Day of The Week Effect and The Stock Returns In The Colombo Stock Exchange : An Analysis of Empirical Evidence

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INTRODUCTION

Empirical evidence indicates the existence of some systematic patterns in the returns of both individual stocks and stock market indices. The stock market indices include seasonal regularities relating to the time of the year, time of the month, day of the week and days around holidays (holiday effect). These anomalies demonstrate continual persistence and their existence evokes considerable interest. Among the different seasonal effects observed in stock markets, an interesting one is the seasonality across the days of a week. Its discovery goes back to Fields in1931. Fields observed that the US stock market consistently experienced significant negative and positive returns on Monday and Friday respectively. The observation once again started receiving increasing attention during the 1980's, when French (1980),Gibbons and Hess (1981), Rogalski (1984), Jaffe and Field, (1985), Harris (1986), Churdy(1991), Balaban (1994) and many more discovered that capital markets of many other countries also experienced similar seasonality including the emerging stock market. However, little attention has been paid to investigate these phenomena in Sri Lankan stock market even though the stock market was established in 1986.

The objective of this paper is two fold. The first objective is to address the long field research gap findings in Sri Lanka by examining the day of the week effect and the second one is to provide necessary and important information to the investors in predicting their stock return and making their investment decision.

This paper is organized as follows: following the introductory comment as above, the second section leads to the discussion of the previous empirical studies related to the area of study. The next section describes the methodology and the data used. Following the results of the study, the last section gives the conclusions and suggestions for areas of future research.

A REVIEW OF PREVIOUS RESEARCH STUDIES

The objective of this section is to document the empirical studies that have been conducted to examine the market efficiency and the day of the week effect in stock markets ranging from developed and less developed countries.

It has generally been assumed that the daily returns are the same for all days of the week. That is, expected return on a given stock is the same for Monday as it is for Tuesday, Wednesday, Thursday and Friday. However, a number of studies have uncovered the evidence that have refuted this belief. The day of the week effect is a phenomenon that constitutes a form of anomaly of the efficient capital market theory. According to this phenomenon, the average daily return of the market is not the same for all days of the week, as we would expect on the basis of efficient market theory.

The day of the week effect has been found to be a predominant phenomenon in most markets since the study by *French (1980)* of the US market using the daily returns of the S & P 500 composite Index for the period 1953-1977. He found that the mean Monday return was significantly negative. *Gibbons and Hess (1981)* also investigated the US market by using the S & P 500 composite Index for the period of 1962 to 1978 and found that the mean Monday returns were also abnormally low and, at time, negative. *Rogalski (1984)* examined the set of 500 stocks in the S & P 500 during the period of 1979-1984 while a study by *Harris (1986)* examined all NYSE listed stocks during the period of 1981-1983. The negative daily return for Monday was observed in both studies.

Harris's (1986) study involved a large sample of stocks but for a shorter time period and it reached a different conclusion. This study found that the negative daily return for Monday was composed of two roughly equal-sized negative returns during the non-trading period and trading period. Statistical test indicated that the average non-trading-period returns for Monday, as well as the average trading period return for Monday, were different from the corresponding returns for the other four days of the week.

Wong and Ho (1986) studied the day of the week effect on the Singapore stock market using data on the All Share Index and six sectorial indices and reported a low negative Monday return and a high positive Friday return.

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Chaurdy (1991) investigated the day of the week effect of the Bombay Stock exchange. He used the data for the period of June 1988 to January 1991 and concluded that average Monday returns are negative. However, Tuesday average returns are still higher. He observed positive average returns on Thursday and Friday.
Balaban (1994) investigated the day of the week effect in an emerging stock market of a developing country, Turkey. The empirical finding verify that although day of the week effects are present in Istanbul Securities Exchange Composite Index (ISECI) (return data for the period January 1988-August 1994), these effects change in direction and magnitude through time.
Berument and Kiymaz (2001) tested the presence of the day of the week effect on stock market volatility by using the S & P 500 market index during the period of January 1973 and October 1997. The findings show that the day of the week effect is present in both volatility and return equations. While the highest and lowest returns are observed on Wednesday and Monday; the highest and the lowest volatility are observed on Friday and Wednesday respectively. Further investigation of sub-periods reinforced their findings that the volatility pattern across the day of the week is statistically different.
An investigation of the day of the week effect on stock returns in Turkey has been studied by *Demirer and Karan (2001).* The findings of this study indicate that the Turkish market appears to be efficient in terms of expected returns. However, it seems inefficient in terms of expected variability of these returns and in terms of investors' expectations.

