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The Value Relevance of Financial Statements and Their Impact on Stock Prices: With Special Reference to Listed Firms in Colombo Stock Exchange

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ABSTRACT

The aim of this paper is to examine the relevance of financial reporting. In order to achieve this, a model that includes specific ratios is developed, and examined those specific ratio affecting return earnings relation and issue of earnings relevance, in the firms of the Sri Lankan Stock Market, and its effects on the return-earnings relation.

Red flag ratios and accruals were used to measure the issues of value relevance which have proved to be indicators of falsified financial statements capital market, and by estimating accruals quality, measured both by discretionary and non-discretionary accruals. The data were collected from a sample of 90 non-financial firms listed at the Colombo Stock Exchange. The time frame spans from 2002 to 2012 and the methodology used is correlations and OLS regression models. The results indicated that the ratios of working capital to total assets (Liquidity ratio) and net profit to sales (Profitability ratio) have a negative impact on stock returns. While the ratios of net profit to total assets (Profitability ratio) and sales to total assets (Efficiency ratio) affect the returns positively. Total debt to total assets (Leverage ratio) has positive return earnings relation. Additionally, both types of accruals have incremental importance with the non-discretionary (Business condition) appearing to be more important compared to the discretionary one (Management condition) in explaining stock return movements. Thus, it is concluded that the Colombo Stock Market depicts price accruals. All the variable other than the inventory to sales have correlations which are similar to attributors of possible to manipulated financial statements found in previous research. Thus, it may be said that there is more possibility for falsifying financial statements. Red flag ratios and accruals are important in explaining stock price movements and good indicator of identifying issue of value relevance. The present study adds to the existing literature by examining the issue of financial reporting relevance within the context of an emerging capital market such as Sri Lanka.

KEY WORDS: Accruals, Capital Market, Red Flag Ratio, Value Relevance

1. Introduction

The optimal allocation of savings into investment opportunities is a critical challenge for any economy. In almost all countries world-wide, capital markets play an essential role in allocating financial resources. Financial Reporting fulfills an important task in the functioning of capital markets because it mitigates information and incentive problems which impede the efficient allocation of resources in capital markets (Healy and Palepu, 2001). By publishing financial statements, companies are able to communicate with potential investors, shareholders and other stakeholders. To be of actual use to their stakeholders, financial statements must provide a true and fair summary of the economic consequences of all business activities in a certain period.

During recent years, the issue of earnings value relevance has received a great attention from both investors and managers. Managers are interested in sustaining an attractive earning growth, since their position and compensation are closely related to the earnings figures reported in the firm's financial statements. Investors, on the other hand, are interested in receiving useful and reliable information in order to take profitable investing decisions. By the term "value relevance", it means the ability of financial statements to summarize valuable information that affect stock price movements and assist investors to assess the value of the firm. (Panagiotis & Dimitrios, 2008; Beaver, 2002; Francis and Schipper ,1999; Kang and Zhao, 2010; Chandra and Ro, 2008; Jegadeesh and Livant, 2006; Ertimur et al., 2003; Davis, 2002; Lipe, 1986)Value relevance is one of the basic attributes of quality of the financial statements (Francis et al. 2004).

The Colombo Stock Exchange (CSE) is the main stock exchange in Sri Lanka. It is an emerging market, providing a fully automated trading platform. The vision of the CSE is to contribute to the wealth of the nation by creating value through securities.

There is a tendency to think that the performance of the stock market is an indicator of the country's economic performance. Most people, including foreign observers, draw a connection between the economy and the stock market as well as stock market and the economy.

This study is effort to examine the value relevance of Financial Statements, Issues of value relevance and their impact on stock prices in firms of CSE.

2. Research Problem

The "true and fair view" principle has been legally embedded in General Accepted Accounting Principles (GAAP), in the majority countries worldwide.

However, the reality sometimes is quite different. Many studies in the past have documented the existence of "creative accounting" through managers' efforts to manipulate earnings figures for convenience (Panagiotis & Dimitrios 2008) (Naser, 1993; Shah, 1998; McNichols and Wilson, 1998). Consequently, the existence of earnings manipulations by the market participants could result in stock market returns that deviate from their originally correct values, resulting in a misleading picture for the market and the return-earnings relation. Thus, an effective measure of earnings relevance could prove very helpful in assessing the power of future stock price movements and the overall return-earnings relation.

A significant number of emerging markets (developing countries) use International Accounting Standards (IAS) or International Financial Reporting Standards (IFRS).

