

The Long-Run Relationship between Stock Market and Macroeconomic Behavior in Postwar Economy of Sri Lanka

DHD Nadeesha

* Institute of Human Resource Advancement, University of Colombo

Abstract- The study investigates the dynamic relations between macroeconomics behaviour and all share price index (ASPI) performance in post war economy of Sri Lanka for the period 2009-2016, using monthly series of the corresponding variables. The study considers Average Weighted Prime Lending Rate (AWPR) and Average Weighted Deposit Rate (AWDR), money supply as measure for country's interest rates which supervise the behaviour of money market, Colombo Consumer price index as measure of inflation and exchange rates as the measure of external sector in economy of Sri Lanka. The objective was achieved by identifying the influence of macroeconomic variables on ASPI by using the statistical techniques of unit root test in order to fulfill the objective of stationary for all the macroeconomic variables and ASPI. The Johansen co-integration test was used to investigate whether the variables are co-integrated of the same order taking into account the trace statistics and the maximum Eigen-value tests. The variables were found to be co-integrated with at least one co-integrating vector. Finally, Vector Error Correction Model (VECM) was developed to forecast the long term behaviour. The results reveal that the change in average prime Deposit rate(AWDR), inflation rate (INF), exchange rate of Britain Pounds (GBP) and Japanese Yen (JPY), Special Drawing Right (SDR) affect All Share Price Index(ASPI) while money supply and average prime lending rate (AWPR) does not influence on ASPI. Moreover, all the macroeconomic variables and ASPI shows significant change and huge depreciation of currency in post war economy in Sri Lanka. From the results, it was inferred that the movement of ASPI reflect the macroeconomic condition of the country and can therefore be used to predict the future path of ASPI behaviour. Rapid growth in ASPI and decline in inflation and interest rates is observed in post war economy. The policy makers of the country should establish proper policies to control depreciation of the currency against USD, GBP, JPY and SDR in post war economy.

Keywords: Average Weighted Deposit Rate, All Share Price Index, Average Weighted Prime Lending Rate, Macro economy

I. INTRODUCTION

The dynamic relationship between macroeconomic variables and stock market returns is well-documented in the literature (Bilson et al, 2001 ; Gunasekarage et al, 2004; Husam et al, 2009). However, absence in the past literature related to examine the co-integration between macroeconomic variables and stock market's sector indices returns in Sri Lanka. In Sri Lanka, Colombo Stock Exchange (CSE) consists of twenty sector wise price indices and macroeconomic variables may affect sector wise price indices differently. Also, these macroeconomic variables affect investment decisions and financing decisions in corporate sector.

The stock exchange acts as the most important market for capital and companies get the ability to find sources of finance from the capital market. A well-developed capital market is essential to promote economic development in a country. The Sri Lankan government has been offering a number of incentives to enhance the share market. Specially, foreign investors are granted substantial incentives to invest in Sri Lankan company shares in budget 2016 (Ministry of Finance, 2016). Furthermore, companies listed in the CSE are already involved in the development of infrastructure in the country of the areas of Power and energy sector, Information technology sector and Telecommunication sector. Furthermore, banking and finance sector covers whole financial infrastructure in the country.

Many researchers believe that investment influence on economic growth and economic development (Aydemir and Demirhan, 2009). Country's business investment environment reflects by the stock exchange market which helps in distributing nation's wealth by enabling wide ownership of public company stocks. Investors get an ability to buy shares of publicly listed companies which enable them to be the owners of the businesses and earn dividends according to their invested capital. Stock market performance is highly volatile to countries economic and political conditions. Theoretically, the interest rate has a negative impact on stock market performance because an increase of interest rate would evade investors making high risk stock market investments compare to low risk interest bearing security investments (French et al., 1987).

Few related papers in a Sri Lankan context, focuses on examining impacts of macroeconomic variables on the stock market performance (Samarakoon, 1996; Gunasekarage et al., 2004; Wickramasinghe, 2011). However, these studies do not specifically focus on exploring the dynamic relationships between macroeconomic variables and sector indices performance in CSE.

Therefore, this study aims to explore the dynamic relationship between sector wise indices returns as a measure of performance of the industrial sector listed in CSE in Sri Lanka and macroeconomic variables.

