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Materiality and the Efficient Capital Market Model: A Recipe for the Total Mix

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MATERIALITY AND THE EFFICIENT CAPITAL MARKET MODEL: A RECIPE FOR THE TOTAL MIX

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I. INTRODUCTION

During the past thirty years, prodigious empirical and theoretical research and commentary has provided an economic perspective on the operation of capital markets. The literature has focused on the efficient capital market model, which posits that security prices fully reflect all available, relevant information. A corollary of this thesis posits that security prices react promptly and in an unbiased manner to any new information. Although researchers have debated the parameters of the efficient market model, they agree that the model accurately represents the market's actual operation.

Not surprisingly, the operation of capital markets also has been a central concern in securities litigation. In many cases, the determinative issues involve the importance of particular information to the investor and the processing of such information by the market. These issues often are decided under a legal standard of "materiality." Materiality may be important in several types of rule 10b-5 litigation, tender offer cases, and proxy litigation, among other areas.

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The legal standard of materiality, however, has developed largely without reference to the findings of the efficient capital market researchers. This Article will compare legal notions of materiality with the treatment of materiality in efficient capital market theory. The Article presents an overview of the current state of research on the efficient capital market model, a discussion of the legal tests of materiality, and a comparison of the legal standard and the economic model in different contexts. This Article's premise is that recognition and use of the economic model will lead to more accurate, predictable determinations of materiality in the context of securities litigation. Courts that consider the results of efficient capital market research in analyzing the materiality issue will have a better understanding of when information becomes public, how the market processes information as an aggregate, and how different estimates of the significance of new information quickly combine to create an unbiased equilibrium market price.

II. The Efficient Capital Market Model: The State of Research

Researchers agree that the efficient capital market model accurately represents the pricing behavior of stocks.[1] The model posits that the price of a security reflects all publicly available informa-

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1. For a review in the legal literature of the efficient capital market model, see Comment, *The Efficient Capital Market Hypothesis, Economic Theory and the Regulation of the Securities Industry*, 29 STAN. L. REV. 1031 (1977). *See also* Barry, *The Economics of Outside Information and Rule 10b-5*, 129 U. PA. L. REV. 1307 (1981). For a general review of the utility of the efficient market model in securities litigation, see Fischel, *Use of Modern Finance Theory in Securities Fraud Cases Involving Actively Traded Securities*, 38 BUS. LAW. 1 (1982). *See generally* J. LORIE & M. HAMILTON, THE STOCK MARKET: THEORIES AND EVIDENCE (1973); W. SHARPE, PORTFOLIO THEORY AND CAPITAL MARKETS (1970); Basu, *Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis*, 32 J. FIN. 663 (1977); Charest, *Dividend Information, Stock Returns and Market Efficiency—II*, 6 J. FIN. ECON. 297 (1978); Fama, *Efficient Capital Markets: A Review of Theory and Empirical Work*, 25 J. FIN. 383 (1970); Finnerty, *Insiders and Market Efficiency*, 31 J. FIN. 1141 (1976); Grossman, *On the Efficiency of Competitive Stock Markets Where Traders Have Diverse Information*, 31 J. FIN. 573 (1976); Hellwig, *On the Aggregation of Information in Competitive Markets*, 22 J. ECON. THEORY 477 (1980); Kanodia, *Effects of Shareholder Information on Corporate Decisions and Capital Market Equilibrium*, 48 ECONOMETRICA 923 (1980); Radner, *Rational Expectations Equilibrium: Generic Existence and the Information Revealed by Prices*, 47 ECONOMETRICA 655 (1979); Verrecchia, *Consensus Beliefs, Information Acquisition, and Market Information Efficiency*, 70 AM. ECON. REV. 874 (1980).

tion about a firm, and that prices react almost instantaneously and in an unbiased manner to any new information.[2] These two notions are obviously interrelated. If share prices always reflect all publicly available information, then prices must adjust promptly to any new data. As a normative matter, a market that operates in the manner described by the model is economically desirable because investment will be channeled into the most profitable areas and capital will be allocated efficiently.[3] Moreover, capital formation is encouraged by an efficient market. Such a market reduces the risk of ownership, thus reducing the cost of capital. If the market price efficiently reflects all public information, then investors can have more confidence that the variance of prices will be more stable than if the market were inefficient.[4]

Research concerning the efficient market model has tested the thesis at three different levels: the weak form, which tests the belief that past price information contains no data that investors can use to obtain profits in excess of the profits a simple buy-and-hold strategy would produce; the semi-strong form, which suggests that the stock market promptly and accurately incorporates into the market price all publicly available information about a particular stock, so that an investor can earn risk-adjusted profits in excess of a buy-and-hold strategy only if the investor has access to inside information; and the strong form, which posits that although some use of inside information occurs in securities transactions, no substantial and consistent use of inside information occurs in a fashion that routinely disturbs a stock's equilibrium price.

The weak form of the model criticizes those investment advisors and their customers who believe that technical analysis[5] can result in profits above a risk-adjusted market rate of return. Technical analysts assert that mechanical rules based on historical pricing

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2. Fama, *supra* note 1 at 383-84; *see also* Cowton & Garrod, *Clearing the Fog Around the Efficient Capital Market Hypothesis*, 92 ACCT. 107 (Aug. 1981).

3. Kanodia, *supra* note 1; Comment, *supra* note 1, at 1035. *See also* W. BAUMOL, THE STOCK MARKET AND ECONOMIC EFFICIENCY 36 (1965).

4. Lorie, *Insider Trading: Rule 10b-5, Disclosure, and Corporate Privacy: A Comment*, 9 J. LEGAL STUD. 819 (1980).

5. Technical analysis is also known as chartist analysis. The basic premise of the chartist model is that history repeats itself, and that patterns of a security's price behavior will recur. Fama, *Random Walks in Stock Market Prices*, 21 FIN. ANALYSTS J. 55 (Sept.-Oct. 1965).

patterns, sometimes coupled with the use of selective financial data, can predict future share prices profitably.[6] If securities prices moved predictably, an investor might be able to develop profitable trading rules based on historical pricing information. Because such historical information is public, technical analysis is fundamentally at odds with the efficient market model. Stated differently, technical analysts believe that future stock prices depend on past prices. The efficient market model, on the other hand, posits that only new information can affect a stock's future equilibrium price. Because the production of new information is essentially a random process,[7] technical analysts should not be able to form profitable trading rules based on historical information which, by definition, the price of a stock already reflects.

In evaluating the weak form, the data supports the efficient market model rather than the technical analysis position. Formal statistical evaluations such as serial correlation, spectral analysis, and runs tests do not show any significant dependences for a series of stock prices.[8] Technical strategies based on filter rules, moving

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6. *Id.*

7. *Id.* at 56.

8. Serial correlation tests provide "a measure of the relationship between the value of a random variable at time t and its value r periods earlier." M. FIRTH, SHARE PRICES AND MERGERS 14-16 (1976). *See* Cowels & Jones, *Some A Posteriori Probabilities in Stock Market Action*, 5 ECONOMETRICA 280, 294 (1937) (concluding that speculators could not use this type of forecasting with any assurance of consistent profits); Fama, *The Behavior of Stock Market Prices*, 38 J. BUS. 34, 65 (1965) (evidence produced by the serial correlation model suggests that dependences in successive price changes are either extremely slight or completely nonexistent).

Spectral analysis tests examine the assumption that the "values of one variable are known at $t=1,2,3...n$ and a number of functions based on this series can be calculated. These can be used for hypotheses regarding the actual structure of the time series." M. FIRTH, *supra*. *See* Godfrey, Granger & Morgenstern, *The Random Walks Hypothesis of Stock Market Behavior*, 17 KYKLOS 1, 22-24 (1964) (the price determining mechanism that the random walk hypothesis describes "is the only mechanism which is consistent with the unrestrained pursuit of the profit motive by participants in the market. . . . [N]o simple functional relationship between the observed variables is likely to be of value."); Granger & Morgenstern, *Spectral Analysis of the New York Stock Market Prices*, 16 KYKLOS 1, 17 (1963) (No commonly assumed strong cycles have been found. Short-run movements of the series obey the random-walk theory, while long-run components could be of greater value than the theory suggests. Seasonal variation, business-cycle components, and the relationship between volume and price, however, were of little value.).

Runs tests involve an analysis of the duration of successive price movements. The results of these tests for individual stocks, as well as for indices, are compared against the matheaverages, fixed proportion maintenance strategies, and relative strength tests also have failed to show that any suggested technical strategy leads to supranormal profits.[9] Indeed, many of the technical strategies underperform the general market.[10] In sum, past pricing data is not a profitable investment tool.

The semi-strong form of the efficient market model challenges the thesis that fundamental analysis of specific stocks can lead to supranormal gains.[11] Fundamental analysis operates on the premise that the evaluation of publicly available information—fundamental factors—such as industry prospects, expected product developments, and management ability will enable an ana-

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matical expectation of runs. M. FIRTH, *supra*.

9. Filter rules "provide buy and sell signals when share prices have moved a certain percentage away from a high or low point." M. FIRTH, *supra* note 8, at 17. *See* Alexander, *Price Movements in Speculative Markets: Trends or Random Walks No. 2*, 5 INDUS. MGMT. REV. 25 (Spring 1964); Fama & Blume, *Filter Rules and Stock Market Trading*, 39 J. BUS. 226, 238-40 (1966). The results of these studies show that the order of magnitude of any predictive filter rule does not exceed the transaction costs associated with operation of the rule. These results thus support the hypothesis that the efficient capital market model is an adequate description of price behavior.

Moving average tests involve buying or selling shares as their prices move above or below their averages. Tests show that this technique does not outperform a buy-and-hold strategy. James, *Monthly Moving Averages—An Effective Investment Tool?* 3 J. FIN. & QUAN. ANALYSIS 315, 324-26 (1968); Van Horne & Parker, *The Random Walk: An Empirical Test*, 23 FIN. ANALYSTS J. 87, 90-92 (1967); Van Horne & Parker, *Technical Trading Rules: A Comment*, 24 FIN. ANALYSTS J. 128, 130-32 (1968).

Fixed proportion maintenance strategies involve adjusting the amount of securities held so that the total dollar value proportion of each security in a portfolio remains the same at the beginning and end of the time period considered. Again, when adjusted for transaction costs and tax effects, this approach does not produce supranormal profits. Evans, *An Analysis of Portfolio Maintenance Strategies*, 25 J. FIN. 561 (1970); Young, *Test of Portfolio Building Rules*, 24 J. FIN. 595 (1969).

Relative strength tests involve the ranking of shares in terms of price performance over some time period and investing in the top performing stocks and selling the poorly performing securities. The premise is that good and bad performance will tend to repeat in the next time period. This does not occur. *See* Jenson and Bennington, *Random Walks and Technical Theories: Some Additional Evidence*, 25 J. FIN. 469 (1970).

10. *See* Levy, *The Predictive Significance of Five-Point Chart Patterns*, 44 J. BUS. 316 (1971).

11. Fundamental analysis attempts to predict the future worth of a company based primarily on the company's future earnings prospects. The theory posits that a stock has some intrinsic worth that may depart from its value as measured by the market price. The leading work on fundamental analysis is B. GRAHAM, D. DODD & S. COTTLE, SECURITY ANALYSIS: PRINCIPLES AND TECHNIQUES (4th ed. 1962). *See also* J. COHEN, E. ZINBARG & A. ZEIKEL, INVESTMENT ANALYSIS AND PORTFOLIO MANAGEMENT (1973).

lyst to forecast a firm's prospects better than the market as a whole.[12] The efficient market model instead states that the competitive marketplace, where many investors evaluate the same data, prevents this strategy from being successful.[13] Competition to produce useful information and competition in evaluating the data produce a new equilibrium price so rapidly that supranormal profits from the production and evaluation of data are not possible.

The semi-strong form of the efficient market model has been tested in two ways. The first test attempts to directly measure market reactions to new information. These studies have observed such events as announcements of earnings, stock splits, dividend announcements, and accounting changes.[14] The studies found that the market reacted to the new data in the expected direction and that the price change occurred in such a short time that no investor could earn supranormal profits by trading on the new information. These studies thus support the theory that the market

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12. Much of the regulation of disclosure under federal securities law is premised on a belief in fundamental analysis. *See, e.g.*, H. KRIPKE, THE SEC AND CORPORATE DISCLOSURE: REGULATION IN SEARCH OF A PURPOSE 25 (1979). Recently, the Securities and Exchange Commission began to use the teachings of the efficient market model in its regulatory activities, particularly with respect to integrated disclosure. Reproposal of Comprehensive Revision of System for Registration of Securities Offerings, SEC Release No. 6331, Report No. 926 (Aug. 6, 1981) (adopted in SEC Release No. 6383 (Mar. 3, 1982)). For a critique of these activities, see Pickholz & Horahan, *The SEC's Version of the Efficient Market Theory and Its Impact on Securities Law Liabilities*, 39 WASH. & LEE L. REV. 943 (1982).

