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# Incremental Value Relevance of Accrual and Cash Flow Information in Top Capitalized Companies in Sri Lanka

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## ABSTRACT

*Financial accounting has emerged as a source of information in decision making process. This study emphasizes the importance of those information offers through financial statements in terms of accruals and cash bases. The purpose of this study is to investigate the value relevance of accrual and cash flow information in top capitalized companies in Sri Lanka. The sample consists with top forty companies over a period of 3 years from 2012 to 2014. Value relevance was measured in terms of explanatory power of the models where accrual and cash flow information were occupied as the value relevant information. Market price of the shares were considered as the dependent variable of the model which is affected by the reactions of investors to the available information. Cos Earnings per Share, Operating Profit per Share, Total Comprehensive Income per Share and Book Value per Share were considered as value relevant information while Operating Cash Flow per Share, Total Cash Flow per Share were considered as the value relevant cash flow information. The Study found that accrual information (OPPS, TCIPS, BVPS) has incremental value relevant to the share price than cash flow information (TCFPS, CFOPS) which emphasizes the importance of accrual information in the decision making process rather than cash flow information.*

**KEYWORDS:** *Value Relevance, Top Capitalized Companies, Cash Flow Information, Accrual Information, Explanatory Power*

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## **Introduction:**

Earnings are considered by most of information users for the purpose of firm's performance while earnings are prepared by the management of the company. There is a reasonable doubt whether these earnings show the accurate and reasonable picture about the firm's actual performance. The reason behind that doubt is management has some discretion over the recognition of accruals in earnings. This discretion can be used by them either to signal private information or to opportunistically manipulate earnings. Since management has greater information regarding their firm's future profitability, signaling is expected to improve the ability of earnings to measure firm performance Holthausen and Leftwich, (1983); Watts and Zimmerman, (1986); Holthausen (1990), Healy and Palepu, (1993). On the other hand, if management uses their power to manipulate accruals, and so earnings, in a manner that is not useful to external information users such as investors, creditors, borrowers. These cause earnings to become less reliable measure of firm's performance. So that many users of accruals information turn in to cash flows as alternative measure of firm's performance for the purpose of decision making rather than using earning information. Net cash came in to the action because of those issues with the accruals. Net cash flows have no accrual adjustments so that they are not subject to management discretion from using different accounting practice. Information of cash flows is useful in conjunction with other information in forecasting future operating cash flows & valuing firms. Therefore it is a question which information, earnings or cash flows best summaries firm's performance.

Shamki and Rahman (2009) found that the net income is value relevant and more value relevant than the book value and cash flows, value relevance is greater in service sector than in industrial sector in Jordanian Economic sectors. According to those findings it is suggest that earnings are the key factor for measuring the firm's performance. But a research done by Bepari, Rahman and Mollik (2013) regarding this topic discovered that the cash flow operating has value relevance incremental to book value and earnings. It is clear that there are more research findings in this field which are contradictory to each other.

There is lack of researches done in Sri Lanka in relation to this field. Since this field is very important to accounting information users such as investors, borrowers, creditors etc. It is important to examine this type of issue in Sri Lankan context.

## **Statement of the Problem:**

There is a problem in this field because most of researches have showed different conclusions. Shamki, Rahman (2009) found that earnings have incremental value relevance than cash flow operating. Also Sheikh, Mollik (2013) have concluded that cash flow operating has incremental value relevance than earnings. Another different finding of this area has been suggested by Garrod, Giner, Larrán (2003) ; both of cash flow operating and earnings have greater value relevance. So that it is proved that there are contradictory conclusions in this domain. But the dominant research findings suggest that the accrual information are more value relevant than cash flow information. So this study also based on that basis. In Sri Lanka few researches have been done. It also is questions mark in this area. So the study is aiming to address the following research question.

What is the incremental value relevance of accrual information than the cash flow information in top capitalized companies in Sri Lanka?

## **Research objective:**

Main objective of the study is to investigate incremental value relevance of accrual information than the cash flow information in top capitalized companies in Sri Lanka. Meanwhile the study attempts to identify the value relevance of accrual information and cash flow information in top capitalized companies in Sri Lanka.

