

THE IMPACT OF ECONOMIC FLUCTUATIONS ON EARNINGS FORECASTS

Ronald A. Stunda, Valdosta State University

ABSTRACT

Prior studies in the area of management forecasts contain a common characteristic, they make no distinction as to the economic cycle of the U.S. when assessing voluntary earnings disclosures. This research tests whether voluntary earnings disclosures released during periods of an economic downturn differ from disclosures released during periods of economic expansion. In terms of bias and information content, findings suggest that forecasts tend to significantly differ during these distinctly different periods. With the U.S. in the grip of what may be a protracted recessionary period, these findings have practical and important implications for users and disseminators of forecast information.

JEL: G10, M410

KEYWORDS: Accounting, Forecasts, Security Markets

INTRODUCTION

The 2008-2012 global economic crisis is considered by many economists to be the worst economic crisis since the Great Depression of the 1930s (Haidar, 2012). It resulted in the threat of total collapse from large financial institutions, the bailout of banks, industries and nations, and downturns in the stock markets around the world. The housing market also suffered due to evictions, foreclosures, and prolonged unemployment in the private sector. The crisis played a significant role in the failure of key businesses, declines in consumer wealth estimated in the trillions of dollars and a downturn in the economic activity leading to the 2008-2012 global recession and contributing to the European sovereign debt crisis. The U.S. Financial Crisis Inquiry Commission reported in its findings of January, 2011 that “the crisis was avoidable and was caused by; widespread failures in financial regulation, including the Federal Reserve’s failure to stem the tide of toxic mortgages, dramatic breakdowns in corporate governance resulting in firms assuming too much risk, an explosive mix of excessive borrowing and risk-taking by U.S. households, and over-leveraging by many U.S. banks.” (NY Times, 2011). This study assesses the impact that shifts in economic cycle have on the voluntary release of earnings forecasts. There exists much extant literature on the analysis of earnings forecasts, none, however, articulate any differences during periods of shifts in economic cycle. This study will attempt to do that. The article will first provide a summary of past and current relevant literature, followed by the hypotheses of the study. The data and methodology used in the study will then be elaborated, followed by results by hypotheses and then concluding comments.

LITERATURE REVIEW

Some extant research concludes that earnings forecasts may be less beneficial during unsettled economic periods (Miller, 2009), and as a result fewer may be issued during such periods. Other literature concludes that earnings forecasts help to cut through the fog of economic uncertainty (Anilowski et al, 2010) and are encouraged to assist users particularly during such periods. An analysis of the Dow Jones News Retrieval Service (DJNRS) was made for the years 2003-2012(third quarter) in an attempt to determine the number of quarterly forecasts recorded by the DJNRS for this time frame. Results are shown in Table 1.

Table 1: Quarterly Firm Point Forecasts of Earnings Dow Jones News Retrieval Service

Year	Number
2003	504
2004	489
2005	517
2006	476
2007	530
2008	521
2009	482
2010	509
2011	473
2012 (Three Quarters)	383

Table 1 indicates the numbers of quarterly earnings forecasts made by U.S. firms from 2003 through three quarters of 2012, as reported by the Dow Jones News Retrieval Service. Even though the table reflects fluctuations in numbers of forecasts per year, they do not reflect any significant change from year to year.

As can be seen from Table 1, there appears to be no discernible drop-off in the number of voluntary earnings forecasts during the economic crisis of 2008-2012. Having demonstrated this, the next step is to ascertain whether or not there are any inherent differences in the quality of the earnings forecast with respect to bias and information content during economic downturn periods (2008-2012) and economic growth periods (2003-2007). Prior research in the study of voluntary earnings forecasts finds that managers release information that is unbiased relative to subsequently revealed earnings and that tends to contain more bad news than good news (Baginski et al, 1994; Frankel, 1995). Such releases are also found to contain information content (Patell, 1976; Waymire, 1984; Pownell and Waymire, 1989). Although forecast release is costly, credible disclosure will occur if sufficient incentives exist. These incentives include bringing investor/manager expectations in line (Ajinkya and Gift, 1984), removing the need for expensive sources of additional information (Diamond, 1985), reducing the cost of capital to the firm (Diamond and Verrechia, 1987), and reducing potential lawsuits (Lees, 1981).

