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Analysts' Consensus Earnings and Considerations for Securities Litigation

1. Significance to Securities Litigation

Almost daily, news articles document additional actions taken against financial services firms by federal and State authorities for alleged misconduct of their research analysts. Investors continue to wonder if there is some link between the activities of professional securities analysts and the losses incurred by institutional accounts and individual accounts.

In recent years, many investment managers have integrated the use of such analysts' earnings estimates into their process for making buy-sell-hold decisions. If these "analyst-forecasted earnings" are systematically biased either at their source, by their author, or in the collection and reporting process by the services that aggregate and sell the data, the opportunity exists to relate such bias to culpability in the occurrence of losses.

It is reasonable to hypothesize that due diligence on the part of data vendors would have uncovered such systematic biases. Thus, culpability with respect to investor losses may be shifted to, or at least shared, with the author or provider. Further, to the extent that computational techniques used by investment managers ignored known limitations or bias of analyst forecasts, responsibility for aberrant investment results may be shifted in whole or in part from the client to the investment manager.

2. Relevant Academic Research

Increasingly, investment managers devise computational strategies to incorporate analyst earnings into their portfolio construction activities. In part, the availability of automated data sets enables portfolio managers to canvass large numbers of companies quickly and unambiguously. However, as Chan, Karceski, and Lakonishok warn in their paper discussed below:

"...there may be a sharp discrepancy between share valuations along with analysts' predictions on one hand, and realized operating performance growth on the other. The discrepancy may reflect investors' judgmental biases or agency distortions in analysts' behavior.¹"

There is substantial evidence that analyst forecasts (particularly long-term forecasts) are overly optimistic. In fact, it is unclear that consensus forecasts add any valuable insight to improve our ability to anticipate long-term earnings growth in company stock. The

¹ Louis Chan, Jason Karceski, Joseph Lakonishok, "The level and Persistence of Growth Rates," page 2, forthcoming: *Journal of Finance*.

value of a company's stock derives from investors' expectations of future cash flows that are available to be paid to shareholders, or reinvested on their behalf. Note that absent bankruptcy, shareholder claims are settled in cash, as opposed to claims on accounting earnings. However, due to the rigor of properly applied accounting conventions, earnings can offer significant insight into the ability of companies to generate cash flows.

Analysts, working largely for brokerage firms (the "sell-side" of Wall Street), issue earnings forecasts. For any forecast period, analyst estimates can be batched such that the arithmetic mean ("average") represents a consensus of earnings estimates. The dispersion around the mean measured as the standard deviation of analyst returns describes the extent that there is disagreement among analysts.

The larger the standard deviation of analyst consensus earnings forecasts for a single security or some group of securities, the greater the disagreements among the analysts who contribute forecasts to the calculation of the mean. To enable comparisons of analyst disagreements among individual securities or portfolios of securities, it is necessary to divide the standard deviation of forecasted earnings in each period by the mean of the analyst estimates for the period (a statistic, the "Coefficient of Variation," "CV"). This keeps variations in the size of forecasted earnings from confounding an analysis of variations in the size of the disagreements among analysts.

Chan, Karceski and Lakonishok (CKL 2001) suggest that analysts have confidence in their ability to identify the companies that will realize earnings growth. They argue that absent this confidence, analyst forecasts of earnings growth would hover around the mean expected growth in gross domestic product — casual observation shows that the forecasts do not. Given that analysts appear to have confidence in their work, the question remains does the work add value. Using regression analysis, CKL observe that long-term earnings forecasts have some positive relationship to growth in sales, but do not contribute to an explanation of growth in income before extraordinary items. The analysis shows that dividend yield (computed from accumulated dividends over the past 12 months) has the same predictive value as analyst long-term consensus earnings.

Anna Scherbina tested the notion, first introduced by Edward M. Miller (1977), that prices would reflect the optimistic view, where knowledgeable investors disagree on the value of a security. Her work assumes high costs or institutional constraints to short selling². She found an inverse relationship between analyst consensus and returns in the forecasted period. Returns on securities with high levels of dispersion around the mean quarterly forecast produced lower returns than securities with low levels of dispersion (indicating greater consensus among analysts). Moreover, this finding held up when she used regression techniques to control for market risk, size, market to book ratios and momentum.