## **Review of Literature:**

Basically economic decisions are taken based on the accounting information. The effectiveness of the decisions depends on the credibility of the information used for decision making process. Since the management has their own power to manipulate accounting information the reliability of the information is a question for information users. So that information users have turned in to other options such as cash

flow information. So that researchers have moved to investigate about this question that is which information is the more value relevant.

Most of researches in this field have emphasized the factors affect to the share price because share price is the independent variable researchers have taken.

### **Value Relevance Information for Decision Making**

Information plays a vital role in decision making because information affect to the organization's whole decision making process. The answer for that is very critical one since decisions, effect on various aspects such as organizational performance, organization's members, processes, regulators, tax authorities, and government etc. Aldrich and Mindlin (1978) say it is very special to address empirically why? What? How? And where? of this decision making process. It is Also emphasize that firm's internal and external environment referred to as environment. Choo (1996) finds that to scan the environment in order to make better informed decisions is an important task on the corporate agenda. Mintzberg (1976) defines a decisions as a set of actions and dynamic factors beginning with the identification of a stimulus for action and ending with a specific commitment to action. It is very important to discuss the value relevance and its role in recent context. Value relevance is defined as the association between accounting amounts and security market values. The key argument in the above definition is that an accounting amount is deemed value relevant if it has significant relationship with security market value. Basically in the present context, accrual information, cash flow information and book values are used as value relevance information Accordingly the vital requirement of information in decision making has been highlighted in here and it is proved that value relevance of information in decision making is highly essential to make right decision at right time.

### **Value Relevance of Accounting Information**

The study, done by Collins, and Madewl, Welss (1997) has paid attention directly to the divisions of the value relevance of earnings and book value along the time change in different industries. The basic purpose of this study is to update and expand the C ollins et al (1997) paper by observing the differences in the value relevance of earnings and book value for the recent 20 years of time period. Further, this study identifies the different influences of the variation in value relevance of earnings and book value over different industries. Moreover, this paper helps in providing a concluded summery about the evolution of value relevance literature since it is related to the study. Certain important facts could be highlighted.

Accordingto the sushma, and Bhupesh (2008) "value relevance implies ability of the financial information contained in the financial statements to explain the stock market measures". Researches on value relevance of accounting information had been a historical development it has been not only developed but also the comparison among different countries has been increased since the 1990's.

One study can be seen in Sri Lankan context is Ranjani and Karunarathne (2006). For the purpose of examining the research question of how book value, earning and cash flows relate to equity value, this study basically use a generalized version of the Ohlson (1995).The study consider earning yield, cash flows, operating earnings after tax to add those to the Ohlson (1995) model. The reason behind that is the study predicts that earning yield, cash flows, operating earnings, earning after tax may provide incremental evidence about the firm's equity value. This model is extensively used in the value relevance literature (Collins et al 1997, Barth et al 1998). So many studies with relevant to the relative and joint impact of earning and book value on stock price have been done along past fifteen years. Finally the research conclude that the EPS is the only value relevant variable for determining stock prices. That implies that the accrual information is the value relevant information when describing the share price.

The findings of Collins et al (1997) proves that the joint value relevance of earnings and book values haven't been reduced with the time. Then this study shows that the incremental value relevance of earnings has raised higher when the incremental value relevance of book value has remained relatively constant (unchanged). Also the result shows that there is no any considerable deviation or a difference between the incremental value relevance of earnings and book value or between the combined explanatory industries. Finally the result of this study proclaims the concept of Collins et al (1997) which the historical cost accounting is value relevant.

According to the findings of prior researches it is obvious that accrual information such as earnings, book value provide value relevance. In this study the researcher is on the basis of accrual information has value

relevant.

## **Value Relevance of Cash Flow Information**

Ohlson and Jagadison (2007) did an analysis regarding firm's cash flow. This study has investigated that why and how of cash flows analysis. The analysis mainly focused on having a tuff common shareholders' perspective with a clear view of equity valuation. This research is based on the statement of cash flows of Generally Accepted Accounting Policies (GAPP). When the researchers undertake to evaluate GAAP's statement of cash flows, new questions is been arisen because it is not clear whether GAAP's narrow concept regarding cash flow is relevant or not. As an example, one can construct economically equivalent transactions leading to different treatments in the cash flow statement .Another reason is distinguish between operating and financial activities is arguably and too arbitrary. For example, an increase in accounts payable could be viewed in substance as a financing rather than operating activity. Also the GAAP's way of assigning transactions to the three major categories (operating, investing, financing) can be challenged. When keep aside these classification matters, equity analysts still face a more basic issue. That is, the GAAP statement of cash flows lacks a bottom-line unlike the income statement. According to the study, it finds that the cash flow information is value relevant subject to the accounting standards in equity valuation context.