All of the aforementioned empirical studies have one common characteristic, they assess voluntary earnings forecasts irrespective of economic climate (i.e., during both economic expansions and contractions). The research question addressed in this study is: Do voluntary earnings forecasts differ depending upon the economic environment? This question links earnings management to voluntary disclosures of earnings. For several years researchers have found that some degree of earnings management may exist in mandatory earnings disclosures. I argue that incentives leading to earnings management may manifest in voluntary disclosures as well. If the potential exists for voluntary disclosures to be managed, then to what extent do investors rely upon the forecast information? In addressing this research question, I rely upon literature that indicates potential earnings management during periods with differing incentive structures. DeAngelo (1986) shows that managers have incentives during management buyouts to manage earnings downward in attempts to reduce buyout compensation. Collins and DeAngelo (1990) indicate that earnings management occurs during proxy contests, and market reaction to earnings during these contests is different than during non-contest periods.

DeAngelo (1990) finds that managers have incentives during merger activities to manage earnings upward so as to convey to current stockholders that the potential merger will not adversely affect their investment. Perry and Williams (1994) find that management of accounting earnings occurs in the year preceding “going private” buyouts. Stunda (1996) finds that managers exert greater upward earnings management during mergers and acquisitions. And Stunda (2003) finds greater earnings management when a firm is under Chapter 11 protection. This study assesses any differences that the economic environment may have on management forecast credibility. In accomplishing this, the presence of earnings forecast management is tested by using bias measures along with the market reaction to the forecasts. The study focus is on firm forecasts during a period of relative economic expansion (2003-2007) versus firm forecasts during a period of relative economic contraction (2008-2012). Based upon

statistical analysis, conclusions are reached that identify whether or not economic environment is a factor that has the potential for influencing voluntary earnings forecasts. The results have implications for all public firms during both periods of economic expansion and contraction, in addition to investors and potential investors in those firms.

HYPOTHESES DEVELOPMENT

Hypotheses about bias of management forecast: As previously noted, most past studies of voluntary earnings forecasts do not find evidence of bias in such disclosures. These studies of management forecasts must be considered along with the earnings management literature. For instance, voluntary disclosures facilitate additional information to the investor at a lower acquisition cost. However, if only partial communication flows from management to investors and acquiring full information is costly, there exists asymmetric information and the potential for earnings management of the forecast. If the same degree of earnings management (whether positive or negative) exists in both the forecast of earnings and actual earnings, the expectation is that there would be no difference in forecast error. If, however, the ability to perform earnings management is anticipated but not realized, some difference of forecast error would be present. If greater upward earnings management of the forecast occurs (or less actual earnings management), a negative forecast error should exist. If greater downward earnings management of the forecast occurs (or less actual earnings management), a positive forecast error should result. Thus, the first hypothesis tests for the existence of forecast error. The null hypothesis tested is:

H1: Average management forecast error (actual EPS – management forecast of EPS) equals zero for firms regardless of economic environment.

Introducing a firm-specific control (i.e., a forecast for the same firm during economic expansion versus economic contraction) allows a test of the relative forecast error in both economic environments. If firms display the same degree of earnings management in both periods, the expectation is that there will be no difference in forecast error. If, however, there exist different incentives to manage earnings (either upward or downward) during times of economic fluctuation, then a positive or negative forecast error would result. Stated in null form:

H2: The average forecast error for the firm is not significantly different during periods of economic expansion and economic contraction.

