Does the All Share Price Index represent the Colombo Stock Market ?

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Abstract

I examine whether the All Share Price Index (ASPI) represents the Colombo Stock Market (CSM). Monthly prices and returns of listed firms in the CSM are available but are not adjusted for capital changes such as dividends, bonus issues, rights issues. After making these adjustments, I compared two indices, the ASPI and the Equally Weighted Index (EWI), under the measure of coefficient of determination (R^2) for a 13 year period from 1994 to 2006 in the CSM with less-frequent and skewed transactions. I found that the mean R^2 values of the ASPI are higher than those of the EWI. This finding indicates that the ASPI is better than the EWI for estimating beta of CAPM in the CSM.

Keywords: ASPI, EWI, Beta, Stock return, Market Return

I. Characteristics of the Colombo Stock Market

Share trading in Sri Lanka dates back to 1896 when the Colombo Brokers Association commenced share trading in limited liability companies that were involved in opening plantations in the country. The establishment of a formal stock exchange in 1985 and the incorporation of the Colombo Stock Exchange (CSE) marked a milestone in the history of share trading in Sri Lanka. The CSE is a company limited by guarantee, and was established under the Companies Act No. 17 of 1982. The CSE has 236 listed companies representing 20 business sectors. Despite these has 236 listed companies, most stocks do not trade frequently in the market. Thus, unlike a developed stock market, the Sri Lankan stock market is very small and has specific characters. Transactions of the CSE are carried out with a completely automated system- that was introduced in 1997. Trading transactions take place weekdays from 9.30 A.M. to 2.30 P.M.

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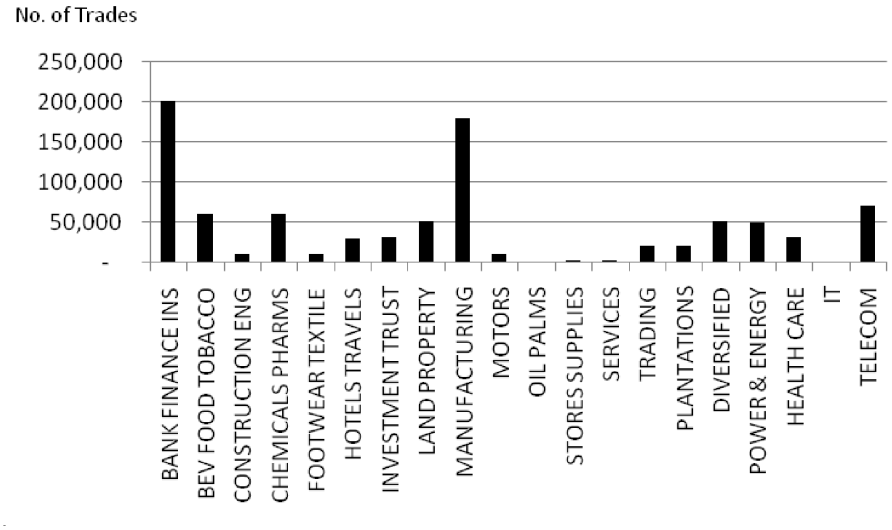
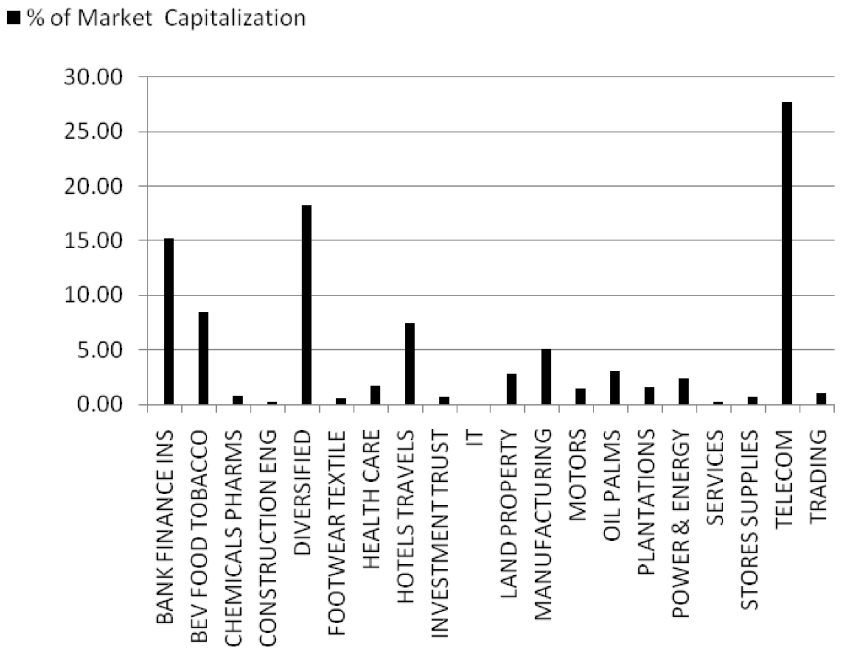