THE DAY OF THE WEEK EFFECT ON STOCK MARKET VOLATILITY AND VOLUME

International evidence has been studied by *Kimaz and Berument (2003).* This study investigated the day of the week effect on the volatility of major stock market indexes for the period of 1988 through 2002. Using a conditional variance framework, they found that the day of the week effect is present in both return and volatility equations. The highest volatility occurs on Monday for Germany and Japan, on Fridays for Canada and United States, and on Thursdays for the United Kingdom.
Lian and Chen (2003) studied the Seasonal anomalies of Stocks in Asian Equity Markets. Their study examined the daily anomalies in the five Asian equity markets of Malaysia, Singapore, Thailand, Indonesia and the Philippines before, during and after the Asian Financial Crisis. The regression result of the study reveals different patterns among these markets for each of the three periods. The Monday and Friday effects are most predominant during the pre-crisis period. Only the Tuesday effect in Thailand and the Philippines is observed during the crisis period. While the pattern of daily anomalies in Thailand during the post-crisis period reverts to that of the pre-crisis period, the other four markets exhibit different patterns of daily anomalies compared to the pre-crisis period. When the time-varying return volatility is taken into account through the use of GARCH-M model, the Monday effect remains significant while some of the other daily anomalies have become insignificant during the pre-crisis period. The Tuesday effect in Thailand and the Philippines disappears altogether during the crisis period. Only the Monday and Friday effects in Thailand persist in the post-crisis period.

DAY OF THE WEEK EFFECT AND MARKET EFFICIENCY

Evidence from Indian Equity market using high frequency data of National Stock Exchange was investigated by *Nath and Dalvi (2004)*. This study empirically examined the day of the week effect anomaly in the Indian equity market for the period from 1999 to 2003 using both high frequency and end of day data for the benchmark Indian equity market index S&P CNX NIFTY. Using robust regression with bi-weights and dummy variables, the study finds that before introduction of rolling settlement in January 2002, Monday and Friday were significant days. However, after the introduction of the rolling settlement, Friday has become significant. This also indicates that Friday, being the last day of the week has become significant after the rolling settlement. Mondays were found to have higher standard deviations followed by Fridays. The existence of market inefficiency is clear. The market inefficiency still exists and the market is yet to price the risk appropriately.

METHODOLOGY AND DATA BASE

The empirical analysis of this study used daily return of the Colombo Stock Exchange for the period of 2nd January 1985 to 31st December 2004 comprising of 4771 observations. The data of daily price indices (All Share Price index) are collected from the data library of Colombo Stock Exchange. The study uses the general methodology followed by the earlier researchers, *Balaban (1994), Kimaz and Berument (2001) and Johnson and Cheng (1999).* The daily market return is used as an individual time series variable. Market returns are calculated from the daily price indices without adjustment of dividend, bonus issue and right issues. The daily share price index represents all the listed companies' stocks. Many researchers confirm that their conclusions remain unchanged whether they adjusted their data for dividend or not. In this research, All Share Price Index (ASPI) of Colombo Stock Exchange

has been taken to calculate the returns. The following equation is used to calculate the daily market return.

$$R_{mt} = \ln (ASPI_t / ASPI_{t-1}) \quad (1)$$

Where, R_{mt} is the Market return, in day t, $ASPI_t$ is the all share Price index at day t, $ASPI_{t-1}$ is the All share Price Index at day t-1, and In is the Natural logarithm.

The reasons to take logarithm returns are justified both theoretically and empirically. Theoretically, logarithmic returns are analytically more tractable when linking together sub-period returns to form over intervals. Empirically, Mobarek & Keasey, Johnson & Cheng's logarithmic returns are more likely to be distributed which is prior condition of standard statistical techniques.

In order to test the day of the week effect on stock return in the Sri Lankan Stock Market, this research employs both descriptive and the autoregressive model similar to Kimaz and Berument (2001). To test the Days of the Week Effect, the following regression equation is formulated.

$$R_t = \infty + B_2D_{2t} + B_3D_{3t} + B_4D_{4t} + B_5D_{5t} + e_t \quad (2)$$

Where R_t is daily returns of the All share Price Index calculated using equation 1., D_{2t}-D_{5t} are dummy variables from Tuesday to Friday and D_{2t} =1 if day 2 is Tuesday and 0 otherwise; D_{3t} = 1 if it is a Wednesday and 0 otherwise; and so on. The OLS coefficients B_2-B_5 are the mean return for Tuesday through Friday respectively and ∞ is the constant factor. The stochastic disturbance term is indicated by e_t. The null hypothesis tested is that $B_2, B_3, B_4, B_5 = 0$.