13. *See, e.g.*, Cragg & Malkiel, *The Consensus and Accuracy of Some Predictions of the Growth of Corporate Earnings*, 23 J. FIN. 67 (1968). *See also* Pozen, *Money Managers and Securities Research*, 51 N.Y.U. L. REV. 923, 934 n.71 (1976).

14. Ball & Brown, *An Empirical Evaluation of Accounting Income Numbers*, 6 J. ACCT. RESEARCH 159 (1968) (results demonstrate that the market anticipates most of the information contained in reported income before issuance of an annual report); Brown & Kennelly, *The Informational Content of Quarterly Earnings: An Extension and Some Further Evidence*, 45 J. BUS. 403, 414 (1972) (substantiating the results of Ball & Brown, *supra*); Charest, *supra* note 1 (dispute in the literature whether dividend change announcements contain information that causes abnormal market activity for significant time frames; some evidence exists showing such effects—evidence potentially inconsistent with complete market efficiency); Fama, Fisher, Jensen & Roll, *The Adjustment of Stock Prices to New Information*, 10 INT'L ECON. REV. 1 (Feb. 1969) (concluding that the price of a stock at the time of a stock split generally reflects new information concerning the firm's future dividend payments); Kaplan & Roll, *Investor Evaluation of Accounting Information: Some Evidence*, 45 J. BUS. 225 (1972) (no statistically significant effect from accounting changes); Sunder, *Stock Price and Risk Related to Accounting Changes in Inventory Valuation*, 50 ACCT. REV. 305 (1975) (changes in the market prices of stocks are associated with the changes in the economic value of the firms rather than changes in reported income).

promptly and correctly processes new information.

The second test examines portfolio performance of managed funds using an investment strategy based on fundamental analysis.[15] If fundamental analysis were a successful investment strategy—that is, if it produced supranormal profits—then managed funds as a group, on a risk-adjusted basis, should outperform the general market. Several studies have measured the rate of return on managed funds against a randomly selected portfolio of similar risk. These studies have shown that the managed funds did not consistently outperform randomly selected portfolios.[16]

The empirical studies of the semi-strong form of the model thus support the theoretical insight that in a competitive market—like the one in which securities analysts operate—where many competing experts analyze the same information, trading induced by analysts will bring a particular security's price promptly to a dynamic equilibrium point. This price should represent the security's intrinsic value.[17] As the product of such a process, the price of a security represents the consensus of the various competitors in the market.[18] As new information is produced, the price of a security reacts promptly. Over or under adjustments are random, and are remedied quickly.[19] The price of a security randomly fluctuates around the consensus price, which represents the processing of new information and the impact of that information on investors.[20]

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15. For the results of many of the studies, see J. LORIE & M. HAMILTON, *supra* note 1, at 88-98; Jensen, *The Performance of Mutual Funds in the Period 1945-64*, 23 J. FIN. 389 (1968) (evidence of mutual fund performance indicates not only that the studied funds on average were unable to predict securities prices, but that individual fund performance did not exceed that which one would expect from chance). *See also* J. COHEN, E. ZINBARG & A. ZEIKEL, *supra* note 11.

16. *See supra* note 15. *See also* Sharpe, *Mutual Fund Performance*, 39 J. BUS. 119 (1966) (differences in return among funds exist when measuring performance by both average risk and return; such differences arise from differences in expense ratios, rather than the predictive capacity of the fund manager).

17. Black, *Implications of the Random Walk Hypothesis for Portfolio Management*, 27 FIN. ANALYSTS J. 16 (1971).

18. *See* Grossman, *supra* note 1; Hellwig, *supra* note 1; Verrecchia, *supra* note 1. *See also* Figlewski, *Information Diversity and Market Behavior*, 37 J. FIN. 87 (1982) (market reveals much information, but not all); Mayshaw, *On Divergence of Opinion and Imperfections in Capital Markets*, 73 AM. ECON. REV. 114 (1983) (price of an asset depends on both the marginal and average investor).

19. Fama, *supra* note 1, at 413-16.

20. *Id.*

The efficient market model describes only the aggregate behavior of the market. Individual investors may have incomplete data or may have different views of the significance of information. The market mechanism, however, combines these different perceptions of the appropriate price and produces an equilibrium price that equals the price that would prevail if all investors had access to complete data and interpreted the data in the same manner.[21] Individual investors may have biased perceptions, but the market averages these variant views to form an unbiased estimate of the value of a security.[22]

The strong form of the efficient market model asserts that the price of a security promptly reflects all material public and nonpublic information. Empirical research has not supported fully this view.[23] Studies of trading by corporate insiders and marketmakers indicate that these market participants do make supranormal profits from trading on information not yet available to the general market.[24] Although this trading alone will not create the post-dis-

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21. *See supra* note 18. Professor Baumol suggests an alternative explanation for the phenomenon. He argues that individual stock prices are the result of irrational decisionmaking, including an attempt to guess how other investors will respond to future events. W. BAUMOL, THE STOCK MARKET AND ECONOMIC EFFICIENCY 53 (1965).

22. *See supra* note 18. *See also* Samuelson, *Proof That Properly Anticipated Prices Fluctuate Randomly*, 6 INDUS. MGMT. REV. 41 (1965). *But see* Bjerring, Lakonishok & Vermaelen, *Stock Prices and Financial Analysts' Recommendations*, 38 J. FIN. 187 (1983) (evaluation of investment advisors' recommendations indicated that investors could earn positive abnormal returns, but extent of access to inside information could not be ascertained). Black, *Yes Virginia, There Is Hope: Test of the Value-Line Ranking System*, 29 FIN. ANALYSTS J. 10 (1973) (positive return attributed to the use of Value-Line recommendations); Lloyd-Davies & Canes, *Stock Prices and the Publication of Second-Hand Information*, 51 J. BUS. 43 (1973) (some positive return attributed to the use of security analysts' recommendations).

23. Lorie & Niederhoffer, *Predictive and Statistical Properties of Insider Trading*, 11 J. LAW & ECON. 35 (1968); Penman, *Insider Trading and the Dissemination of Firms' Forecast Information*, 55 J. BUS. 479 (1982). *See also* Carlton & Fischel, *The Regulation of Insider Trading*, 35 STAN. L. REV. 857 (1983).

24. Finnerty, *supra* note 1 (insiders are able to identify profitable and unprofitable situations affecting their own companies, and by trading on such information they can outperform the market). *See also* Barry, *supra* note 1; Jaffe, *The Effect of Regulation Changes on Insider Trading*, 5 BELL J. ECON. & MGMT. SCI. 93 (1974) [herinafter cited as Jaffe, *Regulation Changes*]; Jaffe, *Special Information and Insider Trading*, 47 J. BUS. 410 (1974).

On marketmakers, see Niederhoffer & Osborne, *Market Making and Reversal on the Stock Exchange*, 61 J. AM. STATISTICAL ANALYSIS 879 (1966) (specialists who have access to unique information concerning supply and demand factors affecting a particular stock are closure equilibrium price, insider trading may move the price in that direction.

The implications of this research on an examination of the legal definition of materiality are profound. If the efficient market model were the explicit basis of the inquiry into materiality, then a court would focus on two limited questions: when did a specific item of information become public—that is, when did it become available to a sufficient number of participants in the market; and was the information of the quality that would change the consensual belief concerning the value of a security? In answering these questions, the model would inform courts that all public information is available to market participants through the price-signalling mechanism, and that the market processes information rapidly. An examination of the legal doctrine of materiality reveals the judicial view of the subject.

III. Evolution of the Legal Standard of Materiality

To prevail in a securities fraud case, a plaintiff usually must show that the defendant misstated or withheld material information.[25] The leading case on the definition of materiality is *TSC In-*

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able to earn an abnormal rate of return).

25. The major federal securities statutes and regulations prohibit the making of false or misleading statements. For example, §§ 11(a) and 17(a) of the Securities Exchange Act of 1933, 15 U.S.C. §§ 77k(a), 77q(a)(2) (1982), proscribe the making of "any untrue statement of a material fact or any omission to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading." The Securities Exchange Commission copied this language substantially in promulgating rule 14a-9, 17 C.F.R. § 240.14(a)-9 (1983), and rule 10b-5, 17 C.F.R. § 240.10(b)-5 (1983), pursuant to §§ 14(a) and 10(b) of the Securities Exchange Act of 1934, 15 U.S.C. §§ 78n(a), 78j(b) (1982). In addition, § 14(e) of the Williams Act, 15 U.S.C. § 78n(e) (1982), also uses the same test. By its terms, the language requires a determination of the materiality question. The definition of "material" for 1934 Act reporting purposes states that a fact is material if a "substantial likelihood [exists] that the reasonable investor would attach importance [to the fact] in determining whether to buy or sell the securities registered." 17 C.F.R. § 240.12b-2 (1983). *See also* Federal Sec. Code § 202(92) (1980). The analysis of the efficient market model in this Article is limited to actively traded securities. The consensus is that the New York Stock Exchange and the American Stock Exchange are efficient markets. The over-the-counter market is considered efficient, but less so than the New York Stock Exchange. Grant, *Market Implications of Differential Amounts of Interim Information*, 18 J. Acct. Research 255 (1980); Pincus, *Information Characteristics of Earnings Announcements and Stock Market Behavior*, 21 J. Acct. Research 155 (1983). Of course, some federal securities cases—rule 10b-5 cases in particular—involve securities that are not

dustries v. Northway, Inc.[26] In evaluating the legal sufficiency of disclosures in a joint proxy statement, the United States Supreme Court in *TSC Industries* adopted an objective standard of materiality requiring

> 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 the information made available.[27]

Courts have applied the "total mix" standard in rule 10b-5 cases,[28] rule 14a-9 nonmerger proxy litigation,[29] section 13(d) cases,[30] and section 14(e) cases.[31] The standard presents a court with a mixed question of law and fact.[32]

The securities law approach to materiality follows closely the common law concept of materiality that developed in actions for fraud and misrepresentation. For example, the *Restatement (Second) of Torts* defines materiality as the existence or nonexistence of a fact that would be important to the reasonable actor in determining a course of action in the transaction in question.[33] Commentators have suggested that the common law approach to mate-

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publicly traded. The efficient market model cannot be applied in those cases.

26. 426 U.S. 438 (1976).

27. *Id.* at 449.

28. *See, e.g.*, Dirks v. SEC, 681 F.2d 824 (D.C. Cir. 1982), *rev'd on other grounds*, 103 S. Ct. 3255 (1983); Austin v. Loftsgaarden, 675 F.2d 168 (8th Cir. 1982); Healey v. Catalyst Recovery, 616 F.2d 641 (3d Cir. 1980); Harkavy v. Apparel Indus., 571 F.2d 737 (2d Cir. 1978); Joyce v. Joyce Beverages, 571 F.2d 703 (2d Cir.), *cert. denied*, 437 U.S. 905 (1978).

29. *See, e.g.*, Galfand v. Chestnutt Corp., 545 F.2d 807 (2d Cir. 1976).

30. *See, e.g.*, SEC v. Savoy Indus., 587 F.2d 1149 (D.C. Cir. 1978), *cert. denied*, 440 U.S. 913 (1979); Transcon Lines v. A.G. Becker, Inc., 470 F. Supp. 356 (S.D.N.Y. 1979).

31. *See, e.g.*, Pacific Realty Trust v. APC Invs., 685 F.2d 1083 (9th Cir. 1982); Radol v. Thomas, 556 F. Supp. 586 (S.D. Ohio 1983); Riggs Nat'l Bank v. Allbritton, 516 F. Supp. 164 (D.D.C. 1981).

32. 426 U.S. at 450. The Court in *TSC Industries* reasoned that the issue of materiality involved the application of a legal rule to a set of facts. Only if the claimed omissions were "so obviously important to the investor, that reasonable minds cannot differ on the question of materiality" is the issue appropriately resolved summarily as a matter of law. *Id.* (quoting Johns Hopkins Univ. v. Hutton, 422 F.2d 1124, 1129 (4th Cir. 1970)).

33. RESTATEMENT (SECOND) OF TORTS § 538 (1965).

riality enhances commercial stability because parties cannot avoid completing a transaction on the basis of a minor or irrelevant misrepresentation.[34] At common law, therefore, a party cannot avoid a transaction on the basis of collateral omissions or misstatements; recovery is available, however, for omissions or misstatements which, if accurate, would justify an actor's decision to take action.[35]

In *TSC Industries*, the Court adopted the common law approach and rejected two alternative tests of materiality—the "might" test and the "outcome-determinative would" test. The United States Court of Appeals for the Seventh Circuit in *TSC Industries*, and several other courts, had held that a fact was material if the investor *might* have considered the information important in making a particular investment decision.[36] The Supreme Court rejected this lower standard of proof because the standard created an unduly heavy disclosure burden on management and could frustrate the policy of full disclosure by burying the investor in an "avalanche" of irrelevant as well as relevant material.[37] The Court also rejected the requirement that the plaintiff prove that knowledge of the relevant fact *actually* would have changed the plaintiff's course of conduct. The Court reasoned that because "such matters are not subject to determination with certainty" and because the release of information is within management's control "it is appropriate that these doubts be resolved in favor of those the statute is designed to protect."[38]

Courts and the SEC have dealt continually with whether a particular misstatement or omission is material. Disclosure problems regarding such items as earnings,[39] dividends,[40] control relation-

34. W. PROSSER, HANDBOOK OF THE LAW OF TORTS § 108 (4th ed. 1971).

35. 426 U.S. at 449; W. PROSSER, *supra* note 34, § 108, at 718.