Source : The CSE database in 2006

Figure 1. Number of Transactions for each sector in 2006



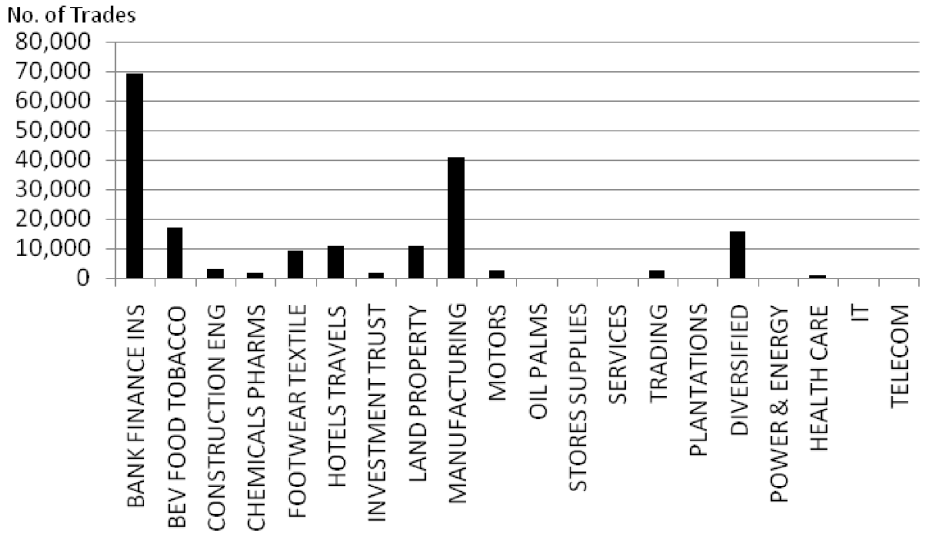
Source : The CSE database in 2006

Figure 2. Percentage of Market Capitalization of each sector in 2006

The key characteristics of the CSE observed in the sample period of 1994 to 2006 are discussed below. According to the number of transactions for each sector (industry) and the percentage of market capitalization from 1995 to 2006, the CSE is dominated by just a few sectors : banking, finance, and insurance as well as manufacturing, diversified, and telecommunication sectors. Figs. 1 to 4 show the main characteristics of the CSE in 1995 and 2006. These figures indicate that the three largest industries in terms of market capitalization in 2006 were telecommunications, diversified, and banking, finance, and insurance, respectively. In terms of the number of transactions the biggest sector in 2006 was banking, finance, and insurance and the second largest was the manufacturing. In Figs. 1 and 2, it can be seen that only a few sectors had a large influence on the ASPI in the CSE.