Hypothesis about information content of accounting earnings and management forecasts: If mandatory disclosures of earnings contain some degree of earnings management, then voluntary disclosures may possess the potential for such earnings management as well. Investors may react to managed earnings in one of two ways; they may discount the information as additional noise, or they may view this information as enhancing the properties of the signal (i.e., in terms of amount or variance). Research during the past two decades has shown that accounting earnings possesses information content. Current literature finds that the information content of earnings announcements is different during non-routine periods (i.e. stock proxy contests, mergers and acquisitions, buyouts, Chapter 11 proceedings, etc.). If investors interpret managed earnings forecasts as just additional noise, the market would discount this information. If, however, investors view the managed earnings forecast as a positive (or negative) signal form management, the market would not discount the information. The expectation for information content of management forecasts in varying economic environments would revolve around these two notions. These alternative notions suggest the following null hypothesis:

H3: The information content of management forecasts during periods of economic expansion is not significantly different from the information content of management forecasts during periods of economic contractions.

DATA AND METHODOLOGY

The sample consists of quarterly management forecast point estimates made during two sample periods, 2003-2007 (representing economic expansion), and 2008-third quarter 2012 (representing economic contraction). The sample met the following criteria: 1) The management earnings forecast was recorded by the Dow Jones News Retrieval Service (DJNRS). 2) Security price data was available from the Center for Research on Security Prices (CRSP). 3) Earnings data was available from Compustat. The samples consist of firms which made at least one management earnings forecast in each sample period. Table 2 provides details on the samples.

Table 2: Study Samples by Sample Period

Economic Expansion Study Period	
Year	Number of forecasts
2003	215
2004	189
2005	207
2006	176
2007	218
Total	1,005
Economic Contraction Study Period	
Year	Number of forecasts
2008	204
2009	180
2010	212
2011	178
2012	127
Total	901

Table 2 reflects the two study periods that are evaluated in this study. Years 2003-2007 reflect the years of economic expansion and contain 1,005 quarterly earnings forecasts. Years 2008-2012 reflect the years of economic contraction and contain 901 quarterly earnings forecasts for the same firms identified in the economic expansion sample. The information was obtained from the Dow Jones News Retrieval Service.

Test of Hypothesis 1

The management forecasts of earnings must be related to actual earnings in order to determine if bias exists. McNichols (1989) analyzes bias through the determination of forecast error. Stated in statistical form, the hypothesis is represented in Equation 1 as follows:

$$\Sigma \frac{f_{ei}}{n} = 0 \tag{1}$$

Equation 1 describes how forecast error is determined:

Where:

f_{ei} = forecast error of firm i (forecast error = actual eps – management forecast of eps), deflated by the firm’s stock price 180 days prior to the forecast.

In order to test hypothesis 1, firm forecasts included in the combined study samples were analyzed. Statistical analysis is performed on the samples in order to determine if the average forecast error is zero. McNichols (1989) and DeAngelo (1988) conduct a t-test on their respective samples in addition to a Wilcoxon signed rank test. Lehmann (1975) reports that the Wilcoxon tests has an efficiency of about 95% relative to a t-test for data that are normally distributed, and that the Wilcoxon test can be more efficient than the t-test for non-normal distributions. Therefore, this analysis consists of performing a t-test and a Wilcoxon signed rank test on the average cross-sectional differences between actual earnings per share and the management forecast of earnings per share.

RESULTS

Hypothesis 1 Results

Test of hypothesis 1 was conducted on the combined two samples (i.e., forecasts made during periods of economic expansion, and forecasts made during periods of economic contraction), a total of 1,906 firm forecasts. Table 3 contains the results of this test.

Table 3: Average Management Forecast Error Deflated by Firm’s Stock Price 180 Days Prior to Forecast

Model: $\sum \frac{fei}{n} = 0$

n	Mean	Medium	Minimum	Maximum	Standard Deviation	(t-statistic)
1,906	0.04	0.01 ***	-0.127	0.229	0.0017	(2.25) **

*Table 3 assesses the bias of voluntary earnings forecasts for all quarterly forecasts included in both samples. That is, the 1,005 forecasts from the expansion study period, and the 901 forecasts from the contraction study period, for a total of 1,906 total forecasts. This analysis is made to determine a baseline measurement of all forecasts in this study to ensure that results are comparable with prior studies that assess forecast bias. ** Significant at the .05 level (two-sided test). *** Significant at the .01 level using the non-parametric sign-rank test. fei = forecast error of firm i (actual eps – management forecast of eps) n = sample of 1,906 firm forecasts during 2003-2012*

Table 3 indicates a mean forecast error for these forecasts is 0.04 with a p-value of .05. Using the distribution-free rank test, significance is observed at the .01 level. These results are consistent with the preponderance of extant earnings forecast literature that indicates that management forecasts tend to reflect more bad news in the forecast relative to actual earnings. As a result, Hypothesis 1 which states that average management forecast error equals zero regardless of economic environment is overturned, since the forecasts in the sample, on average, exhibits downward bias of the management forecast.

