

Full Length Research Paper

The value relevance of accounting information and its impact on market vulnerability: a study of listed manufacturing companies in Sri Lanka

Tharmila K.* and Nimalathanan B.

Abstract

Department of Accounting, University
of Jaffna.

*Corresponding Author's E-mail:
ktharmila@gmail.com

This study examines the impact of value relevance of accounting information on market vulnerability of the listed manufacturing companies in Colombo stock exchange (CSE). Using one of accounting based measure of market vulnerability which is measured by market price per share. The sample of this study composed of twelve companies listed in the CSE and period of 5 five years from 2009 to 2013. The required data and information for the study were gathered from published annual reports, fact book, and website of listed companies in CSE from 2009 to 2013. Descriptive and inferential statistics were used for this purpose for the study. The results revealed that earning per share (EPS) and net assets value per share (NAVPS) significantly impact on market vulnerability. Further EPS and NAVPS are significantly correlated with market vulnerability. Outcome of the study would be beneficial to the practitioners, academicians, policy makers and others.

Keywords: Value Relevance of Accounting Information, Market Vulnerability, Colombo Stock Exchange.

INTRODUCTION

Value relevance is being defined as the ability of information disclosed by financial statements to capture and summarize firm value. Value relevance can be measured through the statistical relations between information presented by financial statements and stock market values (returns). A business enterprise specifically a company is a conscious, deliberate and purposeful creation for satisfying the domain of aspiration of the society at large. It is an independent and a separate legal entity. The survival stability and growth of such entity within society largely depend on the wealth created by it through the collective efforts of all the stakeholders – providers of loan capital, employees and the government. All these stakeholders are the parties to whom the result of operations of business is

communicated. To satisfy the information needs of these users, the conventional financial accounting system generates data relating to financial performance through Comprehensive Income Statement giving emphasis on the interest of shareholders (i.e., owners) only.

The Comprehensive Income Statement does not provide any information showing the extent of the value or the wealth created by the company for a particular period. Contribution to the company by other stakeholders cannot be accessed through the Comprehensive Income Statement. Hence, there is a need to modify the existing accounting and financial reporting system so that a business unit is able to give importance to judge its performance by indicating the value or wealth created by it. To this direction inclusion of

the Value Added Statement (VAS) in financial reporting system is a newly developed technique, which is regarded as a part of social responsibility accounting and reporting. The manufacturing sector in Sri Lanka is very important due to their critical role in the economy. The performance of the Manufacturing sector, which holds the dominant position in the manufacturing sector in Sri Lanka presently, 287 companies representing 20 sectors listed at the CSE in Sri Lanka. In this setting the research problem is as follows.

“Does Accounting Information have lost their relevance on Share market Vulnerability in the manufacturing sector in Sri Lanka?”

Objectives

Main objective of the study is to identify the impact of the value relevance of accounting Information on Share Market Vulnerability of listed manufacturing companies in Sri Lanka. To achieve above objective the following sub objectives were formulated

1. To find out the value relevance variables among the financial related variables such as EPS and NAVPS in a company.
2. To examine association between the value relevance of accounting information and Market Vulnerability.
3. To provide required suggestions to the Accounting Standard setting bodies and Investment Consultants to improve the Value relevance of accounting information.

Literature review

Value relevance is being defined as the ability of information that is presented by financial statements to capture and summarize firm value. Value relevance can be measured by the statistical relations between information that financial statements present and stock market values or returns (Suadiye, 2012).

Generally, investors are not in a situation to directly assess the performance of companies in which they intend to invest. They usually depend on financial statements prepared by the management of such organization. The primary purpose of financial statements is to provide information concerning the financial situation of the company, its operational results, any changes of control in the company and cash flow (Nirmala and Florence, 2011).

The impact of financial statement information on capital markets indicators referred to as the value relevance studies and it is part of the market-based accounting stream. Information is considered ‘value relevant’ if stock price movements are associated with the release of such information (Utami and Noraya, 2010).