The flexibility inherent in GAAP and IFRS arises in permitting alternative accounting treatments, determining the appropriate accounting treatment based on management intent and subjective judgment, and through different interpretations of the standards. This flexibility often provides an opportunity for creative accounting. The flexibility and vagueness of accounting standards are compounded with undefined terms such as "true and fair", "probable", "consistency" and "matching", the concepts which are reliant on professional judgments (Mathews & Pereira 1996).

Merchant (1987) confirmed that questionable financial reporting practices such as selection of liberal accounting policies or manipulation of reserves and provisions are often legal and consistent with GAAP.

Lots of studies in the earlier period have documented that earnings figures and earnings changes are associated with positive abnormal returns (Latane and Jones, 1979; Foster et al., 1984; Bernard and Thomas, 1989). However, this relation is expected to alter depending on the validity of earnings change.

The question may be raised as to why issues of earnings relevance are examined, if Financial Statements are presented with audited financial statements. Unfortunately an expectation gap exists between the users of financial statements and the auditors regarding the detection of fraud. While auditors view the prevention of fraud as primarily a management responsibility, users expect auditors to uncover fraud as part of their audit responsibilities. Karpardis & Anderson undertook a survey in 1995 to gather information on the views of investors on financial reporting issues. Their results indicated that for material misstatements as a result of errors, only about 51% of investors believed that they should receive reasonable assurance while 47% wanted absolute assurance. With regard to fraud detection, 70% of investors believed auditors should be held to absolute assurance for detecting material misstatement as a result of fraud.

Securities and Exchange Commission of Sri Lanka (SEC) examines any referrals received from the CSE as well as complaints from third parties. Surveillance/Investigations Committee has detected possible breaches of regulatory requirements. Out of violations, market manipulation is representing considerable amount.

The analysis of such detections in terms of broad categories of violations is Insider Trading, Market Manipulation and other malpractices. In the year 2009 and 2010, 27% detection were on possible market manipulations. (Securities and Exchange Commission of Sri Lanka, Annual Reports 2010)

Number of empirical evidence is available on examination of issue of earnings relevance; in the context of the Sri Lankan Stock Market, and whether it affects the returns-earnings relation is main motivating force to study the subject in more detail.

Therefore, it will contribute to fill the knowledge gap. The issue of earnings relevance has been studied in other stock market like Greece stock market, US stock market, stock market of Cyprus, Belgian capital market etc...

This research examines whether above mentioned specific ratio affects return earnings relation and issue of earnings relevance, in the firms of the Sri Lankan Stock Market, and whether it affects the return-earnings relation.

2. Methodology

2.1 Objectives of the Study

I. To examine the effect of specific ratios, on the return earnings relation , firms in the Colombo Stock exchange
II. To examine the impact of specific ratios on stock prices
III. To examine the impact of red flag ratios on stock prices
IV. To examine the impact of accruals and red flag ratios on stock prices.

2.2 Conceptualization and Operationalization

Based on the literature survey, the following model (figure 1) was developed as a guidance to carry out the research. It argues that accruals and red flag ratios are important factors that need to be taken into consideration when the return-earnings relation is studied. All studies in the past have provided significant evidences that accruals and "red flag" ratios consist of valuable criterions for the quality of the disclosed information. Research goal is to assess the informational content of accruals and the aforementioned ratios proposed by Spathis (2002) and Spathis et al. (2002) and determine their impact on the observed return-earnings relation.

Sample ratios indicate value relevance; they may lead managers to manipulate their financial statements in order to deal with upcoming negative or positive results. Research's aim is to examine the impact of this relevance on the stock prices and see how the possibility of manipulation is being considered by the market.

