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PREVIEW

Deines, Dan Stuart

A TEST FOR THE SIMILARITY OF ANALYSTS' AND INVESTORS'  
EXPECTATIONS SUBJECT TO THE RELEASE OF MANDATED ACCOUNTING  
DISCLOSURES

*The University of Nebraska - Lincoln*

PH.D. 1985

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PREVIEW

A TEST FOR THE SIMILARITY OF  
ANALYSTS' AND INVESTORS' EXPECTATIONS  
SUBJECT TO THE RELEASE OF MANDATED ACCOUNTING DISCLOSURES

by

Dan S. Delnes

A DISSERTATION

Presented to the Faculty of  
The Graduate College in the University of Nebraska  
In Partial Fulfillment of Requirements  
For the Degree of Doctor of Philosophy

Major: Interdepartmental Area of  
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Under the Supervision of Professor J. Clay Singleton

May 1985

**TITLE**

A Test For The Similarity Of Analysts' And Investors' Expecta-  
tions Subject To The Release Of Mandated Accounting Disclosures

**BY**

Dan S. Deines

**APPROVED**

**DATE**

Dr. J. Clay Singleton

April 30, 1985

Dr. Kung Chen

April 30, 1985

Dr. John W. Goebel

April 30, 1985

Dr. Gordon F. Culver

April 30, 1985

**SUPERVISORY COMMITTEE**

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A TEST FOR THE SIMILARITY OF ANALYSTS' AND INVESTORS'  
EXPECTATIONS SUBJECT TO THE RELEASE OF MANDATED ACCOUNTING DISCLOSURES

Dan S. Deines, Ph.D.

University of Nebraska, 1985

Advisor: J. Clay Singleton

This research examined whether mandated accounting disclosures affected the expectations of financial analysts and investors similarly. If the uncertainty among investors (dispersion of investors' expectations) which is unobservable could be monitored by measuring the uncertainty among analysts (change in the dispersion of analysts' EPS forecasts), accounting policymakers could evaluate their disclosures in part based on whether the uncertainty among investors was reduced.

Security analysts, like investors, are affected by information-bearing signals at two levels: individual and consensus. When individual investor's expectations are revised, transaction volumes increase while revisions in individual analyst's expectations are reflected as a change in the dispersion of analysts' EPS forecasts. When investors' expectations are revised at the consensus level, security prices change, while a revision of analysts' consensus expectations changes the mean of the analysts' EPS forecasts.

To test the similarity of analysts' and investors' expectations a joint hypothesis was tested. The first hypothesis was that financial accounting disclosures which did not affect investors' expectations should not affect analysts' expectations. The second hypothesis was that a financial accounting disclosure which revised investors' (analysts') expectations should also revise analysts' (investors') expectations.

The first hypothesis was tested by measuring analysts' reactions to the release of replacement cost data required by ASR 190. The test results, which found no significant reaction by analysts, were consistent with previous research which indicated investors' expectations were not revised by ASR 190's data.

The second hypothesis was tested by measuring both analysts' and investors' reactions to the release of SEC mandated line-of-business disclosure. The results suggested neither analysts' nor investors' expectations were revised.

The conclusion of this research was that mandated accounting disclosures which did not affect investors' (analysts') expectations did not affect analysts' (investors') expectations. However, whether mandated accounting disclosures which affect investors' (analysts') expectations also affect analysts' (investors') expectations remains unresolved. Therefore, this research provided only partial support for the hypothesized analyst-investor relationship.

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## ACKNOWLEDGEMENT

I want to dedicate this dissertation to my wife Linda and daughter Jennifer. Without their love and encouragement this dissertation would never have been completed.

I want to extend a special thank you to Dr. J. Clay Singleton. His patience, expertise, and enthusiasm have truly made this disseration a learning experience.

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## CHAPTER I

### OVERVIEW AND LITERATURE REVIEW

#### Overview

Financial analysts, in their role as information intermediaries, are often identified as primary users of accounting data and accounting research has examined the responses of professional analysts to various accounting issues. Financial analysts, however, are a differentiable subset of all security market participants because other economic decision makers may react differently from professional analysts, given the same accounting signals.

This research addresses whether mandated financial accounting disclosures affect the expectations of financial analysts and investors in a similar way. If this relationship is established then measurable features of analysts' expectations can be used to monitor changes in investors' expectations which are unobservable directly.