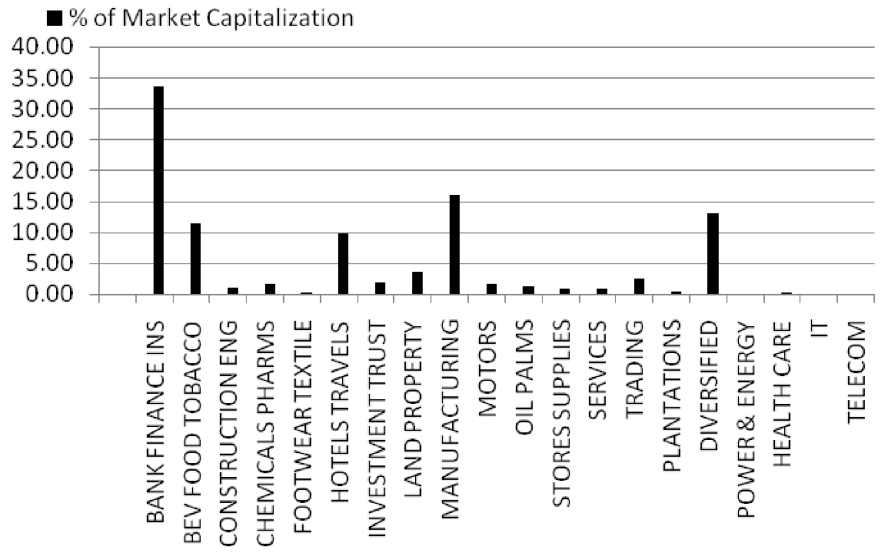
Figs. 3 and 4 show the number of transactions and the market capitalization in 1995. In 1995, the most transactions were recorded in the banking, finance, and insurance sector as was the largest market capitalization. Furthermore the data set of the CSE shows that the banking, finance, and insurance industry was the largest industry in terms of its market capitalization in 1995. The Second most important sector is the manufacturing sector. The number of transactions as well as the percentage of market capitalization is higher for the manufacturing sector, and it was the second largest sector in the CSE in 1995. Figs. 3 and 4 show that the largest market capitalization and the largest number of transactions recorded was in the banking, finance, and insurance sector in 1995.

All four of these figures show that the CSE was dominated by just a few sectors in 1995 as well as in 2006. However Samarakoon (1997) used only the data from non-financial sectors for his



Source : The CSE database in 2006

Figure 3. Number of Transactions for each sector in 1995



Source : The CSE database in 2006

Figure 4. Percentage of Market Capitalization of each sector in 1995

analysis of the Capital Assets Pricing Model (CAPM) in the Sri Lankan stock market. For analyzing CAPM in the CSE, he used data from 75 non-financial companies listed on the CSE for the period from 1990 to 1996. The sample does not include banking, finance, insurance, and investment firms.

As Fama and French (1992) point out, the high leverage firms do not have same meaning as for non-financial firms. Under the consideration of leverage risk, financial firms in the Sri Lankan stock market should be included. Otherwise the rest of the firms do not reflect the market. I use all firms listed in the CSE for this prior analysis of the CAPM test.

Tables 1 and 2 present the summary data for the CSE from 1995 and 2006. In 1995 the total number of listed companies was 26 in the banking, finance, and insurance sector, which is equal to the 11% of the total companies. The market capitalization for this sector was 34%. In contrast, the manufacturing sector had 42 companies in 1995, thus accounting for 18% of the total number of companies. The Percentage of market capitalization was 16%. Altogether, these two sectors represented 50% of the market in the CSE in 1995. Outside of the three main industries, banking, finance, and insurance, manufacturing, and diversified, the other sectors represent only 37% of the market capitalization. The number of companies listed in the other sectors is 147, which represents 65% of the total companies. These data provide a clear understanding of the market structure of the CSE in 1995.

A different situation was present in 2006. The biggest market capitalization is shown in the telecommunications industry. This sector is represented by only two companies, accounting for 1% of the total companies. Though this industry was introduced recently, the market capitaliza-

Table 1 Summary data for the CSE in 1995

Sector	No. of Traders	Listed Firms	Share Volume (No.)	Market Capitalization Rs (Million)	% of Market Capitalization
Bank, Finance, Insurance	69,187	26	82,843,889	34,649.85	33.65
Manufacturing	41,058	42	49,630,811	16,415.12	15.94
Diversified	15,793	11	66,021,740	13,531.10	13.14
Telecom	0	0	0	0.00	0.00
Others	60,237	147	117,432,920	38,386.42	37.27
Total	186,275	226	315,929,360	102,982.49	100.00