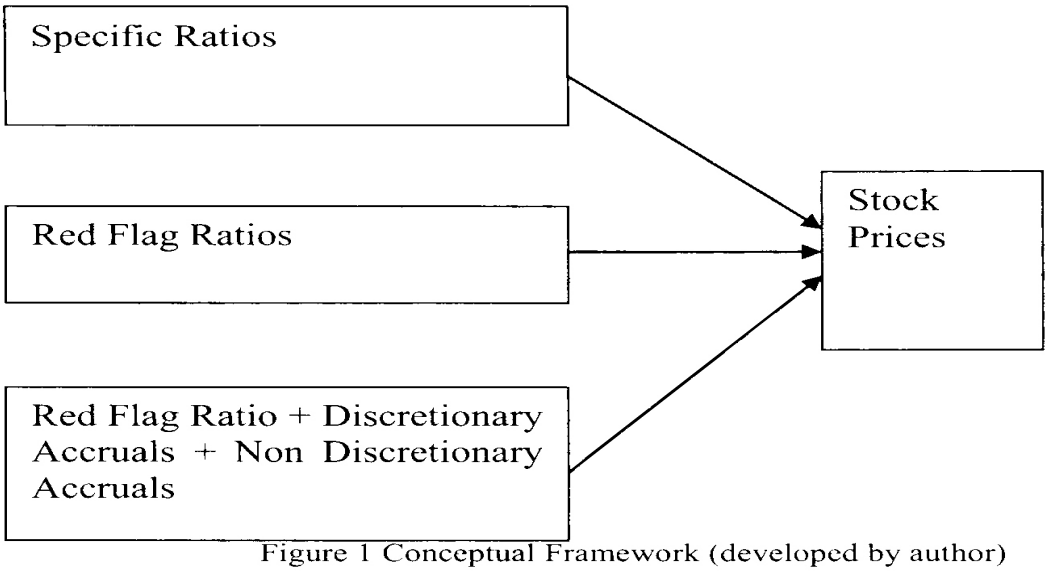

Figure 1 Conceptual Framework (developed by author)

2.3 Population and Sampling Plan

Sample consists of 90 companies and all are listed in the CSE, with full annual data of reported Earnings and Stock Prices, Accruals, Sales, Assets, Total Debt, Inventories and Working Capital, Property Plant and Equipment (PPE) ,depreciation during the period of 2002-2012. The selected 90 companies listed in CSE including all the industry sectors except Banking Finance and Insurance sector because the structure and the accounting practices for these companies differ substantially from the companies in the other sectors.

2.4 Data Analysis

Following specific statistical procedure was used for analyzing data.

- Descriptive Statistics for six main ratios (Mean, Median, SD, Quartile 1,3)
- Ratio on return earning relation (Red Flag)

  Each Ratio * EPS

  Descriptive Statistics of sample variables, Pearson correlations and Regression analysis
- Stock price is regressed on the ratio by using the Statistical Package for Social Sciences (SPSS) Package. (OLS Model)

3. Results and Discussion

Table 1 Descriptive Statistics for Sample ratio over 2002 – 2012

Statistics	INV/SALES	TD/TA	WC/TA	NP/TA	NP/SALES	SALES/TA
Mean	0.16	0.44	0.10	0.04	0.05	0.84
Median	0.15	0.43	0.07	0.04	0.05	0.76
Mode	0.10	0.38	0.00	-0.53	0.00	0.00
Std. Deviation	0.09	0.22	0.24	0.09	0.19	0.59
Skewness	0.51	0.12	-0.40	-0.90	-0.52	0.92
Kurtosis	-0.48	-0.65	7.50	6.05	6.60	0.64
Range	0.40	1.00	2.99	0.89	1.88	2.73

Table 1 depicts some descriptive statistics of six main ratios. As it can be shown, the TD/TA is quite high (44 percent). These results mean that 44 per cent of total assets are owned by debtors and INV/SALES is 16 per cent that the inventories are somewhat low, which means that inventories are not being renewed quite frequently during the fiscal year, a result which indicates an ineffective level of activity. This result is confirmed the previous studies of Persons, 1995; Fanning and Cogger, 1998; Summers and Sweeney, 1998 and Panagiotis & Dimitrios, 2008.

Additionally, the ratios of WC/TA, NP/TA and NP/SALES are very low (0.10, 0.04 and 0.05 percentage) demonstrating a rather inefficient management by means of liquidity and profitability. The reason for having a low mean value on the NP/SALES ratio is mainly because the majority of NP/SALES ratios in the sample are close to zero, and thus firms with losses have a negative impact on the average. All the above findings are consistent to situations that managers may resort to financial statement manipulation as Spathis (2002) documents. The only highly positive ratio is the SALES/TA, which is 84 per cent and indicates a high level of assets profitability.

The distribution of all variables is tested for normality based on the skewedness and the kurtosis of the distribution. The ratios have the skewness value within +1 to -1. Hence, the data of these ratios can be assumed to be symmetrical.

As a result, it can be argued that the majority of the sample ratios indicate a poor financial performance, a fact that may lead managers to manipulate their financial statements in order to deal with upcoming negative results. Aim of this study is to examine the impact of this performance on the stock prices and see how the possibility of manipulation is being considered by the market.

One of the main objectives of this study is to examine the effect of the aforementioned ratios on the return-earnings relation. For this reason, it is multiplied each year's earnings per share (EPS) by each ratio. This was done in order to examine how EPS and the ratios interact and what is their impact on stock prices. The following table (Table 2) indicates the some descriptive statistics of the sample variables.