In an analysis of Nigerian Stock Market consisting top 30 companies from 2001 to 2004 (Germon and Meek, 2000) found that the relationship between share price and EPS is high but the Return on equity is very low. A similar picture is found in the study on stock exchange of Germany, Norway and The United Kingdom (King and Langli, 1998). A different scenario is found in another study on CSE taking 6 commercial banks from 2005-2009 that Return on equity is significantly related with the share price (Perrera and Thrikawala, 2010).

For financial reporting to be effective, accounting information to be relevant, complete and reliable (Hendricks, 1976). The primary purpose of the financial statements is to provide information about a company in order to make better decisions for users particularly the investors. (Germon and Meek, 2001). It should also increase the knowledge of the users and give a decision maker the capacity to predict future actions. Therefore, relevance accounting information can be described as an essential pre requisite for stock market growth. (Oyerinde, 2009).

Actually the information content of accounting numbers is inferred from changes in the level or in the variability of stock prices and from changes in the volume of security trades over a short time period during which these data are publicly released (Pascal and Bernard, 2002). One of the most common methods of investigating the quality of accounting information is value relevance. This was firstly applied by Ball and Brown (1968). By examining the correlation of earnings with share returns, they concluded that high correlations are interpreted as a sign of accounting information of high quality. The analysis of Ball and Brown (1968) generated many studies that compared value relevance of accounting information with different accounting standards.

A value relevance study is evaluation of the relationship between accounting information and capital market values (market values). Beaver (2002) indicated that the theoretical groundwork of value relevance studies adopting a measurement approach is a combination of valuation theory plus contextual accounting and financial reporting arguments (accounting theory) that allows the researcher to predict how accounting variables and other information relating to market value will behave. Holthausen and Watts (2001) suggest that value relevance studies use two different theories of accounting and standard setting to draw inferences: (i) “direct valuation” theory and (ii) “inputs-to equity-valuation” theory. Direct valuation theory proposes a link between accounting earnings and stock market value. In direct valuation theory, accounting earnings is intended to either measure or be combined with the equity market value changes or levels.

While there have been a number of studies on this study in the developed countries. At the time of this study we are not aware of any study that has explored directly in this study in Sri Lanka context. Therefore, this

INDEPENDENT VARIABLE

Earnings per Share (EPS)

Net Assets Value per Share (NAVPS)

Value
Relevance of
Accounting
Information

DEPENDENT VARIABLE

Market
Vulnerability

Market Price per Share

Figure 1. Conceptual Frame Work

study fill the gap in literature by investigating the accounting information reflects the market vulnerability of the manufacturing companies in Sri Lanka CSE. Thus, in turn should accelerate development of the Sri Lankan CSE.

Conceptual frame work

Based on the literature it is evident that the accounting information has an impact on market vulnerability. Previous researchers have studied some important value relevant accounting information in their studies. Most of the Literature, they have selected the EPS, NAVPS as the accounting information. (Figure 1)

Hypotheses development

Based on the reviews of the value relevance literature found in Utami and Noraya, (2010) studies the impact of financial statement information on capital markets indicators referred to as the value relevance studies and it is part of the market-based accounting stream. Information is considered 'value relevant' if stock price movements are associated with the release of such information (2010). And Gjerde, Knivsfla and Sættem, (2007) studied the value relevance of accounting information in Norway's Capital Market within 1965-2004. They claimed that the value relevance of accounting information during this period has not decreased and changing from European-Continental model to American-British had positive impact on value relevance of financial reports information. Thus:

H₁: There is an impact of value relevance of accounting information on market Vulnerability.

H_{1a}: Does the earning per share impact on the market price per share.

H_{1b}: Does the net assets value per share impact on the market price per share.