The same regression is repeated for each individual year and for the total sample period from 1985-2004 to detect whether day of the week effect, if any, is stable through different periods.

Again, with the day of the week effect, the lag effect is going to be tested using equation 3. In this equation, stock returns are regressed on 05 lagged returns. The selection of the number of lag is based on the findings of the autocorrelation analysis. Therefore, the test of equal mean equation with that of lag effect is:

$$R_t = ß + a_2D_2 + a_3D_3 + a_4D_4 + a_5D_5 + b_1R_{t-1} + b_2R_{t-2} + b_3R_{t-3} + b_4R_{t-4} + b_5R_{t-5} + u_t \quad (3)$$

Where R_t is daily returns of the All share Price Index calculated using equation 1, Weekday dummy variables D_i (i = 2, …5), representing day of the week-effect capture differences in mean returns. For example, Tuesday dummy is coded 1 when day is Tuesday and it is 0 otherwise. Dummies for Wednesday through Friday are coded in exactly the same fashion. The residual from this regression estimate the unexpected return on day t. The null hypothesis tested is that change in stock returns in a particular day will not influence the other days' return at the Colombo Stock Exchange.

The selection of five-lag variable is based on the result from the analysis of autocorrelation. According to the autocorrelation test, up to five lags, the effect is statistically significant.

EMPIRICAL RESULTS

Result of Descriptive Studies

Table - 1 intends to provide the summary of descriptive statistics for daily index return through different periods, such as daily, yearly on the basis of the days of the week. There is a pronounced difference between the mean and median of return at any day of the week in each year. It is useful to compare return across days as well as years.

Table 1: Descriptive Statistics on Day of the Week Effect

Yearly Results	Monday	Tuesday	Wednesday	Thursday	Friday	All days
1985						
# Obs.[a]	45	50	45	48	49	237
Mean[b]	0.00155	0.00128	0.00051	0.00126	0.00043	0.00101
Median	0.00047	0.00066	0.00000	0.00043	0.00010	0.00039
SD[b]	0.01106	0.01109	0.00340	0.01253	0.01049	0.01022
Minimum	-0.02729	-0.06511	-0.00642	-0.04101	-0.03882	-0.06511
Maximum	0.06280	0.03209	0.01001	0.06472	0.04496	0.06472
Q1	-0.00053	0.00000	-0.00148	-0.00080	-0.00111	-0.00040
Q3	0.00270	0.00385	0.00165	0.00172	0.00171	0.00197
1986						
# Obs.[a]	28	26	27	26	27	134
Mean[b]	0.00126	0.00152	0.00022	0.00053	-0.00022	0.00066
Median	0.00031	0.00098	0.00022	0.00044	0.00046	0.00046
SD[b]	0.00398	0.00440	0.00451	0.00414	0.00593	0.00462
Minimum	-0.00556	-0.00815	-0.00640	-0.01157	-0.02539	-0.02539
Maximum	0.01238	0.01731	0.01678	0.01198	0.00700	0.01731
Q1	-0.00143	-0.00008	-0.00348	-0.00123	-0.00126	-0.00126
Q3	0.00308	0.00304	0.00200	0.00250	0.00321	0.00280