Test of hypothesis 2

The second hypothesis introduces firm-specific and time-specific controls, namely, it assesses potential bias of the management forecast by the two study periods, those made during economic expansion, and those made during economic contraction for the same firms. This permits a test of the relative forecast error in these two respective periods. Stated in statistical form the hypothesis is represented in Equation 2 as follows:

$$\sum \frac{fei}{n \text{ expansion}} = \sum \frac{fei}{n \text{ contraction}} \tag{2}$$

Equation 2 reflects the hypothesis that in null form suggests that forecast errors in expansion periods are equal to forecast errors in contraction periods.

In order to test hypothesis 2, the same firms are selected from both samples. Required criteria for this test is at least one management forecast of earnings had to exist during each sample period for each firm. When this constraint is applied to the firms, the sample size as indicated in Table 2 is greatly reduced. For the sample period 2003-2007 (economic expansion), a total of 147 firm forecasts are observed. For the sample period 2008-2012 (economic contraction), a total of 121 firm forecasts are observed.

Hypothesis 2 Results

Test of hypothesis 2 was conducted on two samples; one sample including firm forecasts between 2003-2007 (economic expansion), and the other sample including firm forecasts between 2008-2012 (economic contraction). As mentioned above, both of these samples contained the same firms. Table 4 contains the results of this test.

Table 4: Average Management Forecast Error Deflated by Firm’s Stock Price 180 Days Prior to Forecast

Model: $\Sigma \frac{fei}{n \text{ expansion}} = \Sigma \frac{fei}{n \text{ contraction}}$						
Panel A- Management Forecasts during Economic Expansion (2003-2007)						
n	Mean	Medium	Minimum	Maximum	Standard Deviation	(t-statistic)
1,005	0.03	0.01 ***	-0.027	0.229	0.0020	(2.26) **
Panel B- Management Forecasts during Economic Contraction (2008-2012)						
n	Mean	Medium	Minimum	Maximum	Standard Deviation	(t-statistic)
901	-0.12	-0.05***	-0.220	0.121	0.0011	(-2.35) ***

Table 4 reflects forecast error of the two samples. Panel A, reflecting the economic expansion sample, indicates a mean forecasts error that is positive (i.e., .03). This means that the earnings forecast was lower than the actual earnings number for these sample forecasts. Panel B, reflecting the economic contraction sample, indicates a mean forecast error that is negative (i.e., -.12). This means that the earnings forecast was higher than the actual earnings number for these sample forecasts. These results indicate that these two study periods are different from an earnings forecast perspective. Panel A: ** Significant at the .05 level (two-sided test). *** Significant at the .01 level using the non-parametric sign-rank test. fe_i = forecast error of firm i (actual eps – management forecast of eps) n = sample of 147 firm forecasts during 2003-2007. Panel B: *** Significant at the .01 level (two-sided test). *** Significant at the .01 level using the non-parametric sign-rank test. fe_i = forecast error of firm i (actual eps – management forecast of eps) n = 1,005 firm forecasts during expansion periods and 901 firm forecasts during contraction periods.

Table 4 reflects forecast error of the two samples. Panel A, reflecting the economic expansion sample, indicates a mean forecasts error that is positive (i.e., .03). This means that the earnings forecast was lower than the actual earnings number for these sample forecasts. Panel B, reflecting the economic contraction sample, indicates a mean forecast error that is negative (i.e., -.12). This means that the earnings forecast was higher than the actual earnings number for these sample forecasts. These results indicate that these two study periods are different from an earnings forecast perspective.