The theoretical motivation for undertaking the study on the effect of macroeconomic variables on stock prices returns and industrial index performance can be discussed as follows. The relations between exchange rate movements and share prices are based on the rise in the domestic interest rate. Upward movement in interest rates leads to capital inflows and therefore it makes the appreciation of exchange rate. This suggests that export dominant industries have a negative effect of reduction in exports and stock prices in such industries do not perform well. In contrast, currency appreciation boosts the share market for import dominant industries due to increase in imports. Also, whenever the interest rate on treasury securities increases, investors tend to sell stocks, causing stock prices to fall.

The effects of inflation on the financial assets returns have been an important theoretical issue for many years. The basic theoretical concept in this area is commonly endorsed to Irving Fisher (1930) who stated that the nominal interest rate fully reflects the available information concerning the possible future values of the inflation rate. This hypothesis widely accepted among economists and has played an important role in the monetary economic theory, finance theory and macroeconomics. All the above considerations motivated to conduct the study in the Sri Lankan context for different industrial index performance.

In finance, Arbitrage pricing theory (APT) is a general theory of asset pricing that holds the expected return of a financial asset can be modeled as a linear function of various macro-economic factors or theoretical market indices. Macro-economic factors and market indices are sensitive towards changes in pricing of the asset. Therefore, The APT essentially seeks to measure the risk premium attached to various factors that influence the returns on assets. Accordingly, Chen, Roll and Ross (1986), illustrated that economic forces effect on discount rates for the pricing of assets, also the ability of firms to generate cash flows, and future dividend payouts. This sense provided the basis for the belief that a long-term equilibrium existed between macroeconomic variables and share prices in CSE.

1.1.1 Colombo Stock Exchange

The CSE has two main price indices called All Share Price Index (ASPI) and Standard and Poor Index (S&P). Index values are calculated on an on-going basis during the trading session, with the closing values published at the end of each session. The CSE has 295 companies representing 20 business sectors as at 30th March 2016, with a Market Capitalization of Rs. 2,785 Billion in 2016 (Colombo Stock Exchange, 2016).

Public Companies incorporated under the Companies Act No.7 of 2007 or any other statutory corporation, incorporated or established under the laws of Sri Lanka or established under the laws of any other state (subject to Exchange Control approval) are eligible to seek a listing on the CSE to raise Debt or Equity from public. In order to secure a listing of the company's securities, they will be required to comply with the relevant provisions of the above act, the Securities and Exchange Commission Act No.36 of 1987 (as amended) and the Listing Rules of the Exchange (Security Exchange Commission, 2016).

1.2 Statement of Problem

The financial markets are influential in the advancement of macroeconomic development and macroeconomic variables behaviour of an economy change the direction of financial market development. This is evident that well-developed financial markets encourage investors and corporations to increase saving and allocate capital to productive investments efficiently, which leads to an increase in the rate of economic growth. Therefore, stock market performance and macroeconomic variables behavior has been a popular topic for policy holders, corporations and investors where they need to find out whether there is a relationship among macroeconomic variables and stock exchange. It was concluded that macro economy and share market performance were the two most appropriate concepts for this study. Accordingly, the broad question for the study were:

What is the relationship between macroeconomic variables and ASPI return in post war economy in Sri Lankan Context?

1.3 Objectives

On view of the above discussions, the main objectives of the study are:

- To investigate causal relationship between macroeconomic variables and ASPI return in post war economy in Sri Lanka
- To identify the long term relationship between macroeconomic variables and ASPI in post war economy in Sri Lanka
- To identify the behavioural change in stock market in pre and post war economy context

1.4. Significance of the Study

Sri Lanka is quickly emerging as a prominent contender within the region. There is an evolving interest among the new generation of investors in the Sri Lankan stock exchange Market. This study will enhance potential investors to make investment decisions in Sri Lankan capital market and will certainly help in fast tracking such investments to Sri Lankan capital market with the dynamic change in macroeconomic factors. The literatures which examine the relation of macroeconomic variables on individual stock market indices are very limited. It is important to test how each and every twenty sector index perform in relation to the macroeconomic variable changes. The proposed study serves the investors as their reference or guide in selecting best industry to invest when macroeconomic environment changes. Also, it supports government to make macroeconomic policies and see the effect of those policy actions on stock exchange as well as the industry performance. The findings of the study hold practical implications for various parties. Therefore, a study of this nature is timely and essential.

Policy makers should plan for national macroeconomic policies without the fear of influencing behaviour of capital flow and the stock trade process. Moreover, economic and finance theory suggests that stock prices should reflect expectations about potential corporate performance generally reflect the level of economic activities. The stock prices should be employed as leading indicators of future economic activities if stock prices accurately reflect the underlying fundamentals. Therefore, the causal relations and dynamic interactions among macroeconomic variables and ASPI are important in the formulation of the nation's macroeconomic policy.