Some study about that the relationship between Accounting Information and Market Price per Share. Further it revealed that investors still consider Accounting Information which contain in the published financial statements of Commercial Banks registered under CSE for the stock market decisions in Sri Lanka (Perrera and Thrikawala, 2010). And studies many researchers used relationship between Market price per share as the dependent variable and a set of independent variables. Highlighted the relationship between stock prices and the accounting information disclosed in the financial statements.(Ball and Brown 1968).Thus:

H₂: The Value relevance of accounting information is significantly correlated with Market Vulnerability.

H_{2a}: EPS is significantly correlated with Market Price per Share.

H_{2b}: NAVPS has significantly correlated with Market Price per Share.

METHODOLOGY

Scope

The scope of the study is listed manufacturing companies on CSE, Sri Lanka. Thirty nine companies are listed

under manufacturing sectors. Hence, out of thirty nine, only twelve companies are selected for the study purpose as convenience. The companies include (1) Abans Electricals PLC, (2) ACL Cables PLC, (3) ACL Plastics PLC, (4) Dipped Products PLC, (5) Kelani Cables PLC, (6) Laxapana Batteries PLC (7) Piramal Glass Ltd, (8) Print care PLC, (9) Richard Pieris Exports PLC, (10) Samson International PLC, (11) Tokyo Cement Company (Lanka) PLC and (12) Royal Ceramics Lanka PLC.

Data sources

In order to meet the objectives of the study, data were collected from secondary sources mainly from financial report of the selected companies, which were published by CSE in Sri Lanka.

Reliability and validity

Secondary data for the study were drawn from audited accounts (i.e., Comprehensive income statement and financial position) of the concerned companies as fairly accurate and reliable. Therefore, these data may be considered reliable for the study. Necessary checking and cross checking were done while scanning information and data from the secondary sources. All these efforts were made in order to generate validity data for the present study. Hence, researcher satisfied content validity.

Mode of analysis

After collecting data the researcher were analyses this data verify of techniques. In this study correlation and regression techniques are used for analysis.

Research model

Simple linear correlation model is formed to find out the relationship between Value relevance of accounting information on market vulnerability measures for the selected manufacturing firms. The correlation model will be formulated in the following manner:

$$Y = \beta_0 + \beta X + E$$

Where Y is the dependent variable, β_0 is an intercept and β is the co-efficient of the independent variable. By substituting both dependent and independent variables in the above model, the following models can be formed:

Model Specification

$$MV_t = \beta_0 + \beta_1 EPS_t + \beta_2 NAVPS_t + \epsilon$$

Model

Where:

MV_t = Market Vulnerability

EPS_t = Earnings per Share

$NAVPS_t$ = Net Assets Value Per Share

$\beta_0 = \beta_1 = \beta_2$ = Regression Parameters

Data analysis and presentation

Descriptive analysis for the sample is performed on the dependent variable (Market Price per Share) and the independent variables (EPS and NAVPS). The Analysis examines the mean standard deviation and ranges of the data.

Table 1 illustrates that, descriptive statistics for all variables that the Average share price of the manufacturing companies which registered in CSE is 68.3992. The Minimum share price is LKR. 5.36 and the maximum recorded as LKR. 142.89. Standard deviation of share price is LKR. 41.62632.

Average earning per share of the manufacturing companies is 6.3305, the minimum earning per share is LKR. (0.68) and the maximum recorded as LKR. 21.10 standard deviation of earning per share LKR. 6.62793.

Average net assets value per share of the manufacturing companies which registered in CSE is 51.8363. The minimum net assets value per share is LKR. (2.15), and the maximum recorded as LKR. 103.61, standard deviation of NAVP is LKR 41.23934 respectively.

Multi - Co linearity

Two major methods were utilized in order to determine the presence of multi co linearity among independent variables in this study. These methodologies involved calculation of both a Tolerance test, Variance Inflation Factor –VIF and Durbin Watson (Kleinbaum, 1988). The Results of this analysis are presented in the Table 2.