Panel A of Table 4 indicates results for the economic expansion sample of firm forecasts of earnings per share. Mean forecast error for these forecasts is .03 with a p-value of .05. Using the distribution-free rank test, significance is observed at the .01 level. As seen with hypothesis 1, these results are consistent with prior earnings forecast literature which indicates that management forecasts tend to reflect more bad news in the forecast relative to actual earnings. Panel B of Table 4 provides results for the economic contraction sample of firm forecasts of earnings per share. Mean forecast error for these firms is -.12 with a p-value of .01. Using the distribution-free rank test, significance is observed at the .01 level. These results are inconsistent with those from Panel A. They indicate that forecasts during economic contraction tend to reflect more good news in the forecast relative to actual earnings. Therefore, hypothesis 2 which states that there is no significant difference in forecast error between these two sample periods must be rejected.

Test of hypothesis 3

The purpose of this test is to assess the relative information content of management earnings forecasts during periods of economic expansions and economic contractions. The following model in Equation 3 is used to evaluate information content:

$$CAR_{it} = a + b1UE_{it} + b2UEE_{it} + b3UEC_{it} + b4MB_{it} + b5B_{it} + b6MV_{it} + e_{it} \tag{3}$$

Where:

<i>CARit</i>	=	<i>Cumulative abnormal return forecast i, time t</i>
<i>a</i>	=	<i>Intercept term</i>
<i>UEit</i>	=	<i>Unexpected earnings for forecast i, time</i>
<i>UEEit</i>	=	<i>Unexpected earnings for forecast i, time t during economic expansion</i>
<i>UECit</i>	=	<i>Unexpected earnings for forecast i, time t during economic contraction</i>
<i>MBit</i>	=	<i>Market to book value of equity as proxy for growth and persistence</i>
<i>Bit</i>	=	<i>Market model slope coefficient as proxy for systematic risk</i>
<i>MVit</i>	=	<i>Market value of equity as proxy for firm si</i>
<i>eit</i>	=	<i>error term for forecast i, time t</i>

Equation 3 indicates the regression model that is used to assess the information content of the earnings forecasts for both expansion and contraction study periods. In addition to assessing those two specific periods, (i.e., b2 and b3 variables), an assessment is also made for total forecast samples (b1 variable), and other variables that have shown significance in prior studies such as growth, risk and size (b4, b5 ,b6 variables).

The coefficient a in the above model measures the intercept. The coefficient b₁ is the earnings response coefficient (ERC) for all firms (i.e., 1,906) in both samples. The coefficient b₂ represents the incremental ERC for firm forecasts made during periods of economic expansion (i.e., 1,005). The coefficient b₃ represents the incremental ERC for firm forecasts made during periods of economic contraction (i.e., 901). The coefficients b₄, b₅, and b₆ are contributions to the ERC for all firms in the sample. To investigate the effects of the information content of management forecasts on ERC, there must be some control for variables shown by prior studies to be determinants of ERC. For this reason, the variables represented by coefficients b₄, b₅ and b₆ are included in the study. Unexpected earnings (UE_i) is measured as the difference between the management earnings forecast (MF_i) and the security market participants' expectations for earnings proxied by consensus analyst following as per Investment Brokers Estimate Service (IBES) (EX_i). The unexpected earnings are scaled by the firm's stock price (P_i) 180 days prior to the forecast. This is illustrated in Equation 4:

$$UE_i = \frac{MF_i - EX_i}{P_i} \quad (4)$$

This equation is used to assess unexpected earnings. Unexpected earnings is measured as the difference between the management forecast of earnings and the expected earnings level as determined by consensus analyst following per Investment Brokers Estimate Service. This value is then deflated by the firm's stock price 180 days prior to the forecast.

For each disclosure sample, an abnormal return (AR_{it}) is generated for event days -1, 0, and +1, where day 0 is defined as the date of the forecast disclosure identified by the DJNRS. The market model is utilized along with the CRSP equally-weighted market index and regression parameters are estimated between days -290 and -91. Abnormal returns are then summed to calculate a cumulative abnormal return (CAR_{it}). Hypothesis 3 is tested by examining the coefficients associated with unexpected earnings during economic expansion (b₂) and economic contraction (b₃). There are two possible conclusions of results; the forecast may be noisy, which in this event, the coefficient < 0, or the forecast will possess an information-enhancing signal to the investor, which will result in the coefficient > 0.