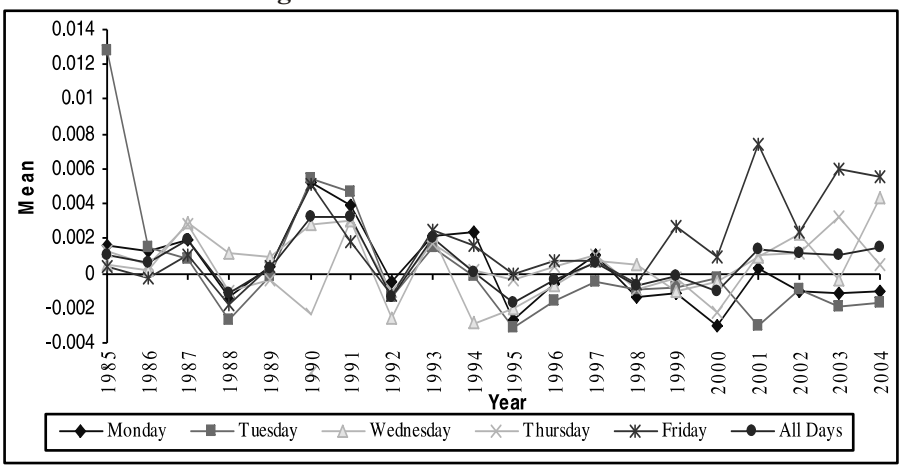
1987						
# Obs.[a]	48	49	45	44	44	230
Mean[b]	0.00196	0.00088	0.00295	0.00283	0.00102	0.00191
Median	0.00062	0.00077	0.00128	0.00097	0.00178	0.00083
SD[b]	0.00735	0.00514	0.00933	0.00637	0.00957	0.00768
Minimum	-0.01486	-0.02014	-0.00625	-0.00574	-0.04342	-0.04342
Maximum	0.02660	0.01711	0.05616	0.02780	0.02323	0.05616
Q1	-0.00287	-0.00089	-0.00070	-0.00120	-0.00193	-0.00128
Q3	0.00552	0.00334	0.00387	0.00634	0.00418	0.00429
1988						
# Obs.[a]	47	46	49	46	48	236
Mean[b]	-0.00134	-0.00269	0.00116	-0.00099	-0.00179	-0.00111
Median	-0.00095	-0.00152	-0.00169	-0.00048	-0.00175	-0.00123
SD[b]	0.00584	0.00583	0.02377	0.00704	0.00527	0.01206
Minimum	-.01960	-0.02009	-0.02230	-0.01605	-0.01544	-0.02230
Maximum	0.01399	0.00881	0.15592	0.02805	0.01313	0.15592
Q1	-0.00349	-0.00479	-0.00528	-0.00417	-0.00481	-0.00470
Q3	0.00046	-0.00005	0.00162	0.00150	0.00053	0.00087
1989						
# Obs.[a]	46	46	51	48	47	238
Mean[b]	0.00036	-0.00012	0.00097	-0.00038	0.00043	0.00026
Median	0.00006	-0.00056	0.00043	-0.00017	-0.00054	-0.00017
SD[b]	0.00609	0.00504	0.00575	0.00652	0.00773	0.00625
Minimum	-0.01157	-0.01117	-0.01468	-0.02159	-0.02651	-0.02651
Maximum	0.02602	0.01514	0.01970	0.02902	0.02677	0.02902
Q1	-0.00202	-0.00336	-0.00139	-0.00325	-0.00268	-0.00269
Q3	0.00298	0.00171	0.00319	0.00278	0.00223	0.00254
1990						
# Obs.[a]	45	47	48	49	49	238
Mean[b]	0.00518	0.00542	0.00283	-0.00236	0.00516	0.00320
Median	0.00000	0.00261	0.00220	-0.00216	0.00082	0.00090
SD[b]	0.01406	0.01865	0.01803	0.01915	0.01759	0.01774
Minimum	-0.01414	-0.03989	-0.04310	-0.06266	-0.02891	-0.06266
Maximum	0.04751	0.07286	0.08185	0.06852	0.08655	0.08655
Q1	-0.00328	-0.00494	-0.00521	-0.00769	-0.00482	-0.00501
Q3	0.01226	0.00793	0.00833	0.00601	0.00944	0.00834
1991						
# Obs.[a]	47	48	47	49	48	239
Mean[b]	0.00395	0.00456	0.00297	0.00298	0.00186	0.00326
Median	0.00294	0.00393	0.00178	0.00357	0.00132	0.00274
SD[b]	0.00937	0.00883	0.00851	0.00660	0.00731	0.00816
Minimum	-0.02556	-0.01616	-0.01789	-0.01397	-0.01230	-0.02556
Maximum	0.03098	0.02274	0.02789	0.01580	0.02898	0.03098
Q1	-0.00071	-0.00056	-0.00182	-0.00086	-0.00173	-0.00109
Q3	0.00779	0.00914	0.00664	0.00775	0.00479	0.00725
1992						
# Obs.[a]	48	49	47	51	47	242
Mean[b]	-0.00052	-0.00141	-0.00252	-0.00106	-0.00125	-0.00134
Median	-0.00087	-0.00192	-0.00253	-0.00172	-0.00138	-0.00156
SD[b]	0.00478	0.00642	0.00593	0.00702	0.00658	0.00619
Minimum	-0.01323	-0.01736	-0.02040	-0.01647	-0.01797	-0.02040
Maximum	0.0130	0.02462	0.01565	0.01861	0.01801	0.02462
Q1	-0.00308	-0.00418	-0.00458	-0.00550	-0.00451	-0.00448
Q3	0.00137	0.00200	0.00100	0.00227	0.00078	0.00151
1993						
# Obs.[a]	50	48	50	48	45	241
Mean[b]	0.00211	0.00152	0.00218	0.00169	0.00249	0.00199
Median	0.00024	0.00001	0.00130	-0.00049	0.00110	0.00080
SD[b]	0.00942	0.00899	0.00863	0.00753	0.00846	0.00857
Minimum	-0.01369	-0.01802	-0.01746	-0.01533	-0.01489	-0.01802
Maximum	0.03176	0.02840	0.03242	0.02151	0.02777	0.03242
Q1	-0.00399	-0.00385	-0.00322	-0.00328	-0.00289	-0.00362
Q3	0.00803	0.00785	0.00689	0.00683	0.00732	0.00714