36. Northway, Inc. v. TSC Indus., 512 F.2d 324 (7th Cir. 1975), *rev'd*, 426 U.S. 438 (1976); *see also* Shapiro v. Merrill, Lynch, Pierce, Fenner & Smith, Inc., 495 F.2d 228 (2d Cir. 1974); Ronson Corp. v. Liquifin Aktiengesellschaft, 483 F.2d 846 (3d Cir. 1973), *cert. denied*, 419 U.S. 870 (1974). For a collection of pre-*TSC Industries* cases on materiality, see Hewitt, *Developing Concepts of Materiality and Disclosure*, 32 BUS. LAW. 887 (1977).

37. 426 U.S. at 448.

38. *Id.*

39. *See, e.g.*, Shapiro v. Merrill, Lynch, Pierce, Fenner & Smith, Inc., 495 F.2d 228 (2d Cir. 1974); Financial Indus. Fund v. McDonnell Douglas Corp., 474 F.2d 514 (10th Cir.), *cert. denied*, 414 U.S. 874 (1973).

40. *See, e.g.*, *In re* Cady, Roberts & Co., 40 S.E.C. 907 (1961).

ships among related companies,[41] inventory and asset values,[42] offers to buy or sell particular corporate assets,[43] pending or threatened litigation against the corporation, its officers, or directors,[44] potential regulatory limitations on the corporation,[45] contingent liabilities—particularly those arising out of environmental or other governmental regulation,[46] and sensitive payments problems[47] have been found material in specific instances. Materiality in these cases, as an economic matter, depends on the dollar value of the event in relation to the size of the company and, with respect to contingent events, the likelihood that the event will occur.[48]

Also essential to implementation of the total mix standard is a definition of the reasonable investor and an assessment of the effects of a statement on that hypothetical individual. Proof of materiality involves whether, objectively, a reasonably prudent investor would have relied on a statement in a given situation.[49] Within this framework, the courts require that disclosures be directed at multiple audiences. A statement that might not mislead a sophisticated investor might be inadequate for the unsophisticated investor. The

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41. *See, e.g.*, TSC Indus. v. Northway, Inc., 426 U.S. 438 (1976); Mills v. Electric Auto-Lite Co., 396 U.S. 375 (1970).

42. *See, e.g.*, Gerstle v. Gamble-Skogmo, Inc., 478 F.2d 1281 (2d Cir. 1973); SEC v. Bangor Punta Corp., 331 F. Supp. 1154 (S.D.N.Y. 1971), *cert. denied*, 414 U.S. 924 (1973); Speed v. Transamerica Corp., 99 F. Supp. 808 (D. Del. 1951).

43. *See, e.g.*, Gerstle v. Gamble-Skogmo, Inc., 478 F.2d 1281 (2d Cir. 1973); Chris-Craft Indus. v. Piper Aircraft Corp., 480 F.2d 341 (2d Cir.), *cert. denied*, 414 U.S. 910 (1973); Kardon v. National Gypsum Co., 73 F. Supp. 798 (E.D. Pa. 1947).

44. *See, e.g.*, Rafal v. Geneen, [1972-1973 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 93,505 (E.D. Pa. 1973). *See also* Gulf & Western Indus. v. Great Atl. & Pac. Tea Co., 476 F.2d 687 (2d Cir. 1973).

45. *See, e.g.*, Riggs Nat'l Bank v. Allbritton, 516 F. Supp. 164 (D.D.C. 1981).

46. *See, e.g.*, Grumman Corp. v. LTV Corp., 527 F. Supp. 86 (E.D.N.Y.), *aff'd*, 665 F.2d 10 (2d Cir. 1981); Securities Act Release No. 5704, [1975-1976 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 80,495 (1976).

47. *See, e.g.*, SEC v. Joseph Schlitz Brewing Co., 452 F. Supp. 824 (E.D. Wis. 1978). *But see* Gaines v. Houghton, 645 F.2d 761 (9th Cir.), *cert. denied*, 454 U.S. 1145 (1981). *See generally* Ferrara, Starr & Steinberg, *Disclosure of Information Bearing on Management Integrity and Competency*, 76 Nw. U.L. REV. 555 (1981). An economic concept of materiality usually does not underlie disclosure requirements in this area.

48. *E.g.*, SEC v. Texas Gulf Sulphur Co., 401 F.2d 833 (2d Cir. 1968), *cert. denied*, 394 U.S. 976 (1969).

49. 426 U.S. at 449.

approach of the United States District Court for the Eastern District of New York in *Feit v. Leasco Data Processing Equipment Corp.*[50] is typical:

> [T]he objectives of full disclosure can be fully achieved only by complete revelation of facts which would be material to the sophisticated investor or the securities professional not just the average common shareholder. But, at the same time, the prospectus must not slight the less experienced. They are entitled to have within the four corners of the document an intelligible description of the transaction.[51]

In *Gould v. American-Hawaiian Steamship Co.*,[52] the United States Court of Appeals for the Third Circuit followed a similar approach and established a "buried facts" doctrine. In an effort to protect the unsophisticated as well as sophisticated investor, the court held that, even if the defendant disclosed all the relevant facts in a single document, the defendant could be liable nonetheless for material misrepresentations if important information was not sufficiently highlighted.[53] Also, failure to present conflicting facts in a balanced manner may lead a court to find that a material misstatement has occurred.[54] Similarly, the court held that omissions or misstatements not individually material may be material in the aggregate.[55]

Courts and commentators have expressed considerable frustration with the application of the legal test of materiality. One commentator noted that "[t]he rule is clear; it is its application which is so difficult."[56] The United States Court of Appeals for the Sec-

50. 332 F. Supp. 544 (E.D.N.Y. 1971). For an analysis of the implications of *Feit* using the efficient market model, see *infra* text accompanying notes 83-94.

51. 332 F. Supp. at 566.

52. 535 F.2d 761 (3d Cir. 1976).

53. *Id.* at 773-74. *But see* Smallwood v. Pearl Brewing Co., 489 F.2d 579, 602 (5th Cir.) ("It is enough that proxy statements be complete and not misleading in light of the circumstances existent and reasonably anticipated at the time distributed."), *cert. denied*, 419 U.S. 873 (1974).

54. 535 F.2d at 773-74.

55. *Id.*

56. Kripke, *Rule 10b-5 Liability and "Material" "Facts,"* 46 N.Y.U. L. REV. 1061, 1069 (1971). *See also* Fischel, *supra* note 1; Lorie, *supra* note 4; Wolfson, *A Critique of the Securities and Exchange Commission*, 30 EMORY L.J. 119 (1981) (definition of materiality used by the courts and the SEC is an arbitrary verbal formula; instead, materiality should

ond Circuit has noted that the materiality finding has proven to be "unpredictable and elusive."[57] A comparison of the legal notions of materiality and the insights of efficient capital market researchers may reduce the judicial uncertainty surrounding materiality.

IV. Application of the Efficient Market Model to the Total Mix Test of Materiality

An analysis of leading cases involving the materiality issue demonstrates the utility of efficient capital market research in the development of legal rules. The efficient market model brings certainty and clarity to the materiality issue. An examination of the facts in the leading cases indicates that the insights of the efficient market model would have aided the courts in determining the proper questions to ask, and in identifying the answers to those questions.

A. Non-Insider Trading Cases and the Materiality Question

In *TSC Industries v. Northway, Inc.*,[58] Northway challenged the joint merger proxy statement of TSC Industries and National Industries. Northway asserted that the statement failed to disclose the amount of control that National had over TSC Industries and the premium that National was offering to TSC shareholders as an inducement to vote for the transaction.[59]

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be measured empirically. Information which causes a statistically significant impact on the price of a stock is material.).

57. SEC v. Bausch & Lomb, Inc., 565 F.2d 8, 10 (2d Cir. 1977).

58. 426 U.S. 438 (1976).

59. *Id.* at 442-43. In Northway, Inc. v. TSC Indus., 361 F. Supp. 108 (N.D. Ill. 1973), *rev'd in part*, 512 F.2d 324 (7th Cir. 1975), *rev'd*, 426 U.S. 438 (1976), the United States District Court for the Northern District of Illinois denied Northway's motion for partial summary judgment on the issue of liability. The United States Court of Appeals for the Seventh Circuit reversed, holding that certain omissions of fact concerning the degree of control that National had over TSC Industries, and the favorability of the terms of the transaction, were material as a matter of law. 512 F.2d at 333-36. The precise issue before the Supreme Court was whether material questions of fact remained upon which the plaintiff could establish liability. Application of the efficient market model analysis would have shown that the plaintiff had not met its burden. Rather, summary judgment for defendants on the two issues discussed here was appropriate because no issue of fact remained; the information in question was in the total mix. A federal district court does have authority to grant summary judgment to the nonmoving party. *See* Fed. R. Civ. P. 56; 6 J. Moore, W. Taggart & J. Wicker, Moore's Federal Practice ¶ 56.12 (2d ed. 1983). For further analysis of the inter-

On the control issue, the proxy statement disclosed that National owned thirty-four percent of the outstanding shares of TSC Industries, and that no other shareholder owned ten percent.[60] The proxy statement also revealed that five of TSC's ten directors were National nominees.[61] Northway asserted, however, that the proxy statement should have disclosed that the chairman of the TSC board was also president and chief executive officer of National, and that the chairman of the TSC executive committee was National's executive vice-president.[62] Northway also contended that the proxy statement was deficient because the statement did not reveal that both TSC Industries and National had indicated in SEC filings that National might be deemed the parent of TSC Industries.[63]

Whether these additional statements in the proxy materials could have affected the total mix of information available to TSC shareholders is the central inquiry. The efficient capital market model suggests that the statements would not affect the total mix of available information. The additional information was public, and thus already in the total mix of data available to TSC shareholders. The relative price of the stocks of TSC Industries and National already would have reflected the possibility that a controlling shareholder might offer an "unfair" price for the target company's stock in a merger transaction. Thus, in determining whether to vote for the transaction, TSC shareholders needed no further information on control relationships. The relative price ratio of the two companies' stocks, a perfect substitute for the legal definition of the total mix, contained the very data that Northway wanted disclosed.[64]

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action of Rule 56 and the use of the efficient market model, see *infra* text accompanying notes 142-61. A third issue involved the suggestion that a coordinated buying program had artificially inflated the price of National stock. The Supreme Court concluded that information suggesting market manipulation must be disclosed only if market manipulation in fact occurred. 426 U.S. at 462.

60. 426 U.S. at 452.

61. *Id.*

62. *Id.* at 451.

63. *Id.*

64. TSC shareholders were asked to make an investment decision—whether to give up shares in TSC Industries with a certain value in exchange for shares in National. The price of each company's stock reflected all of the information known to the market concerning

The joint proxy statement also contained an opinion from an outside investment banking firm that the transaction was fair to TSC shareholders.[65] The banking firm based its opinion, in part, on the "substantial premium over current market values represented by the securities being offered to TSC stockholders. . . ."[66] The securities offered to TSC shareholders comprised a package of National preferred stock and warrants. The principal dispute between the parties centered on whether the premium offered could be characterized as "substantial." This dispute turned on the proper valuation of the warrants.

Application of the efficient capital market theory would have resolved the dispute promptly. National established the exchange ratio on October 9, 1969, and accepting the plaintiffs' proposed valuation of the warrants, the exchange ratio represented a premium of nineteen percent for TSC preferred stock and fourteen percent for TSC common stock.[67] Not surprisingly, as the exchange ratio information became public, the price of TSC stock began to rise. The defendants argued that when National first mailed the proxy statement on November 7, 1969, TSC stock already reflected the discounted possibility that the premium would be paid.[68]

The efficient market model supports the defendants' position. The model informs the court in two interrelated ways that the defendants offered a substantial premium and made adequate disclosure of relevant information. First, the theory supports the defendants' position concerning the measurement of the premium. The model suggests that as information on the proposed exchange ratio became public, the price of TSC stock would rise toward the premium price, discounted by the probability that the transaction

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each firm and the firms' interrelationships. The price ratio reflected the total mix of information that any shareholder needed to make the investment decision.

65. 426 U.S. at 454.

66. *Id.* at 455. The investment banking firm of Hornblower & Weeks-Hemphill, Noyes had rendered a favorable opinion on the fairness of the transaction to TSC shareholders. The opinion was predicated on the market price of both corporations, the high redemption price of the National preferred stock, the dividend and debt service requirement of both corporations, the substantial premium over current market values represented by the securities being offered to TSC stockholders, and the increased dividend income. *Id.* at 454-55.

67. *Id.* at 459 n.18.

68. The fact that National was about to propose a merger at a premium price obviously affected the value of TSC stock, and hence the total mix.

ultimately would occur. Thus, the proper date for measuring the substantiality of the premium was immediately before knowledge of the exchange ratio became public.