According to the results of previous researches cash flow information also a value relevant information category. But it is not that much of incremental value relevance information. In this study researcher in the basis of cash flow information is lesser value relevant.

## **Incremental Value Relevance of Accounting Information**

Value relevance studies of emerging countries usually have two goals. The first is to test, whether accounting earnings are relevant for equity valuation in the local stock market. The second aim is to compare the results of the test with results obtained by previous researchers of rich countries and draw conclusions about the state of the local economy. In both cases value relevance is treated as proof of the quality and usefulness of accounting numbers. Reliance on value relevance as a an indicator of comparative quality of accounting earnings necessitates the use of a unified, robust methodology. Klimczak discuss the theory behind incremental value relevance tests. In the second part of the paper, technical methodological issues of study design and results interpretation are discussed: event study vs. return regression, model specification, and sampling period, measuring unexpected earnings and abnormal returns, and finally methods of comparing results across markets. This paper investigates the theory behind incremental value relevance tests and the methodological issues of applying such tests to emerging economies. The aim of the paper is to create methodological guidelines for future research in this area. The discussion below outlines what theoretical background does exist and where methodological problems lie. The first tests of value relevance were, of course, based on capital market theories prevalent at the time. This allowed them to calculate information value of accounting earnings. It is thus apparent that the return on a share of stock will be equal to the return on assets less interest expense. However, that Modigliani-Miller propositions use expected return, not actual return. Actual return, which is reported in financial statements, influences stock return only indirectly – through its impact on expected earnings.

Also a study done by Cheang, Liu and Schaefer (1996) suggests that the value relevance of earnings decreases and value relevance of operating cash flows increases, with a decrease in the performance of earnings.

If the financial statements lose the value relevance on their information, nobody will pay attention on them. Therefore, the empirical study on value relevance of accounting information (accounting variables) lead for validity and reliability. Thomsen and Pedersen (2000) noted that managers do not supposed to make decisions in favor of maximizing shareholder's wealth always ( Agency theory ).So that, the relationship between ownership concentration as a mechanism to influence managers, and value relevance of accounting information is worth to examine. On the other hand, previous researchers have noted that those financial statements of large firms are in higher quality than that of small firms. Hence, the value relevance of financial information of large firms may higher than that of small firms. However, empirical conclusions on this issue have given mixed results (Bae & Jeong 2007, Brimble & Hodgson 2007). Therefore, the purpose of this study is to examine the value relevance of accounting information in Sri Lankan context by improving some innovations to the value relevance model used in Pathirawasam (2010). In this study 440 firms from the sample were observed as ownership concentrated and the other

442 firms were observed ownership non-concentrated firms. This study uses the Ohlson (1995) model framework that it provides a relationship between share price and two accounting variables. So that, the value relevance of accounting information model used in this study is the models used by Francis and Schipper (1999), Collings, Magdew and Weiss (1997), King and Langli (1998), Bao and Chow (1999) and Pathirawasam (2010). The study found that value relevance of earnings and book value is not incremental and this is Similar to the previous finding of the author. Findings of this research suggest that ownership concentrated firms provide more value relevant information than ownership non-concentrated firms. Also finds that large firms have incremental value relevance of earnings and book value information than small firms. Finally this research concluded that, after controlling the effects of ownership structure and firm size, value relevance of book value information is greater than earnings information and which is contrary to the previous finding.

When consider the prior researches done in Sri Lankan context lack of researches can be seen. The results shows that both cash flow information and accrual information has value relevance. There is no researches been done to investigate the incremental value relevance. So this study will full fill the gap.

### **Methodology:**

Sample selection procedure, Conceptual framework, Statistical data analysis methods and models of the study and variable identifications are discussed under this section.