1994						
# Obs.[a]	45	49	48	47	45	234
Mean[b]	0.00232	-0.00015	-0.00292	0.00014	0.00156	0.00003
Median	0.00220	0.00109	-0.00081	-0.00001	0.00208	0.00082
SD[b]	0.01307	0.01298	0.01005	0.01025	0.01237	0.01199
Minimum	-0.03451	-0.04699	-0.02845	-0.02834	-0.04406	-0.04699
Maximum	0.03614	0.02938	0.01551	0.02598	0.02635	0.03614
Q1	-0.00332	-0.00674	-0.00705	-0.00558	-0.00495	-0.00521
Q3	0.00651	0.00681	0.00320	0.00623	0.00698	0.00557
1995						
# Obs.[a]	45	49	50	49	47	240
Mean[b]	-0.00263	-0.00314	-0.00206	-0.00042	-0.00000	-0.00165
Median	-0.00223	-0.00231	-0.00211	-0.00100	-0.00080	-0.00162
SD[b]	0.01046	0.00913	0.00883	0.00755	0.00910	0.00904
Minimum	-0.04730	-0.04205	-0.01782	-0.01287	-0.02991	-0.04730
Maximum	0.02066	0.01956	0.02594	0.01668	0.01884	0.02594
Q1	-0.00572	-0.00813	-0.00695	-0.00554	-0.00335	-0.00539
Q3	0.00065	0.00119	0.00183	0.00485	0.00435	0.00215
1996						
# Obs.[a]	48	50	48	48	46	242
Mean[b]	-0.00064	-0.00162	-0.00068	0.00034	0.00070	-0.00040
Median	-0.00121	-0.00156	-0.00114	-0.00043	0.00042	-0.00049
SD[b]	0.00375	0.00412	0.00456	0.00418	0.00433	0.00427
Minimum	-0.00699	-0.01761	-0.00882	-0.01354	-0.00821	-0.01761
Maximum	0.00884	0.00789	0.00903	0.01067	0.01602	0.01602
Q1	-0.00358	-0.00392	-0.00399	-0.00223	-0.00244	-0.00297
Q3	0.00139	0.00045	0.00217	0.00260	0.00315	0.00223
1997						
# Obs.[a]	50	47	50	48	46	241
Mean[b]	0.00101	-0.00052	0.00076	0.00109	0.00077	0.00063
Median	0.00089	-0.00013	-0.00076	0.00193	0.00046	0.00065
SD[b]	0.00684	0.00768	0.00909	0.00803	0.00737	0.00780
Minimum	-0.01237	-0.02492	-0.01852	-0.02072	-0.01950	-0.02492
Maximum	0.03605	0.01301	0.03422	0.02545	0.02021	0.03605
Q1	-0.00185	-0.00332	-0.00418	-0.00273	-0.00305	-0.00288
Q3	0.00214	0.00487	0.00459	0.00538	0.00408	0.00422
1998						
# Obs.[a]	48	46	49	49	48	240
Mean[b]	-0.00140	-0.00098	0.00049	-0.00095	-0.00056	-0.00067
Median	0.00139	-0.00014	0.00100	-0.00036	0.00128	0.00107
SD[b]	0.01186	0.01155	0.01203	0.01183	0.01132	0.01164
Minimum	-0.05360	-0.04059	-0.03070	-0.02928	-0.03103	-0.05360
Maximum	0.02096	0.02131	0.03095	0.02093	0.01746	0.03095
Q1	-0.00558	-0.00681	-0.00609	-0.00749	-0.00528	-0.00618
Q3	0.00482	0.00553	0.00523	0.00848	0.00752	0.00603
1999						
# Obs.[a]	48	49	48	49	46	241
Mean[b]	-0.00118	-0.00083	-0.00105	-0.00022	0.00270	-0.00018
Median	0.00024	-0.00037	-0.00065	-0.00018	0.00267	0.00018
SD[b]	0.00787	0.00601	0.00706	0.00712	0.00604	0.00697
Minimum	-0.02638	-0.01352	-0.01625	-0.01572	-0.01174	-0.02638
Maximum	0.02275	0.01349	0.01651	0.02618	0.02073	0.02618
Q1	-0.00476	-0.00544	-0.00489	-0.00460	-0.00049	-0.00433
Q3	0.00278	0.00375	0.00384	0.00317	0.00553	0.00346
2000						
# Obs.[a]	49	50	49	47	46	241
Mean[b]	-0.00304	-0.00026	-0.00045	-0.00225	0.00095	-0.00102
Median	-0.00173	-0.00158	-0.00054	-0.00294	0.00039	-0.00140
SD[b]	0.00909	0.00694	0.00907	0.00597	0.00810	0.00800
Minimum	-0.03693	-0.01080	-0.02318	-0.01311	-0.01731	-0.03693
Maximum	0.01296	0.02565	0.01902	0.01851	0.02944	0.02944
Q1	-0.00513	-0.00517	-0.00525	-0.00588	-0.00358	-0.00519
Q3	0.00142	0.00232	0.00424	0.00154	0.00480	0.00246
2001						
# Obs.[a]	48	46	49	49	48	240
Mean[b]	0.00025	-0.00296	0.00096	0.00105	0.00736	0.00136
Median	-0.00119	-0.00175	0.00023	0.00024	0.00206	0.00000
SD[b]	0.01107	0.01009	0.01265	0.01379	0.02751	0.01654
Minimum	-0.02184	-0.03162	-0.03852	-0.04712	-0.01397	-0.04712
Maximum	0.05299	0.02339	0.04705	0.06362	0.18288	0.18288
Q1	-0.00317	-0.00694	-0.00263	-0.00390	-0.00178	-0.00355
Q3	0.00272	0.00172	0.00562	0.00451	0.00702	0.00400