Second, the model depends on the market price reflecting all available public information in an unbiased manner. If the exchange offer is not premised on information not yet in the total mix, then the market price of the target stock before the offer accurately reflects the approximate value of that stock. The offeror proposes to pay more than the current market price based on the belief that the offeror can make more efficient use of the target's assets. Under this view, any premium over the present market price results in extra value being transferred from the purchaser to the tendering shareholder.[69] In that sense, any premium over market is substantial from the transferring shareholder's perspective.

Mills v. Electric Auto-Lite Co.[70] is subject to a similar analysis. *Mills* also involved the merger of a publicly traded, partially owned subsidiary, the Electric Auto-Lite Company, into a publicly traded parent corporation, the Mergenthaler Linotype Company.[71] As in *TSC Industries*, the materiality issue revolved around disclosure of the relationship of Auto-Lite board members to Mergenthaler.[72]

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69. *See* Easterbrook & Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981); Easterbrook & Fischel, *Corporate Control Transactions*, 91 YALE L.J. 698 (1982) [hereinafter cited as Easterbrook & Fischel, *Corporate Control*]. *But see* Brudney, *Efficient Markets and Fair Values in Parent Subsidiary Mergers*, 4 J. CORP. L. 63 (1978); Chazen, *Fairness from a Financial Point of View in Acquisitions of Public Companies: Is Third-Party Sale Value The Appropriate Standard?*, 36 BUS. LAW. 1439 (1981). For a critique of Brudney's position see *infra* note 82.

70. 552 F.2d 1239 (7th Cir.), *cert. denied*, 434 U.S. 922 (1977).

71. *Mills* involved protracted litigation. In an unreported opinion, the United States District Court for the Northern District of Illinois summarily ruled that the proxy statement inadequately disclosed the control relationship. The district court later held that the plaintiff had shown a sufficient causal relationship between the proxy statement and the consummation of the transaction. Mills v. Electric Auto-Lite Co., 281 F. Supp. 826 (N.D. Ill. 1967), *rev'd in part*, 403 F.2d 429 (7th Cir. 1968), *vacated*, 396 U.S. 375 (1970). The Seventh Circuit affirmed on the materiality issue but reversed on the causation issue, holding that material questions of fact remained unresolved. 403 F.2d at 435. The Supreme Court did not reach the materiality issue, but held that the plaintiff had proven causation. *See* 396 U.S. at 381 n.4, 384-85. In an unreported decision on remand, the trial court awarded $1.2 million in damages and $774,000 in prejudgment interest to the plaintiff class. The Seventh Circuit then held that the plaintiffs were entitled to no monetary relief. 552 F.2d 1239, 1241, 1250 (7th Cir.), *cert. denied*, 434 U.S. 922 (1977).

72. 403 F.2d at 432.

The merger proxy statement indicated that the Electric Auto-Lite board viewed the merger as "fair and equitable."[73] The United States District Court for the Northern District of Illinois and the United States Court of Appeals for the Seventh Circuit, however, faulted the defendants for not disclosing adequately the interested status of the subsidiary's board.[74] The proxy statement, however, did disclose that Mergenthaler owned fifty-four percent of the subsidiary.[75] Moreover, the statement revealed that at least four of the subsidiary's directors were also directors of the parent corporation, and that other directors of the subsidiary were interested directors.[76] Although all information about control relationships was publicly available, both lower courts deemed these disclosures insufficient because the proxy statement displayed the subsidiary board's approval of the merger more prominently than the information regarding conflicts of interest.[77]

The efficient capital market model, however, rejects the notion that the position and emphasis given to a particular fact can amount to a materially misleading disclosure.[78] The relative market price of the stock of the two companies will reflect *any* public disclosure. Thus, the position and emphasis given to the disclosure of the control relationships could not have caused any injury to Electric Auto-Lite's shareholders in determining whether to accept the parent corporation's offer.

The subsequent history of *Mills* reinforces this point. The Seventh Circuit ultimately held that the plaintiffs were entitled to no

73. *Id.* at 433.

74. *Id.* at 432. *See also* Gould v. American-Hawaiian S.S. Co., 535 F.2d 761 (3d Cir. 1976) (similar emphasis must be given to conflicts of interest of the board of directors in approving the transaction).

75. 403 F.2d at 433. Companies routinely file such information with the SEC and the information is also available in reference guides such as *Moody's*.

76. *Id.*

77. *Id.* at 434. The court stated that the board was not free to state its recommendation and opinion favoring the merger without giving similar emphasis to the relationship between the directors and the other party to the bargain. *Id.*

78. Because all public information is part of the total mix, the position or emphasis given to a fact is irrelevant. *See supra* text accompanying notes 1-2. Perhaps decisions such as *Gould* and *Mills* can be explained as substantive judicial reviews of the intrinsic fairness of the transactions at issue, rather than determinations of the adequacy of disclosure. *See* R. JENNINGS & H. MARSH, SECURITIES REGULATION 887-89 (5th ed. 1982).

monetary relief.[79] The court determined that the publicly traded market price of each company before the merger accurately reflected the company's relative "true worth."[80] Accepting the market value measure, the court calculated that the subsidiary's shareholders received a 10.5% premium for the tendered shares.[81] Although the parent company's shareholders also gained as a result of the merger's synergistic effects, the subsidiary shareholders' gain exceeded that of the parent company's shareholders.[82] The court's

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79. 552 F.2d at 1249.

80. *Id.* at 1246-48.

81. *Id.*

82. *Id.* at 1249. The court calculated these effects according to the proposals for gain sharing in controlled transactions suggested in Brudney & Chirelstein, *Fair Shares in Corporate Mergers and Takeovers*, 88 HARV. L. REV. 297 (1974). Brudney and Chirelstein argue that, as a matter of state fiduciary law, minority shareholders should share in any gain arising out of synergies created by the transaction. *But see* Easterbrook & Fischel, *Corporate Control, supra* note 69.

Brudney and Chirelstein also argue that the market price of the controlled entity is systematically distorted around the time of a controlled transaction. They suggest the following reasons for this phenomenon: uncertainty caused by the ability of the controlling entity to disadvantage the controlled entity in ways not easily detected or remedied; and systematic impediments to the flow of information concerning the relative worth of the two companies. *See* V. BRUDNEY & M. CHIRELSTEIN, CORPORATE FINANCE 689-90 (2d ed. 1979). For an expanded version of the same arguments, see Brudney, *surpa* note 69. A third reason the price of the controlled entity might be depressed is that any increment of value derived from the possibility of a takeover is gone; the control relationship already exists.

These arguments do not mean that the efficient market model of materiality is inapplicable in the controlled transaction setting. As Brudney recognizes, the possibility of harm is very different from actual harm. This distinction is significant as a matter of federal law. In Sante Fe Indus. v. Green, 430 U.S. 462 (1977), the United States Supreme Court required that actual manipulation or deception be present in rule 10b-5 litigation, rather than constructive fraud or unfairness. Thus, Brudney and Chirelstein's first point does not raise a federal question. The fact that a controlled transaction is involved is fortuitous. Any injury arises from the existence of the control relationship itself, and not from the transaction or any disclosure in connection with the relationship. Moreover, as Brudney recognizes, measuring any such "control effect" creates extreme problems of proof regarding valuation. Brudney attempts to solve this problem by referring the problem to independent evaluators. Although this might reduce the variability of results as a consequence of litigators' excesses, no one has demonstrated that a coherent replicable method of valuation exists for publicly held companies that does not rely primarily on market values.

Critics also overstate the information impediment argument. The market discounts naive methods of manipulating the relative value of the two firms through devices such as accounting changes. Also, analysts routinely seek information concerning both the parent and the subsidiary firm, the mechanism by which market efficiency is created. An analyst must evaluate the activities of the controlled entity to assess the value of the parent company. This raises serious doubts about whether managers of the parent company have the incenuse of market values to resolve the damage question suggests that the court also should have realized that the market price fully reflected the amount of control that the parent had over the subsidiary. The court then could have terminated the litigation at the liability stage rather than at the damages stage.

Other lower federal courts have had difficulty understanding how completely and promptly financial markets process information. *Feit v. Leasco Data Processing Equipment Corp.*[83] illustrates this difficulty. *Feit* involved the takeover of Reliance Insurance Company by Leasco.[84] Leasco effected the takeover through an exchange offer, at a premium price, of Leasco preferred shares and warrants for the common stock of Reliance. The transaction required that Leasco file a registration statement and prospectus with the Securities and Exchange Commission. The United States District Court for the Eastern District of New York ultimately held that these documents did not disclose adequately material facts concerning the financial attractiveness of Reliance as a takeover target.[85]

An understanding and application of the efficient market model would have led to a different result in *Feit*. Leasco, a company in need of large amounts of liquid assets, pursued the transaction because Reliance had considerable excess cash which Reliance did not need for its insurance company activities. Such cash is known in the insurance industry as surplus surplus.[86] Insurance company regulations, however, usually limit the types of noninsurance activities in which insurance companies may engage. Companies like

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tive to withhold information routinely about the subsidiary. Such a tactic would reduce the value of the parent company as well, however, and would subject the parent company to increased takeover threats. Finally, actual manipulative and deceptive devices are subject to legal control. Both the efficient market approach and the Brudney position recognize the utility of such legal devices. The efficient market model only provides a method to identify the occurrence of such events.

83. 332 F. Supp. 544 (E.D.N.Y. 1971).

84. *Id.* at 549-50.

85. *Id.* at 574. If the offeror discovers the takeover value of the target firm from publicly available data, a requirement that the offeror inform the target shareholders of those facts seems anomalous. No fiduciary relationship exists, and a court should allow the offeror to benefit from the value of its discovery.

86. Required surplus is the amount of cash an insurance company needs to cover declines in asset values and losses and expenses greater than those ordinarily expected. Surplus surplus is any retained amount greater than the amount needed for required surplus.

Leasco could gain access to the surplus surplus through a merger, however, and free these sums from regulatory restrictions by forming holding companies with operating insurance subsidiaries.[87]

A widely distributed industry report used by securities analysts triggered Leasco's specific interest in purchasing Reliance.[88] The report discussed the concept of surplus surplus and methods by which this sum could be made available for noninsurance uses. A publicly available report by the New York Department of Insurance also contributed to Leasco's interest in Reliance as a takeover target.[89]

Despite the public nature of the information in question, the court faulted Leasco for failing to disclose the size and nature of the available surplus surplus. The court held that "[a] substantial possibility [existed] that the Reliance shares were significantly undervalued in the market because of the general traders' ignorance of the magnitude of the possible surplus surplus."[90] The court reasoned that disclosure of the information, when subjected to both professional and nonprofessional analysis, might have raised the price of Reliance stock so that the premium offered would have been reduced or eliminated.[91]

The court's conclusion in *Feit* is fundamentally inconsistent with the efficient market model. The market price of a security fully and promptly reflects publicly available information in an unbiased manner. The court found that Leasco developed internal estimates of the amount of the Reliance surplus surplus from public information.[92] Therefore, the market price of Reliance stock undoubtedly reflected the discounted present value of the surplus surplus if converted to noninsurance uses. The efficient market model suggests that purchasers and sellers either knew, or through the price signalling mechanism, should have known that the availability of surplus surplus made Reliance a potential takeover target. If this notion is correct, then the court's belief that the market undervalued Reliance's stock is incorrect. Leasco was not purchas-

87. 332 F. Supp. at 551.
88. *Id.*
89. *Id.*
90. *Id.* at 572.
91. *Id.* at 572-73.
92. *Id.* at 551.

ing Reliance on the basis of material inside information, and the market could not have undervalued Reliance stock.

Specific evidence in the *Feit* record supports this theoretical insight of the efficient market model. The chief executive officer of Reliance testified that securities analysts knew of the attractiveness of insurance companies like Reliance as takeover targets months before the initial Leasco offer.[93] Many mutual funds had invested in Reliance in anticipation of a takeover bid.[94] Thus, whether specific shareholders failed to discern the significance of Reliance's surplus surplus, the general market "knew" the relevant facts. Leasco's offer included a premium above the market price, which reflected the value of the surplus surplus, and Leasco did not withhold material information from investors who tendered their shares.

In *Del Noce v. Delyar Corp.*,[95] the United States District Court for the Southern District of New York held that a merger proxy statement contained materially misleading information because the statement falsely indicated that the merging companies—Hess Oil and Chemical Corporation and Amerada Petroleum Corporation—considered relative asset values in establishing the exchange ratio.[96] The court concluded that the relative value of the companies' assets played no significant part in the merger negotiations.[97] Although the parties considered past, present, and estimated future earnings, relative market prices, and dividend rates in establishing an exchange ratio, the court nevertheless found the proxy statement materially misleading.[98]

The efficient market model suggests that no injury resulted from the alleged misstatement, and thus no material misstatement occurred. Because the companies' securities were publicly traded, information concerning assets was available to the marketplace and the relative market price of the two companies should have re-

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93. *Id.* at 556.