### **Population and Sample**

The population for this study was companies registered in CSE. Accordingly total companies of 296 companies have been considered as the population for this study. Those companies represent 20 business sectors as at 03rd of august 2015 according to the CSE web site. The sample drawn from the population is top capitalized forty companies in Colombo stock exchange.

The sample of the study consist with top 40 companies from the top capitalized companies over a period of 3 years from 2012 to 2014 in the Colombo Stock Exchange. Market value of share is taken as the dependent variable of the study. Earnings per Share, Operating Profit per Share , Total Comprehensive Income per Share, Book Value per Share are taken as independent variable which represent the accrual information and Operating Cash Flow per Share , Total Cash Flow per Share are taken as the independent cash flow variables. All data is analyzed by using many analysis tools such as regression, descriptive statistic, coefficient and correlation in this study.

When taking the sample from the population the some of companies were ignored. The final sample was selected subject to following criteria,

- a. Select the top capitalized hundred companies from the population.
- b. Exclude the banking, finance and insurance sector companies  
Those companies were excluded from the population because of data inconsistency among those companies. That is because of differences in financial statement and accounting treatments.
- c. Excluded the companies who prepare their financial statement as at 31<sup>st</sup> December  
Those type of companies were excluded because differences in time gap and environmental facts can be affected to the financial statements to get rid of that issue those companies were excluded.
- d. Excluded the companies which have been listed under the default board at CSE – Companies which have been listed under default board because of breach of submission of annual reports on due date. So due to unavailability of the data of those companies they were excluded.

Accordingly forty companies were selected as the final study sample, which can be depicted as follow:

Table 1: Reconciliation of sample

Description	No of companies
Top hundred companies of the top capitalized companies	100
Less :-	
Insurance, banking and finance companies	(29)
Financial year ends 31st December	<u>(08)</u>
Remaining companies	63
<b>Select top 40 companies among 64 companies</b>	<b>40</b>

Sources – Author Constructed (2015) *Conceptual framework*

Figure 1 depicts the developed conceptual framework on the independent and dependent variables. There are five independent variables: which represent the accruals aspect and cash flow aspect. Value relevance of the information act as the dependent variable of this study.