It can be seen from the above table, none of the Tolerance is < or equal to 1, and all VIF values are well below 10. Thus the measures selected for assessing independent variables. In this study do not reach level indicated of multi co linearity. The acceptable Durbin – Watson range is between 1.5 and 2.5. In this analysis Durbin Watson values for depended variable is well below 2.5. There was no auto correlation problems in the data used in the research. Thus, regression model was applied.

Table 1. Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
MV	5.36	142.89	68.3992	41.62632
EPS	-.68	21.10	6.3305	6.62793
NAVPS	-2.15	103.61	51.8363	41.23934
Valid N (listwise)				

Table 2. Test of Co Linearity

Variables	Tolerance	VIF	Durbin-Watson
Earnings Per Share (EPS)	.582	1.717	
Net Assets Value Per Share (NAVPS)	.582	1.717	
Market Price Per Share			1.709

Table 3. Correlation Matrix

		EPS	NAVPS	MV
EPS	Pearson Correlation	1		
	Sig. (2-tailed)			
NAVPS	Pearson Correlation	.646 [*]	1	
	Sig. (2-tailed)	.023		
MV	Pearson Correlation	.851 ^{**}	.801 ^{**}	1
	Sig. (2-tailed)	.000	.002	

Table 4. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.913 ^a	.833	.796	18.80459

a. Predictors: (Constant), NAVPS, EPS

Table 5. Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	23.068	9.021		2.557	.031
	EPS	3.596	1.121	.573	3.209	.011
	NAVPS	.435	.180	.431	2.416	.039

a. Dependent Variable: MV

According to the Table 3, EPS ($r=0.851$) and NAVPS ($r=0.801$) are positively correlated with Market Vulnerability which is significant at 0.01 levels. Overall correlation of value relevance of accounting information is .913 at 0.01 levels.

It is found that from the Table 4, we can observe Market vulnerability is influenced by value relevance of accounting information by

83.3%. Remaining 16.7% are determined by other factors.

The above Table 5 indicates the coefficient of Market Vulnerability (MV) relating to EPS and NAVPS are 3.596 and 0.435 respectively. Thus, confirms significantly impact of value relevance of accounting information on Market Vulnerability.

Hypotheses testing

Table 6. Hypotheses Testing

No	Hypotheses	Results	Tools
H ₁	There is an impact of value relevance of accounting information on market Vulnerability.	Accepted	Regression
H _{1a}	Does the EPS impact on the market price per share.	Accepted	Regression
H _{1b}	Does the NAVPS impact on the market price per share.	Accepted	Regression
H ₂	The Value relevance of accounting information is significantly correlated with Market Vulnerability.	Accepted	Correlation
H _{2a}	Earnings Per Share is significantly correlated with Market Price per Share.	Accepted	Correlation
H _{2b}	Net Assets Value per Share has significantly correlated with Market Price per Share.	Accepted	Correlation

CONCLUSION

This study examined the value relevance of accounting information and its impact on market vulnerability: A study of listed manufacturing companies in Sri Lanka. The finding suggests that the value relevance of accounting information is the determine factor of market vulnerability having the R² value of 0.833 that is 83.3% of variation in market vulnerability is explain by variation in value relevance of accounting information the remaining 16.7% of variation are explained by the factor other than factor value relevance of accounting information. r value reveals that there is a strong positive relationship between the value relevance of accounting information and market vulnerability.

RECOMMENDATION

Therefore it can be inferred that sustainable development of CSE can be boost through reliable financial information. Without confidence in financial information, investors will not invest adequately on the CSE. The accounting preparers and standard setters should enhance the quality of earnings because it received attention of most investors. In addition policy makers should implement more stringent rules to enhance the value relevance of financial information. This will compel diligence, accountability and responsibility in preparation and application of accounting standards. This in turn will increase investor's confidence in CSE by extension, economic growth.