Source: The CSE database in 2006

Table 2 Summary data for the CSE in 2006

Sector	No. of Traders	Listed Firms	Share Volume (No.)	Market Capitalization Rs (Million)	% of Market Capitalization
Bank, Finance, Insurance	200,959	33	40,008,194	1,301,400.92	15.26
Manufacturing	180,087	32	88,705,692	435,964.90	5.11
Diversified	50,529	10	32,643,032	1,562,916.99	18.33
Telecom	70,832	2	66,071,269	2,365,094.92	27.73
Others	389,986	160	110,199,398	2,862,316.65	33.56
Total	892,393	237	337,627,585	8,527,694.39	100.00

Source: The CSE database in 2006

tion was already 28% in 2006. The banking, finance, and insurance industry holds 15% of market capitalization, and the number of listed companies is 33. It accounts for approximately 14% of the total number of companies. The diversified sector is composed of 10 companies and accounts for 4% of the total companies. The market capitalization is 18%. Four industries, namely telecommunications, diversified, banking, finance, and insurance, and manufacturing represented more than 60% of the market in the CSE in 2006. These findings confirm that these few sectors have had large influence on the market in the CSE. Therefore, the following question arises: Does the ASPI represent the market ?"

The answer to this question is important with regard to CAPM analysis and further research in the CSE. When answering this question there should be another index to measure the market return and it needs to be compared with the ASPI. A popular alternative measure of the market return is the Equally Weighted Index (EWI). Therefore, in the present study we utilized the artificial index called the EWI to measure the market return in the CSE.

The ASPI is a value weighted index (VWI). Index values are calculated on an ongoing basis during the trading session, with the closing values published at the end of each session. The ASPI covers the price fluctuations of all the traded companies during a market day.

For the CAPM analysis, some researchers use EWI rather than VWI. The present research however intends to compare two indices-such as the VWI and EWI. There is a difference between the EWI market return and the VWI market return in the stock markets. It is therefore important to identify which is better for CAPM analysis in the CSE.

In terms of number of listed firms, the CSE is a small market, with an average of 236 listed companies. This number differs from time to time according to the number of delistings and new listings in the CSE. Table 3 shows the number of trading firms from January to December in 1994. The largest number of firms is listed in December and the largest number of firms traded is in October. There is a difference between the number of listed firms and the number of trading firms for any particular month. This gap indicates that some of the listed firms do not trade their securities regularly in the market and must be interpreted as missing data for the sample analysis.

In 1994 the gap between these two values was bigger than in 2006. The total number of non-traded companies in 1995 was 517. Table 4 presents the data for listed firms and traded firms in 2006.

In 2006 the maximum and minimum gaps between listed firms and traded firms were 24 and 7, respectively. The total number of non-traded companies in 2006 was 171. These numbers indi-

Table 3 Number of listed and traded companies in 1994

Month	Companies Listed	Companies Traded	Difference between listed and traded
January	201	169	32
February	201	162	39
March	201	164	37
April	202	148	54
May	203	152	51
June	206	156	50
July	207	167	40
August	208	160	48
September	212	166	46
October	212	176	36
November	213	172	41
December	215	172	43
Total number of non-traded companies			517

Source: The CSE database in 2006

Table 4 Number of listed and traded companies in 2006

Month	Companies Listed	Companies Traded	Difference between listed and traded
January	237	218	19
February	237	221	16
March	235	221	14
April	235	217	18
May	236	212	24
June	236	221	15
July	236	225	11
August	236	225	11
September	236	225	11
October	236	229	7
November	237	224	13
December	237	225	12
Total number of non-traded companies			171

Source : The CSE database in 2006

cate that the gap between listed firms and traded firms has become smaller in recent years and thus that there is less missing data than in the 1990s. These missing data influence the individual stock returns in the market model. In May 1994, 51 companies were not involved in trading, which means that there were no transactions within that month for 51 companies. In 1995 the total number of missing data points was 517. These missing data are filled by using closing stock price data from the previous month. The next section explains the adjustment procedures and calculation of return for the individual stocks.

The main purpose of this paper is to examine the representativeness of ASPI in the CSE. The ASPI will be compared with EWI based on the coefficient of determination R^2 and a t- test in the market model.

The rest of the paper is organized as follows. Section II presents the process of price adjustment. Section III explains the process of calculating beta under two market indices such as the ASPI and the EWI. Section IV shows the findings of the research and a conclusion is given in section V.