2002						
# Obs.[a]	45	49	49	49	46	238
Mean[b]	-0.00108	0.00093	0.00223	0.00114	0.00239	0.00114
Median	-0.00058	0.00081	0.00215	-0.00017	0.00061	0.00049
SD[b]	0.00996	0.01316	0.01080	0.01002	0.01268	0.01138
Minimum	-0.03226	-0.03107	-0.02160	-0.02516	-0.03566	-0.03566
Maximum	0.01372	0.04634	0.02821	0.02688	0.03240	0.04634
Q1	-0.00614	-0.00418	-0.00531	-0.00285	-0.00394	-0.00448
Q3	0.00606	0.00717	0.00698	0.00701	0.00734	0.00697
2003						
# Obs.[a]	50	49	47	47	47	240
Mean[b]	-0.00118	-0.00187	-0.00041	0.00323	0.00601	0.00110
Median	-0.00157	0.00059	0.00059	0.00424	0.00294	0.00174
SD[b]	0.01579	0.01439	0.02651	0.01294	0.02286	0.01923
Minimum	-0.06449	-0.05155	-0.13893	-0.02784	-0.07070	-0.13893
Maximum	0.04057	0.02593	0.05779	0.02786	0.11616	0.11616
Q1	-0.00824	-0.00881	-0.00836	-0.00506	-0.00214	-0.00532
Q3	0.00567	0.00706	0.01013	0.01102	0.01167	0.00880
2004						
# Obs.[a]	48	49	46	49	47	239
Mean[b]	-0.00103	-0.00172	0.00439	0.00046	0.00551	0.00146
Median	0.00025	0.00142	0.00155	0.00239	0.00557	0.00184
SD[b]	0.02225	0.02269	0.01268	0.01220	0.01076	0.01711
Minimum	-0.11136	-0.09956	-0.01534	-0.04719	-0.03234	-0.11136
Maximum	0.05582	0.06982	0.05077	0.02692	0.02858	0.06982
Q1	-0.00404	-0.00676	-0.00320	-0.00575	-0.00037	-0.00372
Q3	0.00666	0.00780	0.00893	0.00661	0.01209	0.00844
1985-2004						
# Obs.[a]	948	962	962	961	935	4771
Mean[b]	0.00028	0.00013	0.00063	0.00037	0.00181	0.00058
Median	-0.00009	0.00000	0.00019	0.00010	0.00062	0.00018
SD[b]	0.01073	0.01090	0.01211	0.00982	0.01222	0.01121
Minimum	-0.11136	-0.09956	-0.13893	-0.06266	-0.07070	-0.13893
Maximum	0.06280	0.07286	0.15592	0.06852	0.18288	0.18288
Q1	-0.00344	-0.00399	-0.00386	-0.00384	-0.00287	-0.00359
Q3	0.00378	0.00405	0.00402	0.00447	0.00496	0.00427

The Figure - 1 describes the daily trend in one graph, which shows the year wise differences and day wise differences of the mean value in detail. The finding of this descriptive statistics is that the mean returns across the years are different and it may be due to the different socio- economic conditions of the capital market and the different situations of the Sri Lankan government other than the day of the week effect.