94. *Id.*

95. [1976-1977 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 95,670 (S.D.N.Y. 1978). *Del Noce* was subsequently settled for up to $4 million, 78 F.R.D. 325 (S.D.N.Y. 1978), plus an additional $778,000 in legal fees. 457 F. Supp. 1051 (S.D.N.Y. 1978).

96. [1976-1977 Transfer Binder] FED. SEC. L. REP. (CCH) at 90,290, 90,300.

97. *Id.*

98. *Id.*

flected this information. In particular, information concerning the asset value of petroleum reserves was generally available. The companies, by explictly considering relative market prices, indirectly considered asset values in establishing the exchange ratio. Moreover, shareholders of the companies had all the relevant information concerning assets through the price signalling mechanism. The court partially recognized this analysis when the court stated that no misstatement occurred concerning the nature or value of the securities offered to Amerada shareholders.[99] Application of the efficient market model by the court would have indicated that the price signalling mechanism also revealed the asset value and going concern value of the stock tendered by Amerada's shareholders. The court erred in reasoning that more accurate evidence of Amerada's value could be derived apart from the value reached by the market. Absent material inside information, the efficient market model posits that such a result is impossible. Instead, the model operates on the notion that the total mix of information contained all relevant information concerning Amerada's assets. Thus, from the model's perspective, the allegedly incorrect statement was not false or, if technically incorrect, was not material.[100]

Another leading merger case, *Gerstle v. Gamble-Skogmo, Inc.*,[101] demonstrates the difficulties some courts have with ascertaining the manner by which the market processes information. Skogmo, a substantial retailing firm, purchased control of GOA, the largest outdoor advertising firm in the United States. Skogmo then began liquidating GOA's advertising plants at prices substantially above the plants' book values.[102] Skogmo subsequently merged with

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99. *Id.*

100. *Cf. supra* note 64 and accompanying text.

101. 478 F.2d 1281 (2d Cir. 1973). The lower court opinions are reported at 298 F. Supp. 66 (E.D.N.Y. 1969); 332 F. Supp. 644 (E.D.N.Y. 1971); and 348 F. Supp. 979 (E.D.N.Y. 1972), *aff'd and modified*, 478 F.2d 1281 (2d Cir. 1973). For an early perceptive analysis of *Gerstle*, see Manne, *Accounting and the Administrative Law Aspects of* Gerstle v. Gamble-Skogmo, Inc., 15 N.Y.L.F. 304 (1969). Manne also applies the efficient market model to the facts of *Gerstle* and reaches the same conclusions as those stated in this Article. As with much current application of modern financial theory to corporate law, Professor Manne's approach to materiality is seminal.

102. GOA had sold plants with a book value of $11 million for $33 million, and expert appraisals indicated that Skogmo could sell other plants at equally large premiums over book value.

GOA, and holders of GOA common stock received Skogmo preferred shares. The merger proxy statement revealed that Skogmo would continue "the policy of considering offers for the sale to acceptable prospective purchasers of outdoor advertising branches. . . ."[103] The proxy statement also disclosed the profits obtained from prior sales.[104] By extrapolation, securities analysts should have realized that considerable profits might result from sales of the remaining plants. In fact, one analyst made such a calculation and objected to the SEC that the information supporting these calculations should be highlighted in the proxy statement.[105]

The court criticized Skogmo for failing to disclose explicitly the "active" nature of Skogmo's efforts to sell off GOA assets, a fact that "might have been picked up by the sensitive antennae of investment analysts."[106] Despite the ability of securities analysts to discern the business plans of Skogmo and to approximate the appreciated value of the underlying assets, the court concluded that a material omission resulted from Skogmo's failure to disclose "active" plans.[107] Apparently, the court believed that the failure to disclose resulted in an undervaluation of GOA stock because the market price did not reflect the appreciated value of the underlying assets.[108] The court thus reasoned that GOA shareholders might have preferred to participate directly in the profits derived from the plant sales, rather than participate in the merger transaction.[109] In essence, the court concluded that the information concerning the appreciated asset base was akin to inside information.

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103. 478 F.2d at 1288.

104. *Id.* A note to the financial statements also explained that Skogmo was carrying its stake in GOA at above book value, reflecting the potential appreciated value of the unsold plants.

105. *Id.* Allyn Corp. v. Hartford Nat'l Corp., [1982 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 98,646 (D. Conn. 1982), presents the same problems. In *Allyn*, the court faulted a merger proxy statement that did not include information well known for not including information that was well known by the investment community. The court also held that the proxy statement was materially false because it did not give equal prominence to uncertainties concerning increased dividends and the merging firms' belief that these increased payments were possible. Both holdings ignore the manner in which the market processes information.

106. 478 F.2d at 1297.

107. *Id.* at 1302-03.

108. *But see supra* text accompanying note 17.

109. 478 F.2d at 1303.

In this respect, the court erred. Applying the efficient market model to the facts in *Gerstle*, the investment community apparently was aware of the appreciated value of the assets. The facts indicate that the "sensitive antennae" of securities analysts already had perceived the relevant information.[110] Given this perception, the price of GOA stock fully reflected the appreciated value of GOA assets. Because Skogmo offered a premium over this price, the premium was "real,"[111] and the GOA stock was not undervalued. The premium price fully reflected the potential profits from asset sales. The proxy statement thus was not flawed, nor could the supposed failure to disclose the active nature of the plant sale negotiations have misled GOA shareholders.

Valente v. Pepsico, Inc.[112] demonstrates another judicial failure to appreciate the efficient processing of public information by the market. *Valente* involved a tender offer by the parent corporation, Pepsico, for the shares of a controlled subsidiary, Wilson Sporting Goods. Before the transaction, outside shareholders partially owned Wilson, although Pepsico owned more than eighty-eight percent of Wilson's common stock.[113] When Pepsico initially obtained a seventy-five percent block of Wilson stock, Pepsico announced an intent to purchase the remaining outstanding securities of Wilson. Pepsico pursued the merger transaction in furtherance of that goal and offered the same price that Pepsico had paid for its initial block of stock.[114]

The plaintiffs alleged that Pepsico's tender offer documents were materially misleading because the documents failed to disclose the

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110. *Id.* at 1297.

111. For a contrary view of *Gerstle*, see Comment, *Utilization of Investment Analysis Principles in the Development of Disclosure Policy Under the Federal Securities Laws*, 25 U.C.L.A. L. REV. 292 (1977). The author starts with the correct premise that a court should define materiality by reference to the economic model, and insightfully works through the analysis in other contexts such as reliance and causation. The author's analysis of *Gerstle*, however, is flawed. The author fails to consider that the market in *Gerstle* was aware of Skogmo's plans for liquidation and would have factored these plans into the relative market prices. The plaintiffs' individual knowledge is irrelevant. Thus, the author's conclusion that the plaintiff was unable to value the terms of the merger properly is incorrect.

112. 454 F. Supp. 1228 (D. Del. 1978). Following the decision of the United States District Court for the District of Delaware, the parties settled the case and established a fund which obligated the defendants to pay up to $4.5 million. 89 F.R.D. 352 (D. Del. 1981).

113. 454 F. Supp. at 1235.

114. *Id.*

minority shareholders' appraisal rights, the amount of control Pepsico had over Wilson, and Wilson's significant improvement in earnings.[115] In addition, the plaintiffs asserted that Pepsico should have disclosed that its purchase plans for the outstanding shares placed a cap on the market price of Wilson shares.[116] The United States District Court for the District of Delaware held that the failure to disclose appraisal rights was a material omission as a matter of law, that factual disputes precluded summary judgment on the control and price cap issues, and that the failure to disclose the earnings information in the tender offer materials was immaterial as a matter of law.[117]

The court's ruling on the earnings issue is consistent with the efficient capital market model. Between the time of Pepsico's acquisition of the majority interest in Wilson and the time of the merger in 1972, Wilson's earnings improved from a loss situation to a substantial profit. The plaintiffs maintained that this information should have been included in the tender offer materials but the court rejected the assertion. The court stated that readily available financial information need not be repeated in tender offer documents.[118] This position is consistent with the efficient capital market model because repeating public information about Wilson's earnings could not have added any new information to the total mix.[119]

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115. *Id.* at 1239. Several other issues were also before the court. The plaintiffs challenged disclosure in connection with a tender for certain Wilson debentures and argued that the tender offer documents should have disclosed the redemption price. The court rejected this claim because Wilson had no intention to redeem the debentures. In addition, the possible redemption price was publicly available and the market price of the debentures would have reflected the redemption price. Thus, the court properly concluded that this information was not material. The court held that questions of fact remained with respect to disclosure of the treatment of employee option holders in the transaction. Although other documents disclosed much of the information to Wilson shareholders, the court believed that these disclosures possibly were not in the total mix under the "buried facts" doctrine. This approach ignores the basic tenets of the efficient market model. Finally, the court held that material questions of fact remained concerning the price cap issue and the issue of whether Pepsico had to disclose in the tender offer materials the benefits of the transaction to Pepsico. These issues do not affect the economic benefit of the transaction for Wilson shareholders and thus are not subject to analysis under the approach suggested here.

116. *Id.* at 1245.

117. *Id.* at 1256.

118. *Id.* at 1243.

119. *See supra* text accompanying note 14.

If the efficient market model had been the basis of the court's opinion, summary judgment for the defendants would have been appropriate on the control issue. Instead, the court held that issues of fact remained. The tender offer materials disclosed that Pepsico already owned 88.1% of Wilson. Other public documents, such as annual reports, contained information concerning the amount of control Pepsico had over Wilson, including Pepsico's provision of management services to Wilson.[120] As in *Mills*, the market already knew that Pepsico controlled Wilson.

On the issue of appraisal rights, the defendants argued that the shareholders should have been on notice of their statutory rights of appraisal.[121] This argument essentially is based on the efficient market model because the statutory rights that a shareholder may enjoy are reflected in the price of a security.[122] The court concluded, however, that the tender offer materials were misleading because the documents would have caused the reasonable shareholder to infer that appraisal rights were unavailable.[123] This conclusion is correct only if the tender offer materials added misinformation to the total mix of information. If this had occurred, the price of Wilson stock should have reflected the new information. Rather than assuming such a conclusion based on linguistic arguments,[124] the court should have attempted to observe the price effect directly.[125] *Valente* thus exemplifies the manner in which the efficient market model enables courts to analyze properly the materiality issue. Rather than rely on *ad hoc* judgments concerning

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120. 454 F. Supp. at 1242.

121. *Id.* at 1240 n.17.

122. The legal environment in which a transaction occurs is as much a fact as operational data. *See* Spielman v. General Host Corp., 538 F.2d 39 (2d Cir. 1976).

123. 454 F. Supp. at 1240 n.17.

124. Another example of this linguistic problem is presented by Schlesinger Inv. Partnership v. Fluor Corp., 671 F.2d 739 (2d Cir. 1982). In *Schlesinger*, the United States Court of Appeals for the Second Circuit held that a factual dispute existed concerning whether tender offer documents sufficiently disclosed that the proration period was shorter than the period during which the tender offer would remain open. The tender offer documents, however, contained the precise disclosure information required by § 14(d)(6) of the Williams Act, 15 U.S.C. § 78n(d)(6) (1982). 671 F.2d at 741. The legal requirement with respect to proration and its disclosure by the offeror would be reflected in the market price of the target firm.

125. For a discussion of the methodological issues in using price movements to answer the materiality question, see *infra* note 172.

possible shareholder reactions to certain information, the use of the model focuses the court's inquiry on the actual processing and use of information by investors.

Fisher v. Plessey Co. Ltd.[126] arose out of a self-tender offer by Plessey for its debentures at a substantial premium over market price. The plaintiff asserted that the tender offer disclosure documents were materially misleading because the documents failed to disclose adequately Plessey's improved performance resulting from increased sales and because the documents failed to disclose Plessey's improved market position that resulted from the sale of two unprofitable subsidiaries.[127] The defendants argued that the total mix contained the information as the result of widespread press coverage in the United Kingdom and more limited coverage in the United States.[128] The defendants, explicitly relying on the efficient market model, moved for summary judgment.[129]

The United States District Court for the Southern District of New York rejected the defendants' motion, but accepted the argument that " 'there is no duty to disclose information to one who reasonably should already be aware of it.' "[130] The court held that material questions of fact existed concerning the debenture holders' awareness of the information from sources other than the tender offer materials. The court viewed the problem as involving whether an individual debenture holder actually had seen, or reasonably should have seen, the information in question, and not whether the market price already reflected the information.[131] This approach misses the thrust of the defendants' efficient market model argument. Not every market participant needs to have access to all available information. If enough participants have access to the information, their trading will affect the equilibrium price. The price signalling mechanism then gives the other market par-

126. 559 F. Supp. 442 (S.D.N.Y. 1983). The plaintiff asserted claims for relief under §§ 10(b), 13(e), and 14(e) of the Securities Exchange Act.

127. 559 F. Supp. at 444.

128. *Id.* at 445.

129. *Id.* at 444. The court characterized the defendants' motion as "blunderbuss." *Id.* at 443. This characterization could arise only from a misunderstanding of the importance of the efficient market model in securities litigation.

