



Management

EARNING MANAGEMENT MODELING BASED ON FINANCIAL COMMUNICATION

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Abstract

The present research is focused on financial communication area and aim to investigate the relationship between company's web-based financial communications, information asymmetry and earning management. The research is aim to examine whether financial communication besides its usefulness could be act as contributory means for management in order to earning management. In other words, aim to challenges management incentives toward web-based financial information disclosure.

Keywords: Financial Communications; Signaling Theory; Asymmetry Information; Earning Management.

Cite This Article: Mojtaba Mortezaee. (2018). "EARNING MANAGEMENT MODELING BASED ON FINANCIAL COMMUNICATION." *International Journal of Research - Granthaalayah*, 6(10), 274-279. <https://doi.org/10.29121/granthaalayah.v6.i10.2018.1194>.

1. Introduction

1.1. Financial Communication

Financial communication is consider as any activity for financial information and for promoting the financial image of the entity¹ and provide the basis of institutional communication². Signaling theory is the main theory which will be considered in present research. Signaling theory is useful for describing behavior when two parties (individuals or organizations) have access to different information³. Among the vectors of financial communication strategy, the internet must be underlined as the most important⁴⁻⁸. Besides signaling theory the cultivation analysis theory argues that media plays an extremely important role in how people view their world. According to Cultivation Analysis, in modern culture most people get much of their information in a mediated fashion. Spiral of Silence Theory argue that due to their enormous power, the internet communication as mass media⁹ have a lasting effect on public opinion.

1.2. Asymmetry Information

Signaling theory is fundamentally concerned with reducing information asymmetry between two parties¹⁰. Inter-departmental knowledge asymmetries of this kind potentially pose problems for organizations in as much as they may give rise to misunderstandings, increased communication costs, hinder coordination efforts¹¹. Traditional knowledge gap models¹² assume that one party in a communicative event has relevant and sufficient knowledge (the “have” position) whereas the other does not (the “have not” position), and that this gap tends to widen over time¹³.

1.3. Earning Management

Theorists in cultural studies maintain that the internet communication as a mass media represents ideologies of the dominant class in a society. Because media are controlled by corporations, the information presented to the public is necessarily influenced and framed with profit in mind. Cultural Studies theorists, therefore, are concerned with media influenced and framed with profit in mind. According to¹⁴, earnings management occurs when managers use judgment in financial reporting to alter financial reports¹⁵. Academics often use agency theory in describing earnings management behavior. More importantly, the essence of signaling theory is that the performer can purposively modify one or more of said variables for communicative purposes¹⁶.

2. Explain the Theoretical Connections

This section try to explain the theatrical connections between variables which are based on communication theories and also is an introduction to problem statement. Relationship between Internet Financial communication, Asymmetry information and Earning Management can be explain through Signaling Theory, Cultivation Analysis Theory, Spiral of Silence Theory and Cultural studies. Thus, based on Cultivation analysis theory mass media (internet) plays an extremely important role in how people view their world. In the following; Spiral of Silence Theory argue that due to their enormous power, the internet communication as mass media¹⁷ have a lasting effect on public opinion and then considering internet financial communication under web, signaling theory is fundamentally concerned information asymmetry between two parties (management as agent of company and stakeholders) and finally Cultural Studies theorists, are concerned with mass media influenced and framed with profit in mind which could be as a motivating factor for earning management.

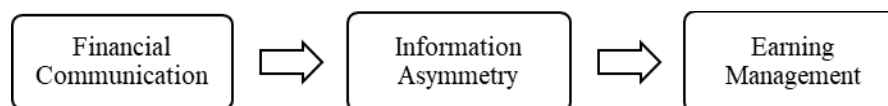


Figure 1: Conceptual Framework

3. Modeling

3.1. Internet Financial Communication

Evaluate the level of financial communication on company’s websites is approached by a financial communication score by scoring technique and analysis grid of websites are practices use to evaluate information disclosure levels¹⁷⁻²⁰. The earlier works propose below model (1) :

$$\text{Financial Communication Score} = \alpha + \beta_1 (\text{Market}) + \beta_2 (\text{Size}) + \beta_3 (\text{Sector}) + \beta_4 (\text{Capital Structure}) + \beta_5 (\text{Level of Debts}) + \beta_6 (\text{Performance}) + \beta_7 (\text{Growth}) \quad (1)$$

Where;

Market = explanatory variables of financial disclosure on the internet

Size = natural logarithm of the total assets

Sector = considering statistical sample study assigned a value of 1 or 0

Capital Structure = subtracting shares held by leaders and institutional investors from the entirety of shares on the market

Level of debts = ratio of long-term debts to the total assets

Performance = can be measure in terms of ROA before amortization or ROE before tax

Growth = the difference between the market value and the book value

3.2. Financial Communication Based on Weighted Parameters

It should be noted that unlike previous studies different weight ($W_{i,j}$) base on analysis grid of web sites¹⁸ in four different area includes; financial reports, investor information, website's ergonomomy and firm profile.