1.5. Literature Review

Maysami and Sims (2002, 2001) examine the relationship between macroeconomic variables and stock returns in Hong Kong and Singapore. The scholar used the Error-Correction Modelling technique to investigate such relationship among macroeconomic variables and stock returns. Also Mukherjee and Naka (1995) applied Johansen's Vector error correction model (VECM) to analyze the relationship between the Japanese Stock Market and macroeconomic variables. This study uses exchange rate, inflation, money supply, real economic activity, long-term government bond rate, and call money rate as macroeconomic variables. They concluded that a co-integrating relation existed and that stock prices contributed to this relation.

Islam (2003) simulated the many studies to examine the short-run dynamic adjustment and the long-run equilibrium relationships between four macroeconomic variables namely interest rate, inflation rate, exchange rate, and the industrial productivity with the Kuala Lumpur Stock Exchange (KLSE) composite index. His conclusions were that there is a statistically significant short-run (dynamic) and long-run (equilibrium) relationships among the macroeconomic variables and the KLSE stock returns.

Ibrahim (1999) used macroeconomic variables of industrial production index, money supply M1 and M2, consumer price index, foreign reserves, credit aggregates and exchange rate and found the dynamic relationships between the KLSE Composite Index, and seven macroeconomic variables. He concluded that Malaysian stock market was informationally inefficient by observing that macroeconomic variables behavior and Malaysian stock indices behavior.

High correlation among six Singapore sector indices in the period 1975 to 1984 and the overall stock exchange of Singapore (SES) market return is observed by Ta and Teo (1985). The scholar used the variables of All-S Equities Industrial and Commercial Index, SES All-S Equities Finance Index, SES All-S Equities Property Index, SES All-S Hotel Index, SES All-S Plantation Index and SES All-S Mining Index. They had concluded that sector returns were highly correlated to each other, although such correlations did not remain stable by using daily data.

Karam Pal and Ruhee Mittal (2008) used the Indian capital markets indices and key macroeconomic variables such as interest rates, inflation rate, exchange rates and gross domestic savings (GDS). He found that there is a co-integration between macroeconomic variables and Indian stock indices which is indicative of a long-run relationship. The Error Correction Model shows that the rate of inflation has a significant impact on the Bombay stock exchange (BSE) Sensex, the S&P CNX and Nifty. Interest rates on the other hand, have a significant impact on S&P, CNX, and Nifty only.

II. DATA COLLECTION AND METHODOLOGY

2.1. Procurement of Data

The study uses stock prices which were collected from the CSE and macroeconomic variables collected from Central Bank of Sri Lanka. The sample period spans from June 2009 to December 2016 and the study was carried out by using 91 monthly observations. After more than 25 years of violence the brutal civil war ended in May 2009. Following data was collected from various issues of “Economic and social statistics of Sri Lanka” published monthly by the Central Bank of Sri Lanka.

- Monthly Average Weighted Prime Lending Rate (AWPR)
- Monthly Average Weighted Deposit Rate (AWDR)
- Monthly y Inflation Rate e
- Monthly money supply
- Monthly exchange rate of SDR
- Monthly exchange rate of USD
- Monthly exchange rate of GBP
- Monthly exchange rate of INR
- Monthly exchange rate of JPY

2.2. Preliminary Analysis Techniques

This section identifies the techniques used to get a basic understanding of the time series variables used in this study. Plotting the data may suggest that it is sensible to consider transforming them by taking logarithms or square roots. The three main reasons for making a transformation are as follows.

a) To Stabilize the Variance

If there is a trend in the series and the variance appears to increase with the mean, then it may be advisable to transform the data. In particular, if the standard deviation is directly proportional to mean, a logarithmic transformation is most suitable.

b) To Make Seasonal Effect Additive

If there is a trend in the series and the size of the seasonal effect appears to increase with the mean, then it may be advisable to transform the data in order to make the seasonal effect constant from year to year. In particular, if the size of the seasonal effect is directly proportional to the mean, then the seasonal effect is to be multiplicative and a logarithm transformation is most suitable.

c) To make data normally distributed

Model building and forecasting are usually carried out on the assumption that the errors are normally distributed. Therefore, an appropriate transformation can be applied to make the errors normally distributed.