130. *Id.* at 445 (quoting Myzel v. Fields, 386 F.2d 718, 736 (8th Cir. 1967), *cert. denied*, 390 U.S. 951 (1968)).

131. 559 F. Supp. at 446.

ticipants access to the same information. The question the court should have asked was whether disclosures in Great Britain would filter into the total mix of information in the United States. Instead, the court considered whether individual market participants in the United States were aware of the information which was common knowledge in Great Britain.

In *Fisher*, the information must have reached investors in the United States. Plessey ordinary stock was traded on the London Stock Exchange, a market in which the efficient market model also applies.[132] The London Stock Exchange price would have reflected the information revealed in Great Britain. Investors on the New York Stock Exchange indirectly traded Plessey stock through the mechanism of American Depository Receipts.[133] An investor could convert American Depository Receipts on a one-for-one basis for Plessey ordinary stock. Arbitrage then would eliminate any difference in the price of the stock on each exchange.[134] The disclosure in Great Britain would have affected the market price of the debentures in the United States through the same process. Because an investor could convert the debentures into American Depository Receipts, and then into Plessey ordinary stock, any change in the value of Plessey ordinary stock on the London Exchange would have affected the price of the debentures promptly.

The foregoing analysis also demonstrates the flaw in the court's analysis of the fairness of price issue. The plaintiff suggested that the offering documents were materially misleading because management asserted that the offer was fair, knowing that the price of the debentures would rise.[135] The court believed that reliance on the efficient market model to demonstrate that no issue concerning the fairness of the price existed was "obvious bootstrapping of arguments," even if the operations information was publicly available.[136] The market, however, had evaluated public information on

132. *See* M. FIRTH, *supra* note 8; Cowton & Garod, *supra* note 2. *See also* Guy, *The Performance of the British Investment Trust Industry*, 33 J. FIN. 443 (1978).

133. 559 F. Supp. at 443.

134. Arbitrage is "the act of simultaneously purchasing foreign exchange, securities, commodities or other goods in one market and selling them in another market at a higher price." THE McGRAW-HILL DICTIONARY OF MODERN ECONOMICS 25 (2d ed. 1973).

135. 559 F. Supp. at 444.

136. *Id.* at 448.

the company's performance in establishing the market price. The premium that Plessey offered exceeded that price. A court could consider such a price unfair only if the company had material inside information not yet in the total mix. The operations information was not material inside information because the data was available in Great Britain. Thus, the disclosure question and the fairness question are fundamentally linked. If the information in question was in the total mix, then fairness was not an issue.

The plaintiff also asserted that the tender offer documents should have included earnings data and earnings projections.[137] The court concluded that the defendants had a duty to disclose preliminary earnings information, but that the defendants had no duty to disclose projections.[138] The efficient market model indicates that both earnings data[139] and management projections[140] do contain new information. Thus, if management delayed the release of new earnings data until the tender offer was complete, then trading on material inside information did occur. Absent compelling reasons to the contrary, management's offer to repurchase the company's securities also might trigger a requirement to disclose projections of future earnings.[141] Application of the efficient mar-

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137. *Id.* at 450.

138. *Id.*

139. Joy, Litzenberger & McEnally, *The Adjustment of Stock Prices to Announcements of Unanticipated Changes in Quarterly Earnings*, 15 J. ACCT. RESEARCH 207 (1977); Morse, *Price and Trading Volume Reaction Surrounding Earnings Announcements: A Closer Examination*, 19 J. ACCT. RESEARCH 374 (1981). Interim earnings information contains more significant information.

140. Patell, *Corporate Forecasts of Earnings Per Share and Stock Price Behavior: Empirical Tests*, 14 J. ACCT. RESEARCH 246 (1976); Penman, *An Empirical Investigation of the Voluntary Disclosure of Corporate Earnings Forecasts*, 18 J. ACCT. RESEARCH 132 (1980); Penman, *supra* note 23.

141. A dispute existed in the record concerning the nature and certainty of the earnings and the projections of earnings information. Only the existence of reliable, reasonably firm information should trigger any legal obligation to disclose projections. If such an obligation to disclose projections existed, this uncertainty would preclude summary judgment. For a discussion of an affirmative duty to disclose projections, see Bauman, *Rule 10b-5 and the Corporation's Affirmative Duty to Disclose*, 67 GEO. L.J. 935 (1979). *See also* Ruder, *Disclosure of Financial Projections—Developments, Problems, and Techniques*, in PRACTICING LAW INSTITUTE, FIFTH ANNUAL INSTITUTE ON SECURITIES REGULATION (1974). These commentators recognize the difficulties inherent in a projections disclosure requirement. By their nature, projections are subject to considerable uncertainty and are often revised. In addition, disclosure of sensitive information concerning a corporation's future business plans may commercially disadvantage the corporation under certain circumstances. Also, a corpo-

ket model thus provides some support for the court's ruling on the earnings and projections issues, but makes summary judgment appropriate on the disclosure of operations issue.

Application of the efficient market model at the summary judgment stage presents difficult problems due to the interplay between substance and procedure. *Jones v. National Distillers & Chemical Corp.*[142] demonstrates the problem. Summary judgment requires that no material questions of fact exist.[143] In *Jones*, the defendants argued that summary judgment was appropriate because the market value of the shares exchanged in a merger was substantially less than the premium price that the minority shareholders received.[144] On the day before the announcement of the proposed merger, the stock of the target firm—Almaden—traded at $5.875. In the full year before the announcement, the stock traded between $5.50 and $8.50.[145] National offered $12.25 per share for the outstanding stock. The plaintiffs countered with the affidavit of an expert who challenged the accuracy of the market value of the target company and claimed that the Almaden stock was worth in excess of $12.25.[146]

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ration might be subject to liability for releasing a projection that later proves erroneous. *See* Marx v. Computer Sciences Corp., 507 F.2d 485 (9th Cir. 1974); Beecher v. Able, 374 F. Supp. 341 (S.D.N.Y. 1974). In *Marx*, a corporate officer orally qualified a published earnings projection before a major securities analyst group to reflect the uncertainty of the projection. The uncertainty of the projection, therefore, was in the total mix. The Ninth Circuit ignored this fact in holding that the corporation was potentially liable for the erroneous projection. The SEC's safe harbor rule for projections ameliorates these problems only partially. *See* Securities Act Release No. 6084, [1979 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 82,117 (1979). *See also* Securities Act Release No. 5992, Guides For Disclosure of Projections of Future Economic Performance [1978 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 81,756 (1978). Under the safe harbor rule, no liability attaches to the release of a forward looking statement made in good faith with a reasonable basis.

142. 484 F. Supp. 679 (S.D.N.Y. 1979).

143. FED. R. CIV. P. 56.

144. 484 F. Supp. at 683.

145. Almaden was traded on the Pacific Stock Exchange and in the over-the-counter market. Two million shares were in the hands of approximately 22,000 shareholders. During 1975 and 1976, nearly 900,000 shares of Almaden were traded; more than 90,000 shares were traded in the first quarter of 1977—the quarter preceding the transaction. Defendant's Memorandum in Support of Motion to Dismiss Second Amended Complaint at 10, 62.

146. When Almaden first offered stock to the public in 1972, the stock sold for $20 per share. *Id.* at 13. Perhaps the comparison between the original issue price and the redemption price led the court to conclude that questions of fact existed concerning the accuracy of the market price of Almaden stock and the fairness of the redemption price. Arguably, a

The major dispute between the parties was whether the proxy statement adequately disclosed Almaden's earnings forecast. The proxy statement revealed that Almaden's projected earnings for the next year were $5,900,000. The company in fact earned $6,187,000 for the year, a difference of less than three cents per share.[147] The projected earnings figure assumed that Almaden's profits would improve in part because the company was switching from selling wine in half-gallon bottles to magnums. The proxy statement, however, did not reveal this fact explictly. The proxy statement did reveal that prices of California wines might increase because of a relatively small grape crop.[148] Also, securities analysts who followed Almaden were aware that the shift to magnums might improve the company's profit margin and volume of sales.[149]

Despite this evidence, plaintiff's expert witness testified that the Almaden market price was unreliable because the market had not been informed completely of the positive effect that the conversion to magnums would have on Almaden and because management was giving up current earnings for present gains in market share.[150] A court that has accepted the efficient market model would reject the first argument. The earnings projection implictly contained the information concerning the magnum conversion and analysts were aware of the potential profits from the conversion. The market price of the company, therefore, reflected fully any benefits derived from the conversion. With respect to the market share allegation, Almaden's prices and its competitors' prices were publicly available. If Almaden had adopted a strategy of trading current profits for market share, the publicly available nature of Almaden's prices

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firm may act unfairly in repurchasing shares of a controlled subsidiary at prices substantially below the original issue price. The original issue price, however, should not have influenced the court's analysis of the transaction. The drop in market price from $20 per share to $5.875 could be explained as the consequence of the aggregate drop in stock prices generally and wine stocks specifically. This does not indicate that the market price for Almaden was inaccurate, but rather quite the opposite. As new information developed about the economy and the specific industry in which Almaden operated, the price of the stock reacted accordingly. *See* King, *Market and Industry Factors in Stock Price Behavior*, 39 J. Bus. 139 (1966).

147. *See* Defendant's Reply Memorandum In Support of Motion to Dismiss the Second Amended Complaint at 21.

148. *Id.*

149. *Id.*

150. 484 F. Supp. at 683.

would inform the market of Almaden's strategy. The price of the stock would reflect the discounted present value of the strategy.

If the court had approached the problem in light of the efficient market model, the court would have ignored the proferred expert opinion because no issue of material fact existed. Summary judgment then would have been appropriate. *Jones*, therefore, turns on whether an expert opinion that contradicts the efficient market model raises a genuine issue of fact. The court concluded that such an affidavit created a jury issue.[151] The court's holding requires that a litigant prove that the efficient market model is correct and that the model applies to the security in question. This approach may encourage the settlement of cases that lack merit by increasing the risk and expense of litigation.[152] Properly interpreted, however, rule 56 of the Federal Rules of Civil Procedure does not require the approach that the court adopted in *Jones*. An expert opinion that departs from the norms of accepted scholarship does not raise questions of material fact.[153] The expert opinion in *Jones* represents such a departure.

Wechsler v. Steinberg[154] also highlights the problem of narrowly construing the concept of total mix in a summary judgment determination. *Wechsler* arose out of the Reliance-Leasco merger.[155] In consummating the transaction, Leasco agreed to repurchase the stock of several institutional investors or to guarantee a resale price for the securities purchased from Leasco. In addition, Leasco promised to pay the institutional investors substantial monthly fees until the purchased securities were resold. The plaintiffs asserted that these guarantees resulted in major contingent liabilities which Leasco's annual reports inadequately disclosed.[156] The defendants responded that other documents—including SEC filings, NYSE listing documents, newspaper reports, and stock analyst re-

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151. *Id.*

152. For example, *Jones* was settled for $750,000—$190,000 of which went to the plaintiffs' lawyers. [1979-1980 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 97,288 (S.D.N.Y. 1980). *Del Noce* and *Valente* also were settled. *See supra* notes 95 & 112.

153. Merit Motors v. Chrysler Corp., 569 F.2d 666 (D.C. Cir. 1977).

154. [1975-1976 Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 95,449 (E.D.N.Y. 1976).

155. *See supra* text accompanying notes 83-91.

156. [1975-1976 Transfer Binder] FED. SEC. L. REP. (CCH) at 99,274.

ports—disclosed the operative facts.[157] Although conceding that the SEC documents were complete, the plaintiffs asserted that these documents were "so fragmented as to inhibit comprehension."[158]

The court, although seemingly accepting that one should evaluate the adequacy of disclosure against the backdrop of all information available to the market, held that questions of fact existed regarding the adequacy of disclosure.[159] The court accepted the plaintiffs' argument that, under certain circumstances, the market might not digest publicly available information.[160] According to the efficient market model, however, the price of Leasco stock did reflect all publicly available information. Summary judgment was appropriate, therefore, particularly because the plaintiffs attempted to prove individual reliance through market reliance. The doctrine of market reliance depends on a belief in the efficient market model.[161]

In contrast to the cases discussed previously, other courts take a broader view of the market's ability to process information. In defining the total mix, these courts hold that determining the adequacy of a statement requires a court explicitly to consider previously disclosed facts.[162] Each communication need not disclose all material facts to avoid violating the securities laws.[163] These courts recognize that other sources of information, such as the trade

157. *Id.*

158. *Id.* at 99,275.

159. *Id.* at 99,276.

160. *Id.* at 99,275.

161. *See* Comment, *The Fraud-on-the-Market Theory*, 95 HARV. L. REV. 1143 (1982). The commentator argues that the fraud on the market theory operates on the assumption that market prices respond to disseminated and undisseminated information about a company. If the information affects the equilibrium price, then even traders who are not explicitly aware of the information are affected. *See also* Fischel, *supra* note 1.