Table 2. Descriptive Statics of Red flag ratios with return-earnings relation

Statistics	STOCK PRICE	EPS	INV/SALES*EPS	TD/TA*EPS	WC/TA*EPS	NP/TA*EPS	NP/SALES*EPS	SALES/TA*EPS
Mean	102.47	9.37	1.37	4.15	2.02	1.36	8.52	13.04
Median	45.00	3.18	0.20	1.10	0.20	0.21	0.34	2.04
Mode	40.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Std. Deviation	226.40	2.76	5.55	16.10	7.89	4.85	156.77	59.07

The mean value of stock prices is 102.47 while for EPS is 9.37. The product of the ratios and the EPS provided means which are above the actual level of the ratios that previously shown in Table 1. All variables standard deviation is higher than the previously found. The majority of firms in the sample have EPS that are higher than the mean of specific ratios.
The variables of study was taken from studies done by Spathis (2002) and Spathis et al. (2002) that ratios comes from the investigation of the possible ways that a manager can follow in order to manipulate the financial statements.

Table 3. Results of Correlation and Regression Analysis

Statistics	Model I	Model II	Model III
R	0.298	0.682	0.684
R square	0.089	0.465	0.468
F Value	13.036	53.169	46.530
Sig. F	.000	.000	.000
Correlation Analysis			
a) Variables of significant and Positive correlation	NP/TA SALES/TA WC/TA	NP/TA*EPS SALES/TA*EPS TD/TA*EPS INV/SALES*EPS EPS	NP/TA*EPS SALES/TA*EPS TD/TA*EPS INV/SALES*EPS EPS DAC NDAC
b) Variables of significant and negative correlation	-	WC/TA*EPS NP/SALES*EPS	WC/TA*EPS NP/SALES*EPS
Regression Analysis			
a) Variables of significant and Positive impact	NP/TA SALES/TA	NP/TA*EPS SALES/TA*EPS TD/TA*EPS EPS	NP/TA*EPS SALES/TA*EPS TD/TA*EPS EPS DAC NDAC
b) Variables of significant and negative impact	-	WC/TA*EPS NP/SALES*EPS	WC/TA*EPS NP/SALES*EPS

As can be seen in table 3, R square of model I is 9%. Six independent variables considered in this study still stock price 91% unexplained. It can be argued that the possibility of manipulation is being considered by the market. Because, this model has not addressed the issues of value relevance. It examined the relationship between selected variables and stock price. According to reproduced Table 3, in this model only three variables are positively correlated with share price with statistically significant.
But, F value of 13.03 which significant at 0.01 shows that model is reasonably fit for the data.

Table 3 discloses in the model II, "R" the multiple correlation coefficients value is .68 indicates a strong positive relationship. R Square is .46. This means 46% of the variation in stock price is explained by red flag ratios.

The adjusted R^2 has increased from 9 per cent in equation model I to 46 per cent in equation model II, suggesting that the later comprises a more appropriate functional aspect for the examination of earnings quality impact on stock returns.

In this study, it is again proved that after incorporating red flagging for specific ratios is an important factor that needs to be taken into consideration when the returns-earnings relation. All studies in the past have provided solid evidence that "red flag" ratios consist of valuable criterions for the quality of the disclosed information.

The model III is the examination of "red flag" ratios, accrual and their impact on stock prices. When compare to model II, R^2 of model III is increased from 46% to 47% that quality of the information of financial statements of the firms has been upgraded after incorporating the impact accruals. Two components of accruals: Business Condition and Managerial intervention are giving a significant impact on returns earnings relation.

Result can be seen in reproduced table 3 revealed the statistically significant variables under each and every model. Without addressing any issue (model I), there are three variables namely NP/TA, SALES/TA and WC/TA. Others are not significant and accepted H_0. H_1 of Hypothesis 01 is accepted for the only variables of NP/TA, SALES/TA and WC/TA.

In model II and model III, either positive or negative impact on share price other than INV/SALES. But INV/SALES is statistically significant with positive relationship in correlation. But not in regression result. So this variable is partially confirmed. Hence, H_1 of Hypothesis 02 and Hypothesis 03 is accepted for all variables other than INV/SALES in the models II and III. Since regression results also confirmed that.

4. Conclusion

This study is an effort to examine the value relevance of Financial Statements and their impact on stock prices in firms of Colombo Stock Exchange. The initially, 179 companies were selected from CSE including all the industrial sectors except banking, finance and insurance which are substantially different from other industries by means of the structure and the accounting practices. The sample period spans from 2002 to 2012. However, working sample was achieved after screening the sample firms for absence of formal records such as reported earnings and stock prices, accruals, sales, assets, total debt, inventories and working capital, property plant and equipment, depreciation the corresponding financial year's end. Stock price is the closing rate at the end of each year (31st March) and annual earnings per share were used. The final sample included 90 companies after adjusting for above reasons.