II. Missing Data and Price Adjustment of Capital Changes

The main purpose of this paper is to examine the relevance of the ASPI in the CSE. For the

comparison of two indices, it is necessary to calculate the R^2, t, and p values of the beta.

One of the major problems faced by researchers in investigating the stock markets in developing countries is the non-availability of data from computerized databases. This concern is equally applicable to the CSE. Monthly data are available from 2000 onwards. We therefore calculate the monthly stock price for each firm listed on the CSE based on available daily data from 1994 to 1999. Available monthly closing price data are prepared based on the daily data. I assume that the monthly closing price is equal to the last traded date price for each month. The same assumption is used to convert daily stock prices into the monthly closing stock prices. I checked the closing prices in the monthly data and found no difference between 1994 to 1999 and 2000 to 2006.

The other problem is that during the sample period (1994 to 2006), for a large number of firms, monthly stock prices were not available. Although there are more than 200 firms listed in the CSE, most of the firms are not involved in frequent stock trades their stocks in the market (shown in Tables 3 and 4). It is therefore difficult to calculate monthly stock returns for all listed firms. To overcome this problem, missing monthly stock prices are filled by using the previous month's closing price.

Another problem is that we have no available price and return data for listed firms that have adjusted capital changes such as dividends, bonus issues, right issues. Before starting to calculate the R^2 and beta, I adjusted monthly prices and returns from the point of capital change for listed firms in the CSE. Then, using this monthly stock price, I calculated the adjusted stock price for all firms.

I assume that capital changes are marked on the last day for each month. Then the monthly adjustment formula is identified from the daily- based formula of the Japan Securities Research Institute (2007). Under the above assumption, the monthly adjustment formula can be written as:

$$Q_{it}=\left(\frac{P_{i,t-1}}{P_{i,t-1}+\beta_{i,t}*A_{i,t}}\right)(1+\alpha_{i,t}+\beta_{i,t}+\gamma_{i,t})\lambda_{i,t}+\frac{D_{i,t}}{P_{i,t}} \quad (1)$$

where, i: individual stock i, t: time (month), p: monthly closing stock price, Q: adjustment multiplier, A: offer price per share on rights issue, D: cash dividends, α: ratio of bonus issues, β: ratio of rights issues, γ: ratio of stocks on stock dividends, λ: ratio of changing face values.

The total number of capital adjustments for the sample period was 2,951. More details regarding capital adjustment are presented in Tables 5 and 6. If there is a capital change, the value of the multiplier Q is greater than 1.

The adjustment process of capital changes for a particular firm is shown in Table 6. It shows the adjustment process of capital changes such as bonus issues, rights issues and dividends. Although the number of capital changes is very small, the effect of these changes to the stock return is great. The greatest effect can be seen in the bonus issues rather than either the rights issues or dividends. P_{it} shows the before- adjustment price of the changes, and PP_{it} indicates the

Table 5 No. of Capital Adjustments from 1994 to 2006

Type of Capital Change	Number of adjustments
Dividends	2,493
Rights Issue	181
Bonus Issue	277
Total	2,951

Source: The CSE database in 2006

Table 6 The effect of capital changes and dividends

Short Name of the Firm: ASIR								
Month/Year	P_{it}	Div	Bonus	Right	Q_{it}	A_{it}	PP_{it}	R_{it}
11-93	45.00				1		45.00	0.66667
12-93	44.50	1			1.02247		45.50	0.01111
1-94	40.00		0.33		1.33333		53.33	0.1985
2-94	48.25				1		48.25	0.20625
3-94	41.00				1		41.00	−0.1503
4-94	39.50				1		39.50	−0.0366
5-94	36.50	1			1.0274		37.50	−0.0506
6-94	32.00				1		32.00	−0.1233
7-94	31.00				1		31.00	−0.0313
8-94	36.00			0.10	1.01791	25	36.64	0.18209

Source: Research data in 2006

adjusted price. When capital change information is available, we find a difference between P_{it} and PP_{it}. After the calculating adjustment multiplier ($Q_{i,t}$), the PP_{it} is calculated. The PP_{it} represents the new stock price according to the capital changes of each firm i in the time t. The relevant formula is given below.