Hypothesis 3 Results

Hypothesis 3 tested information content of management forecasts during periods of economic expansion and economic contraction. Table 5 reports the results of this test. As indicated in the table, the

coefficient representing the overall ERC for all firm forecasts in both study periods (b_1) has a value of 0.14 with a p-value of .01. This is consistent with prior management forecast literature regarding information content. The coefficient representing the incremental ERC for firm forecasts during economic expansions (b_2) has a value of 0.10 with a p-value .01. The coefficient representing the incremental ERC for firm forecasts during economic contractions (b_3) has a value of -0.03 with a p value of .01. All other control variables are not significant at conventional levels. These findings indicate that not only do forecasts contain information content, there is a difference between the information content of forecasts made during periods of economic expansion versus those made in economic contraction. Those made during economic expansion possess an information-enhancing signal to investors and other users while those made during economic contraction are interpreted by investors and other users as being noisy information that may or may not be usable.

Table 5: Test of Information Content of Management Forecasts

Model: $CAR_{it} = a + b_1UE_{it} + b_2UEE_{it} + b_3UEC_{it} + b_4MBit + b_5Bit + b_6MV_{it} + eit$							
CAR_{it}	=	Cumulative abnormal return forecast i , time t					
a	=	Intercept term					
UE_{it}	=	Unexpected earnings for forecast i , time					
UEE_{it}	=	Unexpected earnings for forecast i , time t during economic expansion					
UEC_{it}	=	Unexpected earnings for forecast i , time t during economic contraction					
$MBit$	=	Market to book value of equity as proxy for growth and persistence					
Bit	=	Market model slope coefficient as proxy for systematic risk					
MV_{it}	=	Market value of equity as proxy for firm si					
eit	=	error term for forecast i , time t					
Coefficients (t-statistics)							
a	b1	b2	b3	b4	b5	b6	Adjusted R ²
0.20 (.78)	0.14 (2.35)***	0.10 (2.40)***	-0.03 (2.42)***	0.11 (0.32)	-0.05 (-0.18)	0.04 (0.28)	0.189

Table 5 reflects the results of the assessment of information content through the running of the regression formula above. For the total forecast sample (b_1 variable) the Earnings Response Coefficient is positive (0.14) and significant at the .01 level. For the economic expansion forecast sample (b_2 variable) the Earnings Response Coefficient is positive (0.10) and significant at the .01 level. For the economic contraction forecast sample (b_3 variable) the Earnings Response Coefficient is negative (-0.03) and significant at the .01 level. This indicates that all forecasts possess information content but those during economic contractions are perceived by investors to be noisy or unusable. Other variables assessed in the model are not significant at traditional levels. ***Significant at the .01 level (two-sided test) b_1 , b_4 , b_5 and b_6 sample = 1,906 firm forecasts b_2 sample = 1,005 firm forecasts b_3 sample = 901 firm forecasts

In addition, whenever a set of multiple regression variables are employed, there is a probability of the presence of multicollinearity within the set of independent variables which may be problematic from an interpretive prospective. To assess the presence of multicollinearity, the Variance Inflation Factor (VIF) was utilized. Values of VIF exceeding 10 are often regarded as indicating multicollinearity. In the test of hypothesis 3, a VIF of 1.9 was observed, thus indicating the non-presence of significant multicollinearity.