According to results of uni-variate analysis, it can be said that the majority of the sample ratios indicate a poor financial performance, a fact that may lead managers to manipulate their financial statements in order to deal with potential negative results. All the variables of sample are normally distributed. This study's aim is to examine the impact of this performance on the stock prices and see how the possibility of manipulation is being considered by the market.

Financial statement information is the main path that the managers use in order to communicate significant information to investors. If this information is value relevant, then it enables market participants to evaluate a firm's future accounting earnings and equity. Additionally, investors might take into consideration the level of each firm's disclosure quality and demand supplementary information in order to reach in profitable investment decisions when earnings are not highly relevant.

In model 1 was developed without producing ratios and examining their impact on share prices. Then there are only two ratios namely NP/TA, and SALES/TA, impact on share prices. But ratios produced afterwards using EPS (Red flag Ratios) was the model II that indicated how EPS and the ratios interact and what their impact on stock prices is. Results signified that EPS is highly correlated with all the sample variables indicating a strong connection between the "red flag" ratios and the earnings per share and five ratios out of six ratios importance in explaining stock price movements. Thus it could be recommended that before taking investment decision, it is needed to have a depth analysis rather than just looking ratios. As well as, it could be suggested that EPS can be used as tool for analyzing financial statements to see stock price movements.

Variables of Model III also was of importance in explaining stock price movements other than the INV/SALES ratio and both types of accruals have incremental importance in explaining stock price movements.
Therefore, it might be recommended that business conditions and managerial interventions drive earnings variability making the issue of earnings quality an important factor that affects the returns-earnings relation to an investment decision.

Figures of financial statements relating to profits and working capitals could be quite unacceptable. Because the results of this study indicated coefficients of WC/TA*EPS and NP/SALES*EPS are negative and significant in both variables. These result can be interpreted by the fact that firms with increased WC/TA ratio show a better financial activity and because they can cover their current liabilities faster than those with low working capital. On the contrary, firms with high current assets invest less on non-current assets, a fact that can have a negative effect on their future prospects. Consequently, the less a manager is investing in current assets (and not in non-current assets), the better the impact on the market and the firm's stock price. Moreover, the negative effect of NP/SALES on stock prices is attributed to the act that firms with financial difficulties and specifically difficulties of low returns in sales, try to manipulate the profit and loss account by either increasing revenues or decreasing their expenses. For that reasons, it could be recommended to user of financial statements.

Since, SALES/TA*EPS, NP/TA*EPS are with strong positive correlations, again it could be conclude that where a manager wants to manipulate the financial statements the most logical act is to inflate sales or profits since this will have a positive impact on the market participants. Because as it is considered that sales and net profits are the most comprehensive figures of a firm's productive ability.

The ratios of INV/SAL *EPS (pooled sample) is insignificant in regression results. So, it is partially confirmed this relation. It is believed that the use of inventories and especially in most business setting is a common method for manipulating financial statements (Spathis, 2002).
These findings are not verified here, since it seems that inventories do not affect stock price movements.
Both types of accruals have incremental importance in explaining stock price movements. However, the non-discretionary component (business conditions) is more important and significant compared to the discretionary part (Managerial interventions). This suggests that business conditions and managerial interventions drive earnings variability making the issue of earnings quality an important factor that affects the return-earnings relation.

5. Limitations and Future Research

On the other hand, there are some limitations that worth mentioning. First of all, in order to estimate total accruals, this study applied the balance sheet approach and this could probably bias the estimates of total accruals and its components. Consequently, there are alternative accrual models (Dechow and Dichev, 2002; Ball and Shivakumar, 2006) which need to be considered in order to receive more prominent measures of accruals and accruals components.

The sample of study was restricted to ratios analysis only on past results found in Sri Lanka, extracted on a different time period and this could be another possible source of bias.

However, there are some issues that need further examination. The first includes the investigation of the depreciation methods, the inventory evaluation methods and the type of auditing that firms use as additional variables, which can have a significant effect on the quality of the published financial statements. Secondly, it will be interesting to examine the impact of conservative and timeliness of income recognition on the accrual accounting measures. As well as this study was covered only six ratios .but it can be incorporated more ratios in further researches.

There are models to examine value relevance of financial statements. Price model was used out of other models to examine value relevance of financial statements in this study. Equity model, return model, portfolio model can be used.

Finally, a fruitful avenue for future research is to consider the effect of speculative intensity on the expectations created by the stock market as another factor that can affect the relevance of earnings and

stock prices. Further the research work can be enlarged to create a forum for comparing the Sri Lankan Capital Market with the international stock markets.

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