3.3. Information Asymmetry

In order to construct the information asymmetry (IA) index, denoted as IA_INDEX. The largest (smallest) value the variable IA_INDEX shows the highest (lowest) degree of information asymmetry²¹. Thus, Information asymmetry index model based on financial communication can be proposed as follows:

$$\text{IA_INDEX} = \sum_{j=1}^{10} \beta_j \sum_{i=1}^7 w_{i,j} \lambda_{i,j} \quad (2)$$

and in expanded form;

$$\text{IA_INDEX} = \beta_0 + \beta_1 (w_{(1,1)} \lambda_{1,1} + w_{(2,1)} \lambda_{2,1} + \dots + w_{(7,1)} \lambda_{7,1}) + \beta_2 (w_{(1,2)} \lambda_{1,2} + w_{(2,2)} \lambda_{2,2} + \dots + w_{(7,2)} \lambda_{7,2}) + \dots + \beta_{10} (w_{(1,10)} \lambda_{1,10} + w_{(2,10)} \lambda_{2,10} + \dots + w_{(7,10)} \lambda_{7,10})$$

Where;

IA_INDEX = Information asymmetry index based on internet financial communication

β_j = Information asymmetry variables coefficient

$w_{(i,j)}$ = Weight of internet financial communication in Information asymmetry index

$\lambda_{(i,j)}$ = Regression model coefficients determined in the analysis

$$w_{i,j}^2 = \sigma_{y,i}^2 + \sum_{i=j}^n \left(\frac{\partial f}{\partial x_{j,i}} \right)^2 \sigma_{j,i}^2$$

Where;

$w_{(i,j)}$ = Weight applied to the i th data point, $\sigma_{(y,i)}^2$ = Variance of the i th y value j th, $\sigma_{(j,i)}^2$ = Variance of the j th independent variable,

x_i at the i th data point, n = number of dependent variables, m = number of data point.

4. Conclusion (Final Modeling)

Present research use of discretionary accruals²² in tests of earnings management model based on financial communication. Cross sectional within-industry discretionary accruals are the residuals from the Jones model. Discretionary accruals from the Jones model are estimated for each industry and year as follows:

$$TACC_t = \alpha_0 \left(\frac{1}{Assets_{t-1}} \right) + \alpha_1 \Delta sale_t + \alpha_2 PPE_t + \alpha_3 ROA_t + \varepsilon_t$$

With parameters obtained from the accruals regression, nondiscretionary accruals are estimated as:

$$NDACC_t = \hat{\alpha}_0 \left(\frac{1}{Assets_{t-1}} \right) + \hat{\alpha}_1 \Delta sale_t + \hat{\alpha}_2 PPE_t + \hat{\alpha}_3 ROA_t$$

Where;

TACC_t = total accruals

NDACC_t = nondiscretionary accruals

Δsale^t = equals the change in the firm's sales from year t-1 to year t

PPE_t = equals the firm's gross property, plant, and equipment at year t

ROA_t = return on asset (net income over total assets) at year t

â1, â2, â3 = estimated parameter for firm i

α1, α2, α3 = estimated and denoted as â1, â2, â3 respectively

ε t = discretionary accruals for firm i, in year t

The parameters in above equation can be estimated using either time-series data of each firm²³ or cross-sectional data²⁴. To calculate the matched Jones model discretionary accrual for firm i we subtract the Jones-model discretionary accrual of the firm with the closest return on assets (ROA) that is in the same industry as firm i. Matching is based on ROA in year t-1, which is earning management index.

$$DACC = TACC - NDACC$$

To test proposed questions, use multivariate analysis. Finally, use following multiple regression consist of five information asymmetry measure in order to measure earning management.

$$|DACC_{i,t}| = \alpha_0 + \alpha_1 IA_INDEX_{i,t} + \alpha_2 DEBT_{i,t} + \alpha_3 MKTBV_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GROWTH_{i,t} + \varepsilon_{it} \quad (3)$$

Where;

DACC = is the discretionary (managed) accounting accruals under modified Jones model

IA_INDEX_{i,t} = information asymmetry index which is calculate based on financial communication

DEBT_{i,t} = ratio of long-term debt divided by the book value of equity

MKTBV_{i,t} = market capitalization divided by the book value of equity

SIZE_{i,t} = natural log of the market capitalization

$GROWTH_{i,t}$ = net revenues (current year) less net revenues (previous year) scaled by net revenues for the previous year.

The test of the model will be performed by estimating α_1 . It is anticipated that a α_1 that is significantly greater than zero would provide evidence of a positive effect of information asymmetry level based on financial communication on the magnitude of earnings management.

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