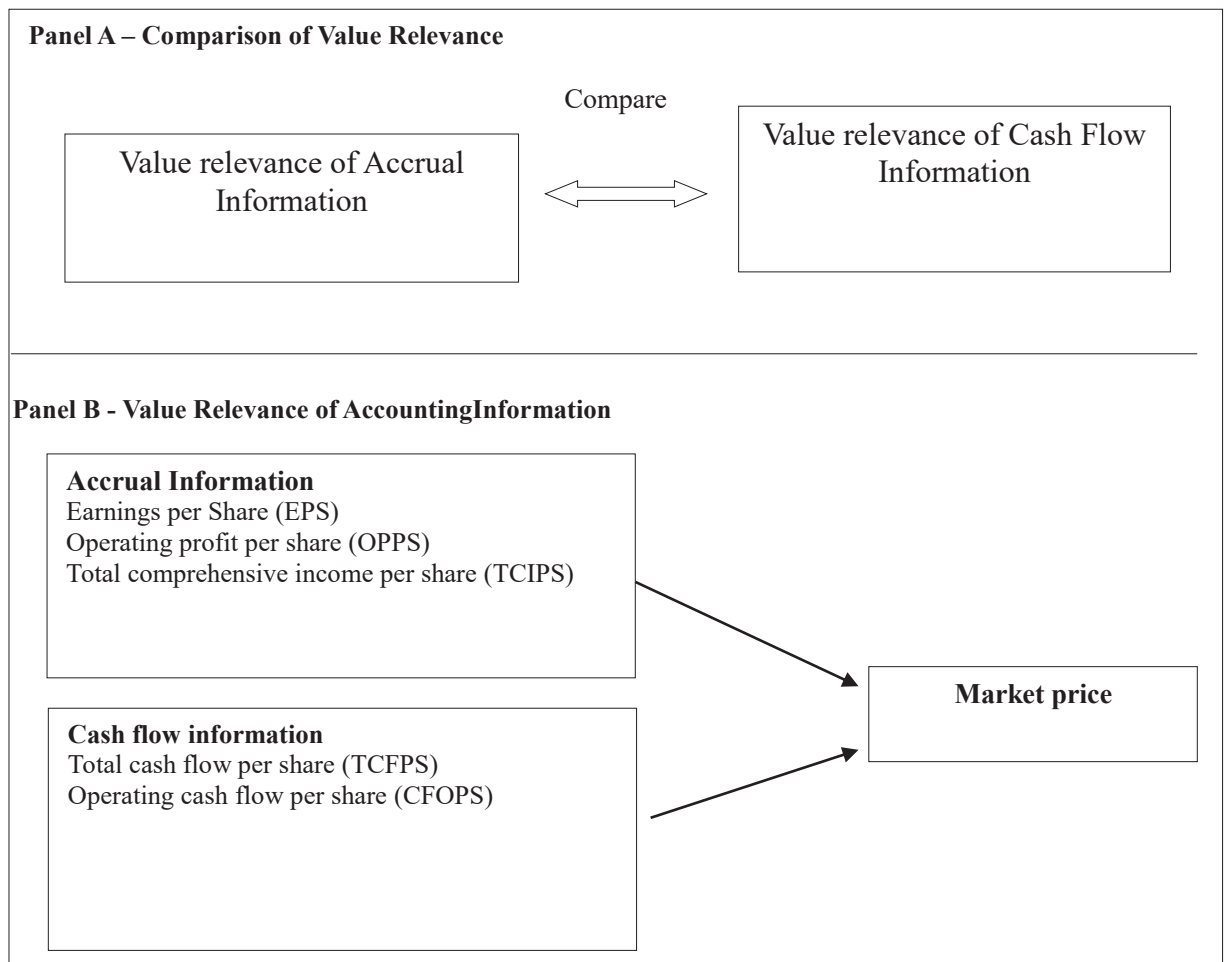


Figure 1: Conceptual Framework

Sources – Author Constructed (2015)

The effect of accrual and cash flow information to the share price is observed and it is to be compared to arrive the conclusion.

## Research Model

In order to examine the fact that are more value relevant to the share price among the cash flow information and accrual information in top capitalized companies in CSE. This study basically use a modified version of the Ohlson (1995). This Study add operating cash flows per share, earning per share, operating profit per share, total comprehensive income per share, book value per share, total cash flow per share to the Ohlson (1995) model that is because this study predicts that cash flows information and accrual information may provide additional information about the firm's market value of share.

$$MV = \alpha_1 + \beta_1 BVPS + \beta_2 OPPS + \beta_3 TCIPS + \beta_4 EPS + \varepsilon_1 \dots\dots\dots \text{Model 1}$$

$$MV = \alpha_2 + \beta_5 OCFPS + \beta_6 TCFPS + \varepsilon_1 \dots\dots\dots \text{Model 2}$$

Where, MV = Market price of the share, BVPS= Book value per share, OPPS= Operating profit per share, TCIPS= Total comprehensive income per share, EPS= Earnings per share, OCFPS = Operating profit per share and TCFPS<sub>1</sub> = Total cash flow per share.

## Results and Discussion:

The ultimate objective of this study is to investigate the incremental value relevance of accrual information and cash flow information in top capitalized companies in Sri Lanka. For the purpose of this study regression analysis method is used and R square value in regression analysis is used to determine which information has incremental value relevance to the market price of share of top capitalized companies in Sri Lanka.

## Value Relevance of Accrual Information

The aim of the study is to investigate incremental value relevance of accrual information than the cash flow information in top capitalized companies in Sri Lanka. The following model expresses the relationship between markets Price and the accrual information variables.

$$MV = \alpha_1 + \beta_1 BVPS + \beta_2 OPPS + \beta_3 TCIPS + \beta_4 EPS + \varepsilon_1$$

Table 2: Model summary

Model		Unstandardized Coefficients		t.	Sig.
		B	Std. Error		
1	(Constant)	64.002	24.036	2.663	0.009
	BVPS	1.883	0.123	15.293	0.00000
	OPPS	-10.556	2.583	-4.086	0.00008
	TCIPS	-6.44	1.929	-3.338	0.00113
	EPS	19.23	4.206	4.573	0.00001
R = 0.848 <sup>a</sup>		R Square = 0.719		Adj. R Square = 0.709	

As per results of table 2 model 1 R Square value is 0.719. This means that the 71.9% of market price is described by the variables taken under the model 1 which are shown in above equation. Also this indicates that the remaining 28.1% of market price is described by the other factors.