These findings offer varying degrees of [dis]comfort to those who believe that most investors are risk averse. Risk averse analysts, particularly in the absence of consensus, would err on the side conservatism and rather than offering optimistic forecasts. The significance of this finding is subject to question as Brown and Kim (BK) found that the set of most current forecasts collected from each analyst correlates more

² "Stock Prices and Differences of Opinion: Empirical Evidence the Prices Reflect Optimism" Anna Scherbina, Working Paper Finance Department, Kellogg Graduate School of Management; Northwestern University: April 2001.

highly to earnings surprise than the mean of analyst year-end forecasts do³. This suggests that analysts add to their knowledge as they approach the end of the forecast period or they discipline their optimistic tendencies.

BK confined their analysis to firms with December 31 fiscal year-ends where earning announcements appeared in the Wall Street Journal. Their sample contained 2,867 quarterly observations over the period 1984-1988 (prior to the recent and much lamented demise of the recent period of "irrational exuberance"). Their findings held for three unique annual data sets consisting of: "...(1) the most recent analyst forecast only; (2) simple average of the three most recent forecasts only; and (3) average of only forecasts made within the last 30 days."⁴

3. Post Script

Once again, reality intrudes on the expectations of rational behavior that economists attribute to participants in financial markets. This year's award of the Nobel Prize in Economics to Daniel Kahneman, and Vernon L. Smith adds significant legitimacy to work that relates our understanding of markets for financial and real assets to notions of perception.

Their intricate experiments involve respondent choices among alternatives with less than certain payoffs under conditions of imperfect information. This work has identified patterns of behavior that call into question the strict notions of utility maximization in a world that treats decision under uncertainty as an exercise in mean-variance optimization.

With respect to consensus earnings, analysts seeking to predict year-end earnings receive additional information at least once each quarter and often more frequently. Consequently, one would expect forecasts to become more accurate as more information is revealed (confirmed by BK 1991). At issue are the rewards analysts perceive for minimizing the difference between reported earnings and forecasted earnings.

Assume analysts, like most employees of for-profit organizations, are subject to resource constraints. Thus, they must make resource allocation decisions, often with imperfect information. Early research on conditioning suggests that perceived incentives govern the set of alternatives offered for consideration in the decision-making process. It follows that analysts may perceive that accuracy with respect to a subset of more widely followed securities will be more highly rewarded than overall accuracy. Alternatively, analysts may perceive more value in achieving some forecasting consensus (perhaps hiding in the crowd) than in overall accuracy.

Following the logic of Daniel Kahneman and Dan Lovallo⁵ (KL), decisions-makers are likely to be both overly cautious regarding risk and overly optimistic with respect to their forecasting ability. Undue caution results from considering each decision (using KL

³ "Timely Aggregate Analyst Forecasts as Better Proxies for Market Earnings Expectations," Lawrence D. Brown and Kwon-Jung Kim, *Journal of Accounting Research*, Vol. 29 No2 Autumn 1991.

⁴ Brown and Kim page 382.

⁵ Daniel Kahneman and Dan Lovallo, "Timid Choices and Bold forecasts: A cognitive Perspective on Risk Taking," *Management Science*, Vol. 39, No. 1, January 1993.

vocabulary; read this as “each gamble”) as a unique event unrelated to the remainder of a sequence of gambles taken over some specified period (a month, a quarter, a fiscal year...). Thus, the statistical benefits of aggregating decisions to approach the expected value of the gambles never emerge in the calculus of perceived rewards. This, in part, may explain the symbiotic relationship between securities analysts and executives in the companies whose earnings they forecast.

Undue optimism regarding forecasting ability results from failure to consider the history of outcomes from like events (again read “gambles”). The literature makes no claim that cautious behavior with respect to risk is in any way offset by the optimism with respect to forecasting ability.

It follows from KL that, absent the patterns of abuse that have led Elliot Spitzer to seek redress, there may still be systematic bias(es) in analyst forecasts, and perhaps, in the level of consensus among analysts regarding projected earnings. The research challenge to the industry and academics who study the industry is to develop expectations with respect to these biases that will be useful as process control tools to test for the integrity of the securities analysis process.