Figure - 1 : Year vs. Mean Value



According to the Figure - 1 and Table -1, in 1985, the lowest mean returns are on Wednesday and Friday and the highest return is on Tuesday. In 1986, the highest returns are on Monday and Tuesday but Friday represents a negative average return. In 1987, the lowest return is on Friday. However, in 1988, there are negative return at all days except on Tuesday. This might be due to some other factors effecting share prices. There is negative return in both 1989 and 1990. During the period of 1991-1993, the mean return on each day is higher than the earlier period and on all days, the returns are positive. In 1991 and 1992, the highest return is on Tuesday but in 1993, it is on Friday.

During the period of 1994-2000, on all days, the average returns are negative. In 1995 on all days, the returns are negative. In 1999 and 2000, accept Friday, all other days' returns are negative. In 2002, Monday represents the negative return and in 2003, accept Thursday and Friday all other days' returns are negative. In 2004, Monday and Tuesday represent the negative return. However, as an overall for the total sample period, Friday has the highest average return and there is no negative effect on any of the days.

From this descriptive statistic, it can be further concluded that there are days of the week effect available at Colombo Stock Exchange and it can be statistically proved using the auto-regression model. The next section gives the proof of days of the week effect.

REGRESSION RESULTS OF DAY OF THE WEEK EFFECT

The results for the test of equality of mean across the days of the week for each year are provided in Table - 2. The f-test results indicate that the null hypothesis of equality of mean returns across the days of the week can be rejected at 10% significant level in 1996, at the 5% significant level in 1999 and 2001. However, for the whole sample period, 1985 2004, across the 4771 observation, the null hypothesis of equality of mean returns across the days of the week can be rejected at 1% significant level.

Table 2 : Regression Results of Day of the Week Effect

Similarly, the same null hypothesis for the mean return can be rejected across the days from Tuesday through

Year	Constant	B_2	B_3	B_4	B_5	R^2 Adj %	F-value	P-value
1985	0.00155 (1.01)[a]	-0 .00028 (-0.13)	- 0.00104 (-0.48)	-0.00029 (-0.14)	-0.00113 (-0.52)	0.00	0.11	0.978
1986	0.00126 (1.43)	0.00026 (0.21)	0.00104 (-0.83)	0.00073 (-0.58)	0.00147 (-1.18)	0.00	0.64	0.632
1987	0.00196 (1.76)	-0.001.08 (-0.69)	0.00099 (0.62)	0.00087 (0.54)	-0.00094 (-0.58)	0.00	0.73	0.575
1988	- 0.00134 (-0.76)	-0.00134 (-0.54)	0.00250 (1.01)	0.00035 (0.14)	-0.00045 (-0.18)	0.00	0.67	0.614
1989	0.000363 (0.39)	-0.00049 (-0.37)	0.00060 (0.47)	-0.00074 (-0.57)	0.00007 (0.05)	0.00	0.34	0.851
1990	0.00518 (1.97)	0.00024 (0.07)	-0.00235 (0.64)	-0.00754 (-2.07)	-0.00002 (-0.00)	1.2	1.70	0.150
1991	0.00395 (3.31)	0.00061 (0.36)	-0.00098 (-0.58)	-0.00096 (-0.58)	-0.00209 (-1.25)	0.00	0.77	0.545
1992	-.000516 (-0.58)	-0.00089 (-0.71)	-0.00200 (-1.57)	-0.00054 (-0.44)	-0.00074 (-0.58)	0.00	0.67	0.617
1993	0.00211 (1.73)	-0.00059 (-0.34)	0.00007 (0.34)	-0.00041 (-0.24)	0.00038 (0.21)	0.00	0.10	0.984
1994	0.00171 (0.98)	-0.00186 (-0.77)	-0.00464 (-1.89)*	-0.00158 (-0.64)	-0.00011 (-0.05)	0.3	1.15	0.333
1995	- 0.00263 (-1.96)	-0.00051 (-0.27)	0.00057 (0.31)	0.00221 (1.18)	0.00263 (1.40)	0.2	1.11	0.352
1996	-0.000614 (-1.03)	-0.00100 (-1.18)	-0.000069 (-0.08)	0.000953 (1.12)	0.00131 (1.52)	2.0	2.26	0.063
1997	0.00101 (0.91)	-0.00153 (-0.96)	-0.00025 (-0.16)	0.00008 (0.05)	-0.00024 (-0.15)	0.00	0.33	0.858
1998	- 0.00140 (-0.83)	0.00042 (0.17)	0.00189 (0.79)	0.00044 (0.19)	0.00084 (0.35)	0.00	0.18	0.947
1999	- 0.00132 (-1.34)	0.00049 (0.35)	0.00027 (0.19)	0.00110 (0.79)	0.00402 (2.85)***	2.7	2.66	0.034
2000	- 0.00304 (-2.68)***	0.00278 (1.74)*	0.00258 (1.61)	0.00078 (0.48)	0.00399 (2.45)**	1.6	1.96	0.101
2001	0.00025 (0.11)	-0.00321 (-0.95)	0.00071 (0.21)	0.00080 (0.24)	0.00711 (2.13)**	2.4	2.49	0.044
2002	- 0.00108 (0.64)	0.00201 (0.85)	0.00331 (1.40)	0.00223 (0.94)	0.00347 (1.45)	0.00	0.68	0.606