If financial analysts' expectations could be used as a surrogate for investors' expectations, then measurement of changes in analysts' expectations could become a basis for evaluating disclosures mandated by accounting policymakers. Analysts' expectations could be used to monitor changes in the otherwise unobservable uncertainty among investors by measuring the changes in the dispersion of analysts' earnings

forecasts. Accounting policymakers could evaluate their mandated disclosures in part based on whether the uncertainty among investors was affected as they intended.

If the amount and timing of a firm's future earnings are related to its current stock price, analysts' expectations as impounded in their EPS forecasts seem a reasonable surrogate for investors' expectations for two reasons. First, investors who do not have the time and (or) expertise to forecast earnings themselves may use analysts' forecasts of earnings to determine stock prices. Second, analysts must compete in a competitive information market to produce accurate forecasts so their services remain in demand. Therefore, while analysts and investors are estimating two separate things (earnings and security values, respectively), it is not unreasonable to suggest that their expectations are affected in a similar way as they evaluate signals produced by accounting disclosures.

This research tests two hypotheses, both of which must hold if the similarity of analysts' and investors' expectations is to be supported:

- (1) Financial accounting disclosures that do not affect investors' expectations do not affect analysts' expectations.
- (2) Financial accounting disclosures which revise investors' (analysts') expectations should also revise analysts' (investors') expectations.

If both hypotheses hold, the limitations of stock market studies which have been used to evaluate mandated disclosure could be circumvented by evaluating changes in analysts' expectations.

### Stock Market Study Shortcomings

Stock market research has developed various methods of detecting the impact of signals generated from the securities market environment on investor expectations. The market model and changes in security transaction volumes have been the primary means used in detecting the impact of these signals. The problem is that both techniques are limited in evaluating the effects of mandated disclosure on investors.

#### The Market Model

In general, the market model splits a security's total ( $R_{it}$ ) return into two components: a systematic return ( $\alpha_i + \beta_i R_{mt}$ ), and an unsystematic return ( $u_{it}$ ) that is firm specific, has a zero (0) expected value, and is independent of the market return ( $R_{mt}$ ) and other securities' firm-specific returns ( $u_{jt}$ ).<sup>1</sup>

Therefore:

$$R_{it} = \alpha_i + \beta_i R_{mt} + u_{it}$$

where:

$R_{it}$  = the return of security  $i$  in period  $t$ .

$\alpha_i, \beta_i$  = intercept and slope of the linear relationship between  $R_{it}$  and  $R_{mt}$

$R_{mt}$  = the market return at time  $t$ .

$u_{it}$  = stochastic portion of  $R_{it}$  which is unique to firm  $i$ .

Two methods for measuring the impact of mandated disclosures are possible with this model. The first measures the unsystematic or

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<sup>1</sup>William H. Beaver, "The Behavior of Security Prices and Its Implications for Accounting Research (Methods)," The Accounting Review 47, supplement (1972): 410.

residual portion of the return that is associated with a specific disclosure event, whereas the second measures the change in the beta coefficient found in the systematic portion of a firm's return.

A limitation of all return based methodologies is that a signal's impact on investors' expectations must be reflected in price changes. Therefore, those signals that revise investors' expectations but not security prices cannot be detected using market model techniques.

### Unsystematic Return

Measurement of a signal's impact on investors' expectations using the unsystematic or residual portion of a security's return can take two forms: (1) calculating the change in the amount of this residual, and (2) measuring the change in the variance of  $u_{it}$  about its zero mean. Using the first technique Horwitz and Kolodny sought to measure the impact of segment disclosure required by the SEC in 10-K reports filed on March 31, 1971.<sup>2</sup> They tested cross-sectional and cumulative average residuals and then repeated the process using averages of the absolute values of the residuals. Their statistical tests indicated no difference in the residuals between multisegment and single segment companies. Had Horwitz and Kolodny found a significant impact, their methodology would not have provided a means of evaluating this disclosure. Their willingness to use absolute value points out that segment disclosure was not expected to revise the residuals in any specific direction. Using this

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<sup>2</sup>Bertrand Horwitz and Richard Kolodny, "Line of Business Reporting and Security Prices: An Analysis of a SEC Disclosure Rule," The Bell Journal of Economics 8 (Spring 1977): 234-49.