CONCLUDING COMMENTS

This study provides empirical evidence regarding the credibility of management forecasts of earnings during differing economic cycles, namely, economic expansion, and economic contraction. Past research on earnings forecasts assess the forecast over time periods which do not consider the effects of the economic cycle on the forecast. This study is the first to attempt to do so. Earnings forecasts were broken into two sample periods; an expansion period (2003-2007), and a contraction period (2008-2012). Firms that issued forecasts in both of these sample periods were evaluated. The evaluation consisted of conducting a study of bias for all firms in both periods combined to assess if results are comparable to previous studies. In addition, a study of bias was conducted for each sample separately to assess any differences between expansion and contraction samples. Lastly, a regression analysis was made for each sample period in order to assess any differences in information content of the

earnings forecasts between the two periods. Bias results indicate that during periods of economic expansion, managers exert greater downwards earnings management on the forecast (relative to actual earnings). This is consistent with prior management forecast literature. However, during periods of economic contraction, managers exert greater upwards earnings management on the forecast (relative to actual earnings). Information content results indicate the presence of information content in management forecasts during both economic expansion and contraction periods. During economic expansion, forecasts tend to exhibit an information-enhancing signal to users. However, during economic contraction, investors interpret the forecast as being more noisy and potentially less informative.

These findings have significant implications for managers issuing earnings forecast during an economic contraction. If investors become aware of a potentially positively biased forecast, there will be a tendency for these users to discount the information provided by the forecast. Both managers and users of the management forecast must be cognizant of potential upward bias of earnings forecasts during contraction periods. Although the time periods that were utilized were constrained by the length of time of the contraction period (i.e., not quite five years of economic contraction forecasts were available, thus the economic expansion study period had to be limited to a similar time period for more comparable results), this was partially offset by the total number of forecasts used in the study. Most prior studies evaluating earnings forecasts use limited numbers of forecasts, normally under 100 in total, this study utilized almost 2,000 forecasts. Future studies might encompass greater time frames with even larger numbers of forecasts.

REFERENCES

- Ajinkya, B. and M. Gift (1984). Corporate managers earnings forecasts and symmetrical adjustments of market expectations. *Journal of Accounting Research*, (Autumn), 425-444.
- Anilowski, C., M. Feng, and D. Skinner (2010). Does earnings guidance affect market returns? *The Journal of Accounting and Economics* (44), 36-63.
- Baginski, S., J. Hassell, and G. Waymire (1994). Some evidence on the news content of preliminary earnings estimates. *The Accounting Review*, (January), 265-271.
- Collins, D. and L. DeAngelo (1990). Accounting information and corporate governance. *Journal of Accounting and Economics*, 13, 213-247.
- DeAngelo, L. (1988). Managerial competition, information costs, and corporate governance. *Journal of Accounting and Economics*, (January), 3-36.
- DeAngelo, L. (1990). Equity valuations and corporate control. *The Accounting Review*, (January), 93-112.
- Diamond, D. (1985). Optimal release of information by firms. *The Journal of Finance* (September), 1071-1093.
- Diamond, D. and R. Verrecchia (1987). Constraints on short-selling and asset price adjustments to private information. *Journal of Financial Economics*, 18, 277-311.
- Frankel, R., M. McNichols, and P. Wilson (1995). Discretionary disclosures and external financing. *The Accounting Review*, (January), 135-150.
- Haider, J. (2012). Sovereign credit risk in the euro zone. *World Economics*, Vol 13, 123-136.

Lees, F. (1991). Public disclosure of corporate earnings forecasts. New York: The New York Conference Board.

Lehman, E. (1975). Nonparametrics: statistical methods based on ranks. San Francisco: Holden-Day Press, 171-175.

Miller, G. (2009). Should managers provide forecasts of earnings? *Journal of Accounting Research*, 40(1), 173-204.

Patell, J. (1976). Corporate forecasts of earnings per share and stock price behavior. *Journal of Accounting Research*, (Autumn), 246-276.

Stunda, R. (1996). The credibility of management forecasts during mergers and acquisitions. *American Academy of Accounting and Finance*, (December), 352-358.

BIOGRAPHY

Ronald Stunda is Professor of Accounting at Valdosta State University. He also serves as reviewer for several journals. His research deals mainly with market-based applied accounting research and has appeared in such journals as *Academy of Business Journal*, *Journal of Business and Behavioral Sciences*, *Advances in Business Research*, and the *Journal of Accounting and Financial Studies*. He can be reached at Valdosta State University, 1500 North Patterson Street, Valdosta, GA, 31698, rastunda@valdosta.edu.