2.3 Test for Stationary

In order to avoid the possibility of biased results stemming from a likely existence of unit roots in the variables under study, the researcher is planning to test stationary of data using the Augmented Dickey Fuller test (ADF) procedure and Phillip Perron Test (PP). The ADF approach controls for higher-order correlation by adding lagged difference terms of the dependent variable to the right-hand side of the regression. The ADF test is specified here as follows (1):

$$\Delta Y_t = \alpha + \theta Y_{t-1} + \beta_1 \Delta Y_{t-1} + \beta_2 \Delta Y_{t-2} + \dots + \beta_p \Delta Y_{t-p} + \epsilon_t \dots \dots \dots (1)$$

Where,

Y_t = time series to be tested for stationary

α = the intercept term,

θ = the coefficient of interest in the unit root test,

ϵ_t = the white noise error term.

Once a unit root has been confirmed for a data series as stationary, there arises a question whether there is any possibility for the existence of a long-run equilibrium relationship among a given set of variables. In order to test for the co-integrating relationship between the variables under study, the general to specific approach was taken to search for a suitable optimal lag length. Johansen’s co-integration tests are very sensitive to the choice of optimal lag length. Therefore, Johansen-Juselius test procedure was used to test for the possibility of a long-run equilibrium relationship between macroeconomic variables, sector wise price indices and ASPI. This way, the researcher was able to analyze whether the time series under study share a common stochastic drift or not.

2.4. Co-integration Test and Vector Error Correction Model

The Hannan-Quinn information criterion (HQ) and the Schwartz information criteria (SIC) are used to select the number of lags required in the co-integration test. VECM is including the error correction term used to investigate the dynamic behaviour of the model. Since the variables included in the VAR model are found to be co-integrated and all series are stationary in the same order, the study specified and estimates a VECM. Moreover, the size of the error correction term indicates the speed of adjustment of any disequilibrium towards a long-run equilibrium state. (Engle, 1987)

III. RESEARCH FINDINGS

E Views software was used for descriptive statistics, Granger Causality analysis in order to examine the influences of variables. The data analysis is divided into the following sections. The first section conducts a Vector Error Correction Model which is marginally superior to an unrestricted VAR and much better in predicting the short-run as well as the long-run dynamics between stock market performance and macroeconomic variables. The next section explains the effect of post war condition on macro economy and all share price index in Colombo Stock Exchange.

The simplest method for determining the time series is stationary or not with the use of graphical representation which observes the evidence of mean, variance, autocorrelation and seasonality. Figure 1 highlights the graphical representation of ASPI from 1994-2016 due to economic and market changes.

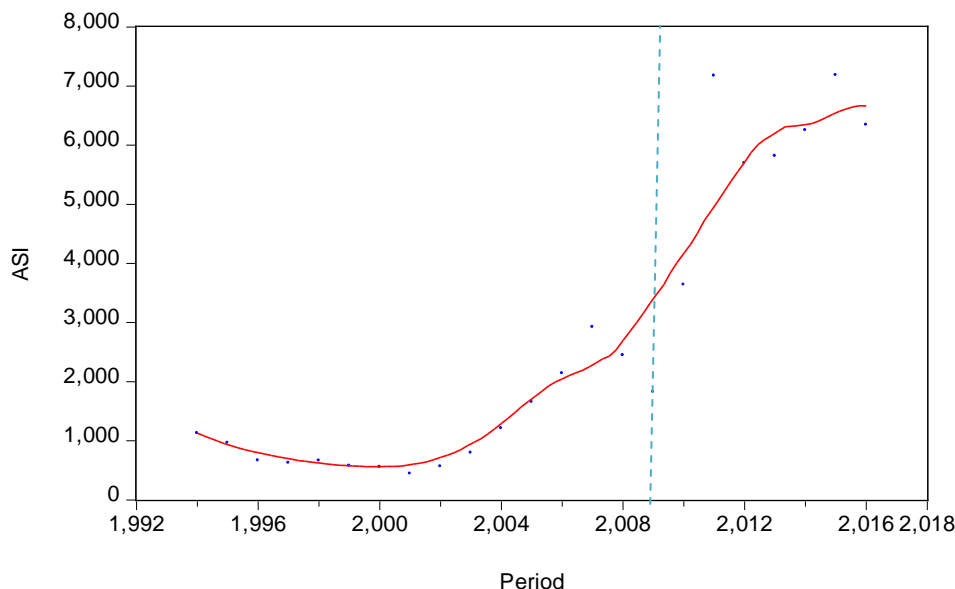


Figure 1: Pattern of All Share Price Index

The ASPI has no significant gradual movements till year 2004. Thereafter, upward trend can be identified and a steep upward slope is notable after year 2009 due to the end of Sri Lankan civil war. However, a sudden drop has been reported in 2011 and now ASPI is in a recovery phase. The economic variables contribute more on dynamic changes in ASPI. The highest ASPI reported as 7798 in mid of 2010

Tests for Stationary was performed at first difference and second difference to run VECM to check long run relationship among variables in post war economy. The test for stationary found that all series are stationary at its 2nd difference based on ADF test and Phillips Perron test. Since the all variables are integrated of the order 2, Long-run equilibrium relationship between these series is analyzed.