162. *See, e.g.*, Spielman v. General Host Corp., 402 F. Supp. 190 (S.D.N.Y. 1975), *aff'd*, 538 F.2d 39 (2d Cir. 1976). *Spielman* involved a tender offer contest between General Host Corp. and Greyhound Corp. for control of Armour & Co. The plaintiffs asserted that General Host's tender offer materials were misleading in two respects: failure to disclose General Host's ability to meet all cash needs from internally generated funds; and failure to disclose General Host's ability to gain immediate control of Armour. These contentions were the subject of considerable discussion in the media during the tender offer. The court held, therefore, that the information was in the total mix. The efficient market model supports the holding in *Spielman*.

163. 402 F. Supp. 190.

press, newspapers, and the electronic media, can affect the total mix.[164] One need not "disclose 'that which had been publicly proclaimed in several ways on several occasions' " because such information is already "sufficiently 'in the public domain.' "[165] The efficient market model supports this approach because the model asserts that the market reacts to new information without regard to the source.

Beissinger v. Rockwood Computer Corp.[166] demonstrates a court's intuitive understanding of the model. Rockwood was one of several companies that leased the IBM System/360 generation of computers to end users. In 1970, IBM publicly announced the introduction of a new System/370 generation of computers.[167] Because of technological improvements, the industry concluded that the improved cost/performance ratio of this product line would provide computer customers with greater economic efficiency. The trade press widely noted this fact and the possible impact on computer leasing firms like Rockwood.[168] Computer leasing firms faced an uncertain financial future because the new generation of computers could reduce the useful life of the System/360 units on hand and the expected rental income from the units.

The plaintiffs asserted that Rockwood's annual report inadequately disclosed facts concerning the effect on the company of the new generation of computers.[169] The wide dissemination of the System/370 information led the United States District Court for the Eastern District of Pennsylvania to conclude that detailed disclosure of these facts by Rockwood was unnecessary. The court stated that the market would have "already been well aware of any uncertainty concerning the Company's future."[170] To strengthen its conclusion, the court noted that publication of the allegedly unduly optimistic statements in the annual report had not affected

164. *See* Beissinger v. Rockwood Computer Corp., 529 F. Supp. 770 (E.D. Pa. 1981).

165. Smallwood v. Pearl Brewing Co., 489 F.2d 579, 606 (5th Cir.) (quoting Johnson v. Wiggs, 443 F.2d 803, 806 (5th Cir. 1971)), *cert. denied*, 419 U.S. 579 (1974).

166. 529 F. Supp. 770 (E.D. Pa. 1981).

167. *Id.* at 775.

168. *Id.* at 775-76.

169. *Id.* at 778.

170. *Id.* at 782. The information was available from numerous articles in *Computerworld*—the leading industry trade paper, in IBM announcements, and in Form 10-K on file with the SEC.

the price of Rockwood stock. The court reasoned that, if the statements were material, a price movement would have occurred.[171] Because no movement occurred, the statements in question did not affect the total mix. A conclusion that particular statements were not material because of a lack of price movement is consistent with the efficient capital market model. New information alters the equilibrium price; if the equilibrium price remains stable, then the statement probably disclosed no new information.[172]

Another example of the model's usefulness in resolving materiality issues is *Seaboard World Airlines v. Tiger International.*[173] In *Seaboard*, Tiger made a cash tender offer of $12.30 per share for 9.4% of the outstanding common stock of Seaboard. The offer would have raised Tiger's holdings in Seaboard to twenty-five percent.[174] Before Tiger began purchasing Seaboard's stock, Seaboard stock was trading at approximately $4 per share. Seaboard asserted that its liquidation value approached $20 per share and that Tiger's statement assailing the $20 figure was materially misleading.[175] If the Tiger statement was misleading, Tiger would have violated section 14(e) of the Williams Act because the statement was

171. *Id.*

172. A court should consider the price movements of the general market when testing for new information through the price movements of a particular stock. For a description of this methodology, see Comment, *The Measure of Damages in Rule 10b-5 Cases Involving Actively Traded Securities*, 26 STAN. L. REV. 371 (1974). The Comment develops a method of creating an "abnormal performance index" (API). This technique is the primary method researchers use to analyze the operation of financial markets. The Comment establishes a model for the given return of a security, including firm specific and market-wide data. The price movement of the stock is measured for a period of normal activity, thus establishing a control period uncontaminated by the alleged violation. Statistical tests are then run on the movement of the price of the stock for the period of alleged manipulation or disclosure violations. These tests reveal whether the alleged illegal conduct created any abnormal price movement and, if so, the magnitude. *See also* Ohlson, *Residual (API) Analysis and the Private Value of Information*, 17 J. ACCT. RESEARCH 506 (1979); Schwert, *Using Financial Data to Measure Effects of Regulation*, 24 J. LAW & ECON. 121 (1981). The API is useful not only for measuring damages, therefore, but for finding liability as well. If the API indicates no abnormal activity, then the market probably was aware of the information in question or the information was not of sufficient magnitude to change the equilibrium price. Thus, the use of price movements in *Rockwood* to show materiality was a step in the right direction. To aid in the materiality analysis, courts should use the more complete API analysis.

173. 600 F.2d 355 (2d Cir. 1979).

174. *Id.* at 357.

175. *Id.* at 361.

made in connection with a tender offer.[176]

The United States Court of Appeals for the Second Circuit explicitly relied on the efficient market model in holding that no material misrepresentation occurred.[177] Because Seaboard was traded broadly on a national securities exchange, the court stated that Seaboard's market value accurately represented the corporation's value[178]—at least as a going concern.[179] Thus, Tiger's statement challenging the $20 figure was not misleading, particularly in light of Seaboard's trading history. Moreover, the court considered a broad information set in determining the impact of the dispute over the liquidation value of Seaboard's assets on the reasonable investor. The court recognized that, in addition to specific statements in the tender offer documents, shareholders also had access to other information. Documents filed with the SEC nine months before commencement of the tender offer completely disclosed the nature of the dispute between Tiger and Seaboard, and Seaboard's assertion that the $20 figure was accurate.[180] Thus, the liquidation value dispute was in the public domain and the price of Seaboard stock reflected that dispute.

The market had the opportunity to assess whether Seaboard's proposed valuation method was realistic in the context of a battle for corporate control. Market participants had concluded that Seaboard's valuation figure was unrealistic because the price of the stock did not rise to the $20 figure. This result is not surprising. Securities analysts were familiar with Seaboard's assets, and were in a good position to evaluate whether liquidation would occur and the price that the assets would bring in liquidation. Thus, the court's use of the efficient market model resulted in a focused inquiry and led to the proper result.

In certain instances, application of the model requires the bal-

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176. *Id.* at 360 (citing 15 U.S.C. § 78n(e) (1976)).

177. *Id.* at 361-62.

178. *Id.* at 362.

179. The court's acceptance of the market value of the *Seaboard* stock as reflecting only the corporation's value as a going concern is too limited. Under the efficient market model, the market price of a firm's stock measures the entire value of the firm, from whatever source. The market price of the stock reflects going concern value, takeover value, and liquidation value.

180. *Id.* at 364.

ancing of competing reasonable views of the total mix. *Franklin Life Insurance Co. v. Commonwealth Edison Co.*[181] involved Commonwealth Edison's decision to redeem an issue of preferred stock. The plaintiffs asserted that the prospectus accompanying the issuance of the stock was materially misleading. Plaintiffs interpreted the prospectus as stating that the issuer could not redeem the stock for a period of ten years from the date of issue.[182] The prospectus actually stated that the issuer could not redeem the shares "through refunding, directly or indirectly, by or in anticipation of the incurring of any debt. . . ."[183] Commonwealth Edison redeemed the stock out of the proceeds of a common stock offering, but continued to borrow funds at the same time at rates lower than the dividend rate on the preferred stock. The plaintiffs maintained that the market read the quoted language as meaning that so long as Commonwealth Edison was a net borrower, the limitation on refunding would apply.[184] In some respects, the market price of the preferred stock supports this argument. Until Commonwealth Edison announced the redemption, the preferred stock traded substantially above the redemption price.[185] Efficient market theory would suggest that this pricing data demonstrated that the consensus judgment of stock traders matched the plaintiffs' assertion. If stock traders believed that Commonwealth Edison could not redeem the stock while Commonwealth Edison was a net borrower, and if the dividend rate was attractive, the price of the preferred stock would trade in excess of the redemption price.

Commonwealth Edison, however, revealed that redemption was a possibility at its annual meeting and in the proxy statement that Commonwealth Edison issued when the common stock was distributed.[186] Under the efficient market theory, the price of the preferred stock should have reflected this information. In such a situation, the price of the preferred stock never would have exceeded the discounted present possibility that Commonwealth Edison ac-

181. 451 F. Supp. 602 (S.D. Ill. 1978), *aff'd*, 598 F.2d 1109 (7th Cir.), *cert. denied*, 444 U.S. 900 (1979).

182. 451 F. Supp. at 606.

183. *Id.* at 605.

184. *Id.* at 608.

185. *Id.* at 606.

186. *Id.*

tually would undertake a redemption through the issuance of common stock. To resolve these inconsistencies, a court would have to determine why the preferred stock might trade in excess of the redemption price despite knowledge that Commonwealth Edison considered the possibility of a redemption, even as a net borrower. Efficient market theory thus does not resolve the dispute between the parties conclusively. The theory, however, does provide a framework for narrowing and focusing the issue of whether a material misstatement or omission occurred.[187]

B. Materiality in Insider Trading Cases

The efficient market model also is useful for determining whether insider trading has occurred. An insider trading case often turns on whether particular information, allegedly not generally available to the market, was material. The efficient market model helps determine whether the information was in fact available to the market and whether the information was of a sufficient quality to affect the equilibrium price, and hence the total mix.[188]

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187. An API analysis of the price movement of the stock could resolve this ambiguity. *See supra* note 172. This analysis might reveal the source of the aberrant trading pattern. An analogous factual pattern appears in Morgan Stanley & Co. v. Archer Daniels Midland Co., [Current Transfer Binder] FED. SEC. L. REP. (CCH) ¶ 99,460 (S.D.N.Y. July 29, 1983). In *Morgan Stanley*, the United States District Court for the Southern District of New York denied a motion for preliminary injunctive relief to prevent the redemption of debentures. The court posited two reasons why the securities might trade above the redemption price: investor anticipation of a possible tender offer; and the perception of traders concerning what the issuer might do rather than what the issuer was legally entitled to do. Both of these theories would be subject to empirical testing.

188. Professor Manne, citing the strong form theory of the efficient market model, believes that limitations on insider trading are unnecessary and fruitless. Manne maintains that insider trading is a proper form of managerial compensation, that it directs the price of stocks toward their true value, and that most attempts to control the use of inside information are likely to fail. H. MANNE, INSIDER TRADING AND THE STOCK MARKET (1966). Although insider trading appears widespread, *see* Jaffe, *Regulation Changes, supra* note 24, empirical evidence indicates that insider trading does not create strong form efficiency. *See supra* notes 23-24 and accompanying text. Regulation of insider trading, therefore, might create marginal pressures to disclose important corporate information promptly, which would lead to a market where more stock prices reflect all information. Additionally, if insider trading was not prohibited, managers might have an incentive to overinvest in risky projects and to profit from good news or bad news. Finally, investor confidence in the stock market's fairness requires prohibition of insider trading. For a summary of the arguments concerning insider trading, see Carlton & Fischel, *supra* note 23; Dooley, *Enforcement of Insider Trading Restrictions*, 66 VA. L. REV. 1 (1980).

Three recent decisions of the United States Court of Appeals for the Second Circuit provide good examples. In *Securities and Exchange Commission v. Bausch & Lomb, Inc.*,[189] the SEC sued Bausch & Lomb and its chairman of the board for providing material inside information concerning earnings to selected securities analysts. In the early 1970's, Bausch & Lomb marketed the first soft contact lens in the United States. The product proved successful and the company's earnings rose dramatically. Consequently, the price of Bausch & Lomb's stock rose from $46 per share to a peak of $194.75 in less than one year.[190] The price of Bausch & Lomb stock, however, remained sensitive to developments affecting soft lens sales, and securities analysts closely followed activity in this product market. Early in 1972, two developments adversely affected Bausch & Lomb sales: Bausch & Lomb faced its first competition in the market, and concern developed in the medical community over the safety of the product.[191] The financial press extensively reported these developments causing the price of Bausch & Lomb stock to fall $40 in the three weeks before the alleged tip.[192]

Against this background, Bausch & Lomb began a series of meetings with securities analysts in an attempt to counteract the adverse publicity. The SEC's action arose out of meetings and telephone conversations that the company's chairman of the board held with securities analysts on March 15-16, 1972. While these conversations were occurring, Bausch & Lomb's chief competitor announced that it was negotiating for a new license that would allow introduction of a directly competitive soft lens product.[193]

The SEC's allegations concerned the disclosure of information about earnings, sales, and new product developments.[194] In assessing whether any of the information given to the analysts was material, the Second Circuit applied a broad definition of the total mix. In evaluating whether any of the information was significantly

189. 565 F.2d 8 (2d Cir. 1977). *See also* 82 F.R.D. 50 (S.D.N.Y. 1979) (history of SEC negotiations with settling defendants).

190. 565 F.2d at 10.

191. *Id.* at 10-11.