$$PP_{i,t}=P_{i,t}*Q_{i,t} \tag{2}$$

$$R_{i,t}=\frac{PP_{i,t}}{P_{i,t-1}}-1 \tag{3}$$

The monthly stock return is then calculated by using the above formula (3). More information regarding the capital changes and dividend adjustments are presented in Tables 7, 8, and 9. The descriptive statistics for firm monthly returns show that the mean value of return after adjustment of capital changes is better than before. The mean value of monthly return after adjustment dividends is 5.66%. The mean values of monthly returns after adjustment bonus and rights issues

are 31.71 and 10.25%, respectively. Before adjusting the dividends, bonus issue, and rights issue, the mean values are 0.48, −15.78, and −9.73% respectively. We can watch the positive stable

Table 7 Descriptive Statistics for monthly return of the firms

After Adjustment of Dividends		Before Adjustment of Dividends	
Mean	0.056559*	Mean	0.0048
Median	0.025	Median	0
Standard Deviation	0.219091	Standard Deviation	0.160967
Sample Variance	0.048001	Sample Variance	0.02591

Source: Research data in 2006
* The null hypothesis of "the mean differences of two monthly returns are equal to zero" is rejected at a 1% significance level.

Table 8 Descriptive Statistics for monthly return of the firms

After Adjustment of Bonus Issue		Before Adjustment of Bonus Issue	
Mean	0.317106*	Mean	−0.15784
Median	0.080936	Median	−0.13461
Standard Deviation	0.85535	Standard Deviation	0.222601
Sample Variance	0.731623	Sample Variance	0.049551

Source: Research data in 2006
* The null hypothesis of "the mean differences of two monthly returns are equal to zero" is rejected at a 1% significance level.

Table 9 Descriptive Statistics for monthly return of the firms

After Adjustment of Rights Issue		Before Adjustment of Rights Issue	
Mean	0.102482*	Mean	−0.09732
Median	−0.02843	Median	−0.09695
Standard Deviation	0.960146	Standard Deviation	0.233131
Sample Variance	0.921881	Sample Variance	0.05435

Source: Research data in 2006
* The null hypothesis of "the mean differences of two monthly returns are equal to zero" is rejected at a 1% significance level.

returns after the adjustment. This fact will imply the potential information contents of capital changes.

In order to give some perspective on the returns and risk of the CSE, Table 10 provides the mean and standard deviation of monthly returns for the period 1994 to 2006.

During the sample period, the monthly mean market return was 0.29% with a standard devia-

Table 10 Mean and Standard Deviation of Market Return and Stock return from 1994 to 2006

	Mean return %	Standard Deviation %
ASPI-market return	0.002924	0.074381
All firms return	0.018431	0.067265
Banking, finance, and insurance	0.015168	0.094175
Diversified	0.025533	0.10499
Manufacturing	0.016281	0.080505

Source : Research data in 2006

tion of 7.4%. On the basis of the monthly stock return, all firms as well as industries such as banking, finance, and insurance, diversified, and manufacturing performed much better than the market. The diversified industry had the highest standard deviation and the highest return during the sample period.

The market return is calculated by using the market indices. One market index is the ASPI, and the other is the EWI. The ASPI is introduced by the CSE, and the EWI is computed by using adjusted stock prices for all firms in the CSE.

Recently, there have been two main price indices namely the ASPI and the Milanka Price Index (MPI). This research uses only the ASPI ; the reason is that the MPI was introduced very recently. The ASPI indicates the price fluctuations of all the listed companies and covers all the traded companies during a market day. I use two proxies, the ASPI and the EWI, which is calculated by using the sample data. The relevant formula (4) for calculation of the ASPI is given by :

$$AllSharePriceIndex=\frac{MarketCapitalizationofAllListedCompanies}{BaseMarketCapitalization}*100 \quad (4)$$

where,

$$MarketCapitalization=\sum CurrentNo.ofListedSharesofCompany_i*MarketPrice_i$$
$$BaseMarketCapitalization=\sum No.ofListedSharesofCompany_i*MarketPrice_i$$

Base values are established with the average market value for the year 1985.

$$OpeningBaseMarketCapitalization=\frac{TotalMarketCapitalizationin1985}{No.ofTradingDay\ \text{sin}1985} \quad (5)$$

The equation of the ASPI shows that it is a value-weighted index and that it reflects the market movements in the CSE. In the next section, we use the individual stock return and the market return to calculate the individual stock beta.