That means the above mentioned each variables significantly difference from each other and those variables are explained different aspects. So that variables within the model can be accepted.

According to the Coefficient value all the accrual information variables BVPS, OPPS, TCIPS, EPS are significant that is 0.000, 0.000, 0.001, 0.000 respectively (below 0.05). When the p value is below 0.05 it is considered to be significant.

$$MV = \alpha_1 + 1.833BVPS - 10.556OPPS - 6.44TCIPS + 19.23EPS + \varepsilon_1$$

### Value Relevance of Cash Flow Information

The objective of the research is to investigate incremental value relevance of accrual information than the cash flow information in top capitalized companies in Sri Lanka. The following model expresses the relationship between market price and the cash flow information variables.

$$MV = \alpha_2 + \beta_5OCFPS + \beta_6TCFPS + \varepsilon_1$$

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	234.191	39.441	5.938	0.000
TCFPS	0.57	0.99	0.576	0.566
OCFPS	1.116	0.881	1.267	0.208

Table 3: Model Summary

t = .128<sup>a</sup> R Square = 0.016 Adj. R Square = 0.000

Source: - Survey Analysis Data

a. Predictors: (Constant), OCFPS, TCFPS

b. Dependent Variable: MP

According to the results of table 3 model summary of model 2 R Square value is 0.016. This means that the 1.6% of market price is described by the variables taken under the model 2 which are shown in above equation. Also this result reflects that the regression analysis does not explain the relationship between MP and OCFPS, TCFPS.

According to the Coefficient value all the cash flow information variables TCFPS, OCFPS are not significant that is 0.566, 0.208 respectively (above 0.05). When the p value is above the 0.05 it is considered to be insignificant.

$$MV = \alpha_2 + 0.57OCFPS + 1.116TCFPS + \varepsilon_1$$

### Result discussion

The ultimate objective of this study is to investigate the incremental value relevance of accrual information and cash flow information in top capitalized companies in Sri Lanka. For the purpose of this study regression analysis method is used and R square value in regression analysis is used to determine which information has incremental value relevance to the market price of share of top capitalized companies in Sri Lanka.

R square value shows the how far the independent variables taken in this study describe the Market price of share. Accordingly as per results of regression analysis R square value of accrual information is 0.719



and it reflect that accrual information variables describe the 71.9% of market price of share while the R square value of cash flow information is 0.016. This result indicates that the cash flow information express the 1.6% of market price of share. Accordingly it is clear that accrual information variables have incremental value relevance than cash flow information.

## Conclusion and Recommendation

In order to examine the research objective of the study that is, investigate incremental value relevance of accrual information and cash flow information in top capitalized companies in Sri Lanka this study basically use a modified version of the Ohlson (1995). This Study add operating cash flows per share, earning per share, operating profit per share, total comprehensive income per share, book value per share, total cash flow per share to the model.

The sample of the study consist of top 40 companies from the top capitalized companies over a period of 3 years from 2012 to 2014 in the Colombo Stock Exchange. Market value of share is taken as the dependent variable of the study. Earnings per Share, Operating Profit per Share , Total Comprehensive Income per Share, Book Value per Share are taken as independent variable which represent the accrual information and Operating Cash Flow per Share , Total Cash Flow per Share are taken as the independent cash flow variables. All data is analyzed by using many analysis tools such as regression, descriptive statistic, coefficient and correlation in this study.

The findings of this study revealed that the accrual information has incremental value relevance than the cash flow information while the R square value of accrual information is greater than R square value of cash flow information. All the variables taken under the accrual information are significant and none of the variables taken under the cash flow information variables become significant in this study. So the objective of the study is accomplished that is to investigate which information has incremental value relevant to the share price of top capitalized companies in Sri Lanka. The research concluded that the accrual information has incremental value relevance than the cash flow information.

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