Some additional suggestions for further research are appropriate in this place. Value relevant is only one of the attributes of accounting quality which give space for further research into the area of accounting quality in the Sri Lanka. Further this value relevant test does not distinguish between the accounting regulation and its actual implementation.

A potential policy implication is that market Vulnerability of CSE in Sri Lanka needs complementary informa-

tion sources other than published accounting reports to become more information efficient.

Directions for future research

Future research may focus on listed manufacturing companies under those sectors and extend the current study by examining the Market vulnerability and value relevance of accounting information. Further, the results of the current study are significantly to the CSE because of manufacturing of the selected industries. As such, future research may consider other sectors of CSE and extend the study and develop significantly results to the CSE.

Finally, future research may investigate the influence of circumstances of the Market vulnerability of manufacturing companies. More specifically, study of this type may examine the influence of the harmonization of accounting standards (adoption of LKS) for the market vulnerability by EPS and NAVPS before and after the adoption of LKS. Investigation of the influence of business culture for the value relevance of accounting information of market vulnerability is another area of research interest as global business cultures vary significantly. Similarly, investigation of the influence of different stages of the business life cycle and the influence of different sector settings such as ownership concentration may provide a valuable contribution to value relevance of accounting information on market vulnerability.

REFERENCES

- Ball R, Brown P (1968). An Empirical Evaluation of Accounting Income Numbers. *J. Account. Res.* 6, 159-178
- Beaver, William H (1968). The information content of annual earnings announcements, in: *J. Account. Res.* 6:3, 67-92.
- Chen J, Chen S, Su X (2001). Is accounting information value-relevant in the emerging Chinese stock market?, *J. Int. Account. Audit. Taxation*, 10(1): 1-22.
- Collins DW, Maydew EL, Weiss IS (1997). Changes in the value

- relevance over the past forty years, *J. Account. Econ.* 24,39–67.
- Germon H, Meek G (2001). *Accounting: An international perspective*. McGraw Hill.
- Gjerde Ø, Knivsflå K, Sættem F (2011). The Value-Relevance of Financial Reporting in Norway 1965-2004.", *Scandinavian J. Manag.* 27, 113—128.
- Hayn C (1995). The information content of losses, *J. Account. Econ.* 20: pp 125–153.
- Hendrick JA (1976). The impact of human resources accounting information on stock investment decisions-An empirical study. *The accounting review, Vol 51(2)*, pp 292.
- Holthausen, Robert W, Watts RL (2001). The relevance of the value-relevance literature for financial accounting standard setting, in: *J. Account. Econ.* 31:1-3, 3-75.
- King RD, Langli JC (1998). Accounting diversity and firm valuation, *Int. J. Account.* Vol.33, no.4, pp.529-567.
- Muhammed SM (2012). Value Relevance of Accounting Information and Stock Market Vulnerability – A Study on Listed Companies in Dhaka Stock Exchange, in: *Int. J. Res. Commerce and Manag.* Vol 3,23-27.
- Nirmala N, Florence J (2011). Value Relevance of Accounting Information". *J. Fin. Account. Manag.* 2,(1), 16-26.
- Oyerinde DT (2009). Value relevance of accounting information in emerging stock market in Nigeria, *Proceedings of the 10th Annual International Conference. International Academy of African Business and Development (IAABD), Uganda.*
- Perra AA, Thrikawala SS (2010). An empirical study of the relevance of accounting information on investor's decision" *proceedings of international research conference on business and information, ISBN 978-955-8044-91-8,*
- RSiti U, Noraya S (2010). Significance of Accounting Information in Explaining Market and Book Values: The Case of Indonesian Banks, *Int. Res. J. Fin. Econ.* ISSN 1450-2887 Issue 55
- Suadiye G (2012). Value Relevance of Book Value and Earnings under the Local GAAP and IFRS: Evidence from Turkey. *Ege Akademik Review, 12(3)*, 301-310.