III. Beta Estimation

I will discuss the procedure that is used to calculate the stock beta for the period January 1994 to December 2006. This study uses monthly returns data for 237 companies listed on the CSE. This return is adjusted for capital changes using formula (1), as shown above. The market return can be calculated by using two indices such as the ASPI and the EWI. Using these two set of market return data and individual stock return data, the individual stock beta is calculated.

Different beta calculation procedures have been used by different researchers. Fama and MacBeth's (1973) have studied the relationship between risk and return by using a three-step procedure for beta calculation. Using the first 4 years of monthly return data, 20 portfolios are formed on the basis of ranked beta, from the largest to the smallest, for individual securities. The second sub period is referred to as the portfolio beta estimation period. The next 5 years of data are then used to re-compute the individual beta for all securities, and these are averaged across securities within portfolios to get 20 initial portfolio betas for the tests. Hawawini (1991) uses similar methodology to compute the beta and test the validity of the CAPM. An initial 2-year period of monthly returns is used to construct the portfolio on the basis of risk and size. This step is referred to as 2-year construction period for the portfolio. The next 3 years of monthly returns are used to estimate the risk of the portfolios. This is referred to as the 3-year risk estimation period. Finally, the examination of the risk-return relationship and the investigation of seasonality and size effects are performed over the sixth year of data. This step is referred to as the testing period. Hodoshima et al. (2000) have also employed similar procedures to estimate the portfolio betas. In the first step, they estimated beta for each individual security by using 2 years of data. Based on the obtained results, they constructed 20 portfolios by ranking the individual beta from largest to smallest. In the second step, they recomputed beta for the portfolio by using the next 2 years of data. Finally, they used another 2 years of data and obtained the portfolio return by averaging the returns of the securities belonging to each portfolio.

I will introduce the step-by-step estimation method which estimates the monthly beta for each firm by regressing the monthly stock return (R_i) on the market return (Kunimura 2008). The beta is estimated by using the following market model. The following formula (6) shows the relationship of the return of a particular security in relation to market return and the risk of that particular stock.

$$R_{i,t}=\beta_{0,i}+\beta_{1,i}R_{m,t}+\varepsilon_{i,t} \qquad i=1,2,\cdots\cdots n \tag{6}$$

In the model, $R_{i,t}$ and $R_{m,t}$ denote the monthly return of i^{th} security in time t and market return of time t respectively. β_0 and β_1 denote the intercept and slope coefficient of the regression line. ε_{it} is the error term of the i^{th} security at time t. The model shows that the return of a security is determined in accordance with its risk contribution to the market portfolio i.e. the systematic or market risk. The risk does not relate to the market-Unsystematic risk is assumed to be eliminated through portfolio diversification. In the market model, the security beta estimation period is a complete 24-month period starting in January 1994 and continuing to December 1995. Reducing by a 1-month period, we repeat this procedure up-to December of 2006. Beta is calculated by using TOAN-VBA programming (Toan2008). The second beta is estimated from February 1994 to January 1996, and so on. Individual stock beta, t value, p value, and R^2 are calculated using regression analysis (Kunimura2008). The summarized results of the monthly beta are given in Table 11.

Table 11 Number of beta and probability level

Index	Less than or equal 10% (P≤0.1)	More than 10% (P>0.1)	Total
ASPI	14,848	12,042	26,890
EWI	9,761	17,129	26,890

Source : Research data in 2006

The total number of monthly beta computed under the two indices by using regression analysis is 26,890. Among them, 14,848 ASPI monthly beta belongs to the less than or equal 10% (p≤0.1) probability level, which accounts for 55% of the total number of monthly beta. Then, 9,761 monthly beta, which was calculated using the EWI market return, belong to the less than or equal to 10% probability level, which accounts for 36% of the total number of monthly beta. More than 50% of the ASPI beta belong to the less than or equal to 10% probability level, which verifies that the ASPI is better than the EWI in the CSE at measuring the market return.

