VALUE EFFECT ON STOCK RETURNS: AN EMPIRICAL STUDY ON THE COLOMBO STOCK MARKET

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ABSTRACT
The book to market capitalization of firms become one of the common risk factor on asset pricing models. The impact of book to market value of firms on stock returns was initially found in US market and subsequently tested in many international markets both developed and developing markets. However, the empirical test of value effect in Sri Lankan stock market seems hard to find in literature. Therefore, this study examines weather value effect is exist on stocks returns in the Colombo stock market as an emerging capital market. The sample of study includes all non-financial companies listed on main board of Colombo stock exchange during the period from 2000 to 2013. The book value of the firm is measured based on net asset as at end of financial year and the size is measured based on market capitalization at the end of each facial year. All sample of stocks are formed into ten portfolios based on book to market ratio and equally weighted average monthly return is calculated and assigned to respective decile portfolios at the end of each year. The existence of value effect is estimated by the differences of portfolio return between smallest and biggest decile portfolio. It was found that the highest decile portfolio of stocks earns higher return than lowest decile portfolio of stocks. Therefore, the study concludes that there is a value effect exist in the Colombo stock market during the study period and the finding consistent with the previous studies.

Keywords: Book to market effect, Colombo stock exchange, market capitalization, Value premium, stock return

INTRODUCTION
Treynor (1961), Sharpe (1964), Lintner (1965) and Mossin (1966) version of CAPM, version of Capital asset pricing model (CAPM) is commonly used to estimate cost of capital and to value financial asset. Studies found evidences in contrast to such existence of linier relationship. Friend and Blume (1970), Jensen et al. (1972) and Stambaugh (1982) found a flat relationship between stock return and market factor.. Due to the inability of the market factor, researchers focused on identification of other risk factor which determines stock return. Rosenberg et al. (1985) found the Book to market equity is able to determine the variations of expected return of stock. The stocks with high book to market equity ratio earn higher return than stock with low book to market equity ratio. The existence of value premium and positive relationship between stock return and book to market ratio were confirmed by the study of Fama and French (1992), Davis (1994), Lakonishok et al. (1994), Asness (1997), Lewellen (1999), Asness et al. (2000) in US market. The value premium is found in international market also, for example Chan et al. (1991) in Japan; Fama and French (1998) found value premium in international market such as Australia, Belgium, France, Germany, Hong Kong, Japan, Netherlands, Singapore, Sweden, Switzerl and UK; Fraser and Page (2000) in South Africa and Griffin (2002) in Canada. Capaul et al. (1993) in developed market such as France, German, Switzeland, UK, Japan and USA; Rouwenhorst (1999) Rouwenhorst (1999) found in developing markets such as Argentina, Brazil, Chile, Greece, Indonesia, India, Jordan, Korea, Malaysia, Mexico,

Nigeria, Philippines, Taiwan, Turkey, Venezuela and Zimbabwe. Even though the existence of the value premium were found in several developed and developing market, evidences for existence of value effect in Sri Lankan context is seems hard to find in literature. Hence there is a question is exist weather the value effect is exist in Sri Lankan capital market. Therefore this study empirically test the value effect in the Colombo Stock Exchange.

METHODOLOGY
The relevant market data for this study were taken from the official website of the Colombo Stock Exchange website (www.cse.lk) and CSE data library. In addition to the market data, the accounting data and number of shares of the company were taken from financial statements of respective companies published in annual reports. All listed companies are taken into considered for this study during the period from April 2000 to March 2013. However, the financial firms and stocks with negative Book to Market ratios were excluded from the sample of this study.

The book to market ratio is calculated at end of March each year. The book to market is defined as the net assets as at end of financial year end of a respective firm is divided by the market equity as at end of financial year. The market equity is defined as the number of shares outstanding times closing price as at end of last trading day of financial year end of respective firm. Book-to-Market equity ratio is sorted in ascending order and divided into ten equal number of portfolios. First decile portfolios labeled as D1, second decile portfolios labeled as D2 and so on. So that the stocks with smallest BM ratio lies in the first portfolio D1 and the highest BM ratio stocks are, in the last portfolio D10. The equally weighted monthly portfolio return is assigned to respective portfolio from April t to March t+1. The portfolio is reformed each year at end of March. The existence of value effect is tested by the return differences between two extreme decile portfolios.

RESULTS AND DISCUSSION
Table 1 shows descriptive statistic summary of monthly observation of each portfolio average monthly return from April 2000 to March 2012. The average portfolio return of highest decile portfolio D10 return is 5.93% per month while lowest decile portfolio D1 return is 3.63% per month. The differences between highest and lowest decile portfolio return is 2.2972%, Stranded Deviation is 14.99%, Stranded Error Mean is 1.20029% and t statistic is 1.914% with 155 degree of freedom. The statistical test is shows that the p value is 0.0285, which is less than alpha value of 0.05. Therefore null hypothesis is rejected at 95% confidence level. The alternative hypothesis is the average monthly return of highest decile portfolio D10 is higher than lowest decile portfolio. The study provides evidence for existence of value effect in the Colombo stock market.

Table 1: Descriptive Statistics

Descriptive statistics										
Statistic	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**	**D7**	**D8**	**D9**	**D10**
No. of observations	156	156	156	156	156	156	156	156	156	156
Mean	3.63	1.82	2.44	2.47	2.98	3.14	2.69	4.02	4.01	5.93
Median	1.25	2.04	2.14	1.24	1.86	1.88	2.12	2.79	2.29	2.43
Minimum	-21.79	-21.25	-22.30	-21.37	-20.12	-17.72	-20.89	-21.72	-23.29	-25.30
Maximum	127.78	23.69	28.05	35.04	58.31	31.42	32.19	36.25	38.46	92.97
Range	149.57	44.93	50.34	56.41	78.43	49.14	53.08	57.97	61.75	118.27
Standard deviation (n-1)	14.88	8.26	8.01	8.71	10.47	9.23	9.01	10.21	10.56	15.91
Standard error of the mean	1.19	0.66	0.64	0.70	0.84	0.74	0.72	0.82	0.85	1.27
Mean absolute deviation	9.09	6.38	6.25	6.51	7.52	7.22	6.92	7.75	8.15	10.89

CONCLUSION

This study examines existence of value effect on stocks returns in the Colombo stock market. The sample of study includes all non-financial companies listed on main board of Colombo stock exchange during the period from 2000 to 2013. All sample of stocks are formed into ten portfolios based on book to market ratio and equally weighted average monthly portfolio return is calculated and assigned to respective decile portfolios at the end of each year. The existence of vale effect is estimated by the differences of portfolio return between highest and lowest book to market decile portfolio. The analyses show that the highest decile portfolio of stocks earns higher return than lowest decile portfolio of stocks. Therefore, the study concludes that there is a value effect exist in the Colombo stock market during the study period and the finding consistent with the study of Fama & French (1992), Davis (1994), Lakonishok, Shleifer & Vishny (1994), Asness (1997), Lewellen (1999), Asness, Proter & Stevens (2000) in US market and . Chan, Hamao and Lakonishok (1991), Fama and French (1998), Fraser & Page (2000), Griffin (2002), Rowley and Sharpe (1993), Rouwenhorst (1999) in international markets.

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