192. *Id.* at 11.

193. *Id.* at 11-13.

194. *Id.* at 16-17.

new, the court noted that other sources, such as newspaper reports and presentations to customers, added information to the total mix.[195] The Second Circuit concluded that much of the pressure on Bausch & Lomb stock came from generally available data relating to the threat of growing competition and to concerns about the medical safety of the product.[196] Against the backdrop of this information, the SEC's allegations concerning disclosures of sales information and new product developments failed.[197] The board chairman had revealed that soft lens sales had flattened out. This fact was common knowledge in the investment community and thus was part of the total mix. The court also held that the delayed development of certain new products was not material because of an insignificant impact on the company and consequent investor indifference to the information.[198] The model supports both of these holdings. Information to which investors are indifferent cannot change the equilibrium price, nor can information which sources have disclosed previously. The court did find that the disclosure of the company's lowered estimate of earnings to an analyst was material.[199] The analyst had disseminated his view that Bausch & Lomb's earnings for the next quarter would fall to sixty cents per share. Rumors developed in the investment community that the company had leaked the estimate to the analyst. Bausch & Lomb's chairman telephoned the analyst to say that the estimate was incorrect, and revealed that the company's estimate of sixty-five to seventy-five cents was more realistic.[200] Shortly after the chairman made this disclosure, the company released the same information to several other analysts and to the Wall Street Journal.[201]

Whether the disclosures of the company's estimate of earnings was a tip of material inside information that resulted in inside trading presents a close question. Undoubtedly, management's view of future earnings reduces investor uncertainty, and even if

195. *Id.* at 17.
196. *Id.* at 15-16.
197. *Id.* at 17-18.
198. *Id.* at 17.
199. *Id.* at 18.
200. *Id.* at 13.
201. *Id.*

management's view is not substantially different from that of analysts, this reduced uncertainty may change the equilibrium price.[202] *Bausch & Lomb* presents two factual problems. First, management initially disclosed its view of the company's future earnings a short time before trading ended for the day. The factual record in the case does not indicate whether the information induced any trading. Second, from the opposite perspective, the nearly simultaneous release of the information to several securities analysts meant that, under the efficient market theory, any effect of the disclosure on the market was rapidly assimilated. In that sense, one could argue that the disclosure was made to the general public.[203]

Regardless of one's view of the materiality question, the significance of *Bausch & Lomb* is the court's appreciation of the important and positive role that analysts play in the market.[204] An implicit premise of the decision is that the efforts of analysts in producing information for the market are beneficial to the market. This premise meshes well with the efficient market model. Although the model suggests that analysts and their customers cannot gain supranormal profits, the activities of analysts in producing information is the mechanism that produces market efficiency. Management contacts with analysts are a crucial part of the process of creating an efficient market, and legal rules should not discourage this process. Restrictive notions of inside information would hinder the ability of analysts to function.[205] *Bausch & Lomb*

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202. *See supra* notes 139-40. Management's views of future earnings contains informational content for the market.

203. Disclosure to enough analysts, and the trading thus induced, would establish the new equilibrium price.

204. The Supreme Court's opinion in Dirks v. SEC, 103 S. Ct. 3255 (1983), supports this view. In *Bausch & Lomb*, the United States District Court for the Southern District of New York refused to grant the SEC an injunction because of a lack of scienter and because a recurrence of tipping was unlikely. 420 F. Supp. 1226 (S.D.N.Y. 1976), *aff'd*, 565 F.2d 8 (2d Cir. 1977). The Second Circuit affirmed on the second ground. *Dirks* raises the possibility that the lack of pecuniary or other gain to the tipper also would prevent imposition of liability. 103 S. Ct. at 3266. The defendants in *Bausch & Lomb* derived no benefit from the leaked information. 565 F.2d at 19.

205. In *Bausch & Lomb*, the Second Circuit described contacts between analysts and management as a "fencing match conducted on a tight rope." 565 F.2d at 9. Uncertain conceptions of materiality create substantial risks of unwarranted allegations of tipping. Undoubtedly, some information is material. The problem is that a skilled analyst often can

demonstrates that the efficient market model can assist a court's determination of whether information received from management is already in the total mix. Similarly, the case demonstrates the rapidity with which the market processes information. Both of these insights limit unbridled speculation concerning the definition of material inside information.

Lilly v. State Teachers Retirement System[206] also involved allegations of insider trading and presented questions of materiality. *Lilly* arose from the difficulties that the real estate investment trust (REIT) industry encountered in the mid-1970's. A REIT makes money on the spread between the interest rates at which the REIT borrows from banks and the rate at which the REIT lends to real estate developers. The REIT industry suffered when interest rates increased significantly while builders simultaneously faced sharply rising material costs. These factors adversely affected the real estate development business and REIT stocks. *Lilly* was a difficult case because the investment community was aware of these industry problems through numerous press reports and securities analyst studies. Thus, much of the impact on the price of any REIT stock would have occurred despite any specific information concerning a particular trust.[207]

The factual issue in *Lilly* was whether an investment analyst had received material inside information concerning the level of problem loans experienced by a REIT.[208] In an unpublished opinion, the United States District Court for the Southern District of New York had held that the investment analyst had received no material inside information because the analyst believed that the

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deduce a material fact—such as earnings—from a series of apparently insignificant facts and impressions. The legal problem involves drawing a line between material conclusions and immaterial clues. Lorie, *supra* note 4. The Second Circuit, in addressing "tips" to analysts, draws no clear line: "A skilled analyst with knowledge of the company and the industry may piece seemingly inconsequential data together with public information into a mosaic which reveals material non-public information." Elkind v. Liggett & Myers, Inc., 635 F.2d 156, 165 (2d Cir. 1980). The mosaic theory thus creates considerable uncertainty. Although a court may recognize the benefits of analysts' efforts, this recognition is not always reflected in the court's holding. *See infra* note 220.

206. 608 F.2d 55 (2d Cir. 1979), *cert. denied*, 446 U.S. 939 (1980).

207. Industry market conditions play a role in the price movement of specific stocks of companies within that industry. *See* King, *supra* note 146.

208. 608 F.2d at 56.

borrowers ultimately would repay all the loans and that the problem loans would not affect significantly the trust's level of dividends.[209] The district court also noted that the information concerning problem loans had been disseminated to a number of securities analysts who monitored the financial stability of the REIT.[210]

The Second Circuit, in reversing the district court's decision to grant the defendants' motion for a directed verdict, relied on the total mix of data available to investors. The appellate court concluded that a jury question existed over whether the investment community would view the increased level of problem loans as a significant fact.[211] Indeed, investors had disagreed over the relationship of dividends, loss reserves for problem loans, and the definition of problem loans.[212] Some believed that a REIT should create a reserve for problem loans and make a charge against the funds available to pay dividends, even if the loans ultimately were repaid. Others believed that, if a borrower would repay the loan at some time, then a REIT need not create a current reserve, thereby limiting the ability to pay dividends. If enough investors believed in the first position, then the release of the additional information could affect the equilibrium price. Thus, the conclusion of the Second Circuit was proper.

The different positions of the district court and the appellate court in *Lilly* demonstrate that application of the efficient market theory is far from mechanical. Courts must make difficult judgments about the information that an investor would find important. This process often requires considerable inquiry into industry conditions and the factors that enter into an investment decision. The use of the efficient market theory provides courts with the ability to focus the factual inquiry. Both courts in *Lilly* properly attempted to assess the impact of the specific inside information against the background of generally available information known about the REIT industry. In some instances, however, this factfinding process is subject to uncertainty in reconstructing the

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209. *Id.* at 59.
210. *Id.* at 56 & n.1.
211. *Id.* at 58.
212. *Id.* at 59.

relevant information set.

A third insider trading case involving a materiality question is *Elkind v. Liggett & Myers, Inc.*[213] *Elkind* also involved the alleged tipping of material inside information to selected securities analysts. The case raised other issues about management's duties with respect to statements made by analysts after meetings conducted by management. The plaintiff charged that the first of two tips had occurred on July 10, 1972, when management confirmed that sales of two products had slowed and that the company would issue a preliminary earnings report soon.[214] An analyst concluded that this data would lead to a decline in the company's earnings. In the second conversation on July 17, management specifically confirmed that earnings would drop for the quarter.[215] Both events occurred against a backdrop of negative news about the company. Early in 1972, management had been positive about the company's prospects for the year. As earnings dropped, company contacts with analysts took on a more negative tone.[216] Between June 19 and July 5, the company's stock traded between $64.50 and $67. From July 6 to the date that the company issued a press release concerning lower earnings, the price of Liggett stock steadily dropped. By July 14, the stock had fallen to $60. On July 17, the date of the second tip, the stock closed at $55.25; on July 18, the day of the press release, the closing price was $52.50.[217] The district court held that material tips of inside information occurred on both July 10 and July 17,[218] but the Second Circuit ruled that only the July 17 conversation produced material inside information.[219]

Elkind also presents close questions in applying the efficient

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213. 635 F.2d 156 (2d Cir. 1980). *Elkind* is noted for establishing the disgorgement measure of damages in the open market tipping context. For an analysis of this aspect of *Elkind*, see Recent Decisions, *In an Open Market Context, Uninformed Investors May Recover the Postpurchase Decline in the Market Value of Their Shares, but Recovery is Limited to the Gain Realized by the Tippee from the Inside Information*—Elkind v. Liggett & Myers, Inc., 49 GEO. WASH. L. REV. 902 (1982); and Comment, *Damages for Insider Trading Violations in an Impersonal Market Context*, 7 J. CORP. 97 (1981).

214. 635 F.2d at 160-61.

215. *Id.* at 161.

216. *Id.* at 160-61.

217. *Id.* at 173.

218. *Id.* at 161.

219. *Id.* at 166.

market model to the materiality question. As the Second Circuit properly noted, the marketplace already was processing the negative information about the company's sales. Not unexpectedly, the price of Liggett stock fell in response to the negative information—even before the alleged tips. To separate the impact of any additional information contained in the conversations with market professionals from the publicly available information on the same subjects requires sharp analysis. The July 10 conversation could not have affected the total mix because the data disclosed was common knowledge in the investment community. The company had disclosed the information partially in publicly issued documents and in other contacts with securities analysts.[220] Thus, the Second Circuit correctly concluded that no material tip occurred. Analysis of the July 17 conversation, as the court recognized, was more difficult. The company revealed no specific numerical earnings information. Management only confirmed the possibility that earnings would decline. This statement merely supplemented, and was based on, the sales data. As efficient market research suggests, however, management's views about earnings contain information for the market, even if the management view only confirms the opinions of market participants.[221] Thus, the July 17 conversation did reveal material information. Indeed, the substantial downward price movement on the next trading day, when the information was released generally, supports this conclusion.[222]

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220. Contrast the Second Circuit's holding in State Teachers Retirement Bd. v. Fluor Corp., 654 F.2d 843 (2d Cir. 1981). In *Fluor*, much of the data that the analyst relied upon was already in the public domain, but the meeting that the analyst attended may have filled in the analysis. The Second Circuit, applying the mosaic approach, found that at least some of the material disclosed at the meeting may have been material.

221. *See supra* notes 140-41 and accompanying text.

222. For another analysis of *Elkind* from the perspective of the efficient market model, see Friedman, *Efficient Market Theory and Rule 10b-5 Nondisclosure Claims: A Proposal for Reconciliation*, 47 Mo. L. Rev. 745 (1982). Professor Friedman argues that insiders should have an obligation to disclose material information even in the absence of trading. He also proposes a two-tier damage remedy for insider trading. Those who control and intentionally delay disclosure to trade on the information should be responsible to all traders for the extent of their damages. Disgorgement would be the appropriate standard for tippees who could not control disclosure. The article, however, does not analyze the predicate for liability—whether and when inside information was disclosed.

V. Conclusion

The efficient market model is a powerful tool for analyzing the materiality question. Application of the theory to the materiality issue informs the court that the market processes information in the aggregate. Each market participant need not have access to all information. Rather, the court should focus on whether enough traders had the information so that the price signalling mechanism revealed the information. The model also indicates to the court the alacrity with which the market processes new information.

An analysis of the case law demonstrates that, although some courts have an intuitive sense of the model's operation, many courts ignore the model when deciding the materiality issue. This behavior leads to *ad hoc* decisionmaking and often a finding of materiality when the market already has received and processed the information in question. The clearest examples of this phenomenon occur in the controlled transaction context. Courts appear particularly concerned about the fairness of the terms proposed by a controlling shareholder. Essentially, the federal securities laws do not deal directly with the fairness of a particular transaction. The courts, however, review fairness under the rubric of materiality. The efficient market model suggests that the courts' concerns are misplaced. Assuming that stock is actively traded, the market price of the shares represents a reasoned judgment of its value. Unless the controlling shareholder truly has material nonpublic information, the market price of two companies is the best measure of their relative worth. Thus, courts should use the model to make materiality determinations in controlled transaction cases as well as in arms length situations.

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 signalling mechanism represents the transmittal of a complete information set of publicly available data. The courts should limit their inquiry to whether a particular item of information has, or would have, affected the price of a stock.