2003	- 0.00118 (-0.44)	-0.00069 (-0.18)	0.00077 (0.20)	0.00441 (1.13)	0.00719 (1.85)*	0.00	1.46	0.214
2004	- 0.00103 (0.42)	-0.00069 (0.20)	0.00541 (1.54)	0.00149 (0.43)	0.00654 (1.87)*	1.2	1.73	0.14
1985-2004	0.000247 (0.68)	-.000383 (-0.75)	0.000385 (0.75)	0.000118 (0.23)	0.00156 (3.03)***	0.3	4.09	0.003

a. The values in parentheses denote the t-value of the coefficients. *, ** and *** denote statistical significance of given coefficient at 10%, 5%, and 1% respectively.

Friday. However, this is quite complicated. This significant is not for all days and all years. In 1999, it is significant on Friday at1% level of significance. In 2000, the same has significant effect on Tuesday and Friday at 10% and 5% level of significance respectively. Similarly, in 2001 on Friday, it is with 5% significance; in 2003 and 2004, on Friday it is with 10% significance. Therefore, there is significant effect only on Friday at the years where there is significant effect at 10%, 5% and 1% significance level. The Friday's significant effect is available in the overall sample period also at 1% significant level. Therefore, Friday is the significant day for the Colombo Stock Exchange. This might be because it is the day before the weekend.

RESULTS OF THE DAY OF THE WEEK EFFECT WITH LAGS VARIABLE

In this section, the lag effect is going to be analyzed together with the day of the week effect.- 3 is for the result of the test of equality mean return and lag effect. In order to test the lag effect, only five lags are included in the equation 3. The selection of five lags is based on the autocorrelation test. According to the autocorrelation test, up to five lags are having significant effect at CSE. In this section, the yearly analysis has been omitted because there is no notable significant yearly wise effect in the previous section. The result is applicable only for the whole sample period.

Table - 3 : Regression Result of Equality of Mean Return on Days of the Week and Lag Variable, January 1985 - December 2004

Variables	Coefficient-value	t - value	P - value
Constant	-0.000359	-1.06	0.292
Tuesday	0.000067	0.14	0.890
Wednesday	0.00104	2.17**	0.030
Thursday	0.000443	0.92	0.355
Friday	0.00203	4.20***	0.000
Lag_1	0.362	25.00***	0.000
Lag_2	- 0.0578	-3.76***	0.000
Lag_3	0.0209	1.36	0.175
Lag_4	0.0643	4.18***	0.000
Lag_5	0.0011	0.07	0.942
R^2	13.10		
F-value	79.60		
P-value	0.000		

*The marks *, ** and *** denote statistical significance of given coefficient at 10%, 5%, and 1% respectively.*

The t-test result indicates that there is 5% significance level effect on Wednesday and 1% significance level effect on Friday. Lag 1, lag 2 and lag 4 have 1% significance effect, but lag 2 is with negative effect. Therefore, the second hypothesis can be rejected with this t-test. It has also been proved with the f-test at 1% significant level.

CONCLUSION

Calendar anomaly is one of the many factors affecting the share prices. This study presents emerging stock market evidence for the existence of the day of the week effect and its impact on the stock returns of Colombo Stock Exchange (CSE). From the analysis, it is confirmed that day-of- the-week-effect exists at CSE and Friday is the most significant day whose return is statistically significant in CSE, which is inconsistent with the developed market behavior.

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In ROI analysis, it is found that small farmers are getting more rates of returns than the other two groups. The present study reveals that due to mulberry cultivation, small farmers are more benefited. The same level of benefit can be extended to all farmers. In this regard, Government of India and Central Silk Board have to extend more training facilities to reduce the cost of cultivation. Further, it is suggested that marketing facilities should be expanded. By following the suggested practices, there is chance to get a favourable price for the growers.

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