IV. Findings

The study used R^2 to identify the best measurement for market return in the CSE. The coefficient determination R^2 is a summary measure that tells how well the sample regression line fits the data. Thus, R^2 is computed for the all data samples by regressing the return of individual stocks on the market return. Table 12 indicates the R^2 values of the two indices. This result indicates that ASPI is a better fit than EWI in calculating the market return in the CSE. For market return of the ASPI, the mean of R^2 is 20.1165% and the standard deviation is 14.6599%. The skew for the ASPI is smaller than that of the EWI, which indicates a symmetrical distribution,

while kurtosis is weaker. For the market return of the EWI, the mean of R^2 is 12.2621% and the standard deviation is 8.9382%.

Table 12 Descriptive Statistics of R^2

ASPI		EWI	
Mean	0.201165*	Mean	0.122621
Standard Error	0.009309	Standard Error	0.005676
Median	0.167301	Median	0.093147
Standard Deviation	0.146599	Standard Deviation	0.089382
Sample Variance	0.021491	Sample Variance	0.007989
Kurtosis	0.149134	Kurtosis	1.265992
Skew	0.857982	Skew	1.169253
Minimum	0.000899	Minimum	0.005621
Maximum	0.656134	Maximum	0.460679

Source: Research data in 2006

* The null hypothesis of "the mean values of two R^2 are equal to zero" is rejected at a 1% significance level.

Table 12 confirms that the ASPI is better than the EWI at measuring the market movements in the CSE. It indicates that fitness of the ASPI is better than that of the EWI. It also verifies that for the testing of the CAPM, the ASPI is better than the EWI. Table 13 provides the summary statistic of the t value of beta. For the t value of beta of the ASPI, the mean is 2.129858 and the standard deviation is 2.015801. For the t value of the EWI, the mean is 1.406065 and the standard deviation is 1.603496. These results are also consistent with previous results and show that the ASPI is better than the EWI.

Table 13 Descriptive statistics of the T value of beta

ASPI		EWI	
Mean	2.129858	Mean	1.406065
Standard Error	0.012293	Standard Error	0.009779
Median	1.937189	Median	1.186906
Standard Deviation	2.015801	Standard Deviation	1.603496
Sample Variance	4.063453	Sample Variance	2.571198
Kurtosis	1.499946	Kurtosis	2.278466
Skew	0.758659	Skew	0.909926
Minimum	−4.7573	Minimum	−6.2029
Maximum	14.65224	Maximum	13.50657

Source: Research data in 2006

Thereafter we use a t-test to determine whether the mean of two R^2 values is equal to zero. For the t-test, the study created a new variable called Z. The new variable (Z) represents the difference between two indices R^2 values. The null hypothesis is that "the mean value of Z is zero". The T statistics value is calculated using the following formula.

$$t=\frac{\hat{Z}-\bar{Z}}{SE(\hat{Z})} \tag{7}$$

The obtained t statistics value is 14.22093. The null hypothesis of the mean value of Z is zero rejected at a 1% significance level. As such, the mean value of the two indices is significantly different from zero and the ASPI is better than the EWI. The consistency of results among various computations provides the strongest evidence that the ASPI is better than the EWI at measuring the market return in the CSE.

V. Conclusion

I have examined whether the ASPI is the best measurement for market returns in the CSE. The data used includes monthly returns for the Sri Lankan stock market for the 13-year period from 1994 to 2006.

I tested the two indices by using R^2 and a t-test in the market model. I found that the mean value of R^2 of ASPI is larger than that obtained from the EWI. This result is consistent with the results of the t-test. These results support the alternative hypothesis that the mean value of the two indices is significantly different from zero. It confirms that the ASPI is better than the EWI at measuring market performance in the Sri Lankan stock market.

In the CSE, the EWI does not represent the market return and thus, the results provide remarkable evidence regarding the ASPI, which represents the market performance in the CSE. Although the ASPI is a capital weighted index, and the banking, finance, and insurance sector heavily influence the market in the CSE, the validity of the ASPI remains important.

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