Selection of optimal lag length for VAR, VECM model based on Schwarz Information Criterion and Hannan-Quinn Criterion is analysed at second difference and found that the minimum values of SIC and HQ statistic were obtained at lag 1. Therefore, it can be concluded that the optimal lag length of this model is one. Thus VECM test was carried out for ASPI and other variables for lag 1. The Co-integration relationship between all share price index (ASPI) & other macroeconomic variables is tested using Johansen approach at the predetermined lag 1. Results in Table 01, indicate that there is one integrating equation, with normalized cointegrating coefficient. Hence, an error correction model should be applied.

Table 1 Normalized Cointegrating Coefficient: ASPI

Variable	LNASPI	LNAWDR	LNAWPR	LNGBP	LNINF	LNINR	LNJPY	LN2M	LN2MB	LNSDR	LNUSD
Coefficient Value	1	-4.92	1.43	-34.33	-1.63	5.11	-2.87	6.16	-6.35	62.29	-5.37
Standard Error		-0.90	-0.93	-3.78	-0.17	-1.08	-0.71	-7.23	-7.75	-5.84	-1.36
T statistics		5.46	-1.54	9.07	9.83	-4.75	4.05	-0.85	0.82	-10.66	3.94

The ASPI and macroeconomic variables have the expected signs and are statistically significant according to the t values shown. The study can interpret the coefficients as follows under postwar condition:

- A 1% increase in AWDR leads to a 4.92 per cent decrease in LNASPI in the long run
- A 1% increase in GBP rate leads to a 34.33 per cent decrease in LNASPI in the long run
- A 1% increase in INF leads to a 1.63 per cent increase in LNASPI in the long run
- A 1% increase in INR leads to a 5.11 per cent increase in LNASPI in the long run
- A 1% increase in JPY leads to a 2.87 per cent decrease in LNASPI in the long run
- A 1% increase in SDR leads to a 62.29 per cent increase in LNASPI in the long run
- A 1% increase in USD leads to a 5.37 per cent decrease in LNASPI in the long run

In contrast to the sample results, the AWPR, money supply of M2 and M2b are not statistically significant according to the t values shown. The ECM for All share price index was fitted to determine the short run relationship between macroeconomic variables and ASI results are shown below in Table 2.

Table 2. Adjustment coefficients (standard error in parentheses)

	D(LNASPI)	D(LNAWDR)	D(LNAWPR)	D(LNGBP)	D(LNINF)	D(LNINR)	D(LNJPY)	D(LNM2)	D(LNM2B)	D(LNSDR)	D(LNUSD)
Coefficient Value	-0.12	0.00	0.00	-0.01	0.33	-0.02	0.02	-0.01	-0.01	0.00	0.00
Standard Error	-0.04	-0.01	-0.02	-0.01	-0.14	-0.02	-0.02	0.00	0.00	-0.01	-0.01

According to the above table, 12% of disequilibrium “corrected” each month by changes in ASPI, and about 1% of disequilibrium “corrected” each month by changes in GBP, money supply of M2 and M2b. Thereafter, independent sample t test was carried out to check the effect of macroeconomic variables and share price index of Colombo Stock Exchange in post war economy in Sri Lanka.

Table 03. Independent Samples Test of Variables

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
ASPI1	Equal variances assumed	15.756	0.00	-107.39	274	0.00	48.4752	121.526
	Equal variances not assumed			-178.33	122.316	0.00	48.4752	143.244
Inflation Rate (%)	Equal variances assumed	27.478	0.00	5.736	238	0.00	-4.3692	7617.0
	Equal variances not assumed			8.51	209.673	0.00	-4.3692	5134.0
M2b	Equal variances assumed	73.748	0.00	-506.28	251	0.00	+2245794	78782.126
	Equal variances not assumed			-817.23	113.333	0.00	+245794	94293.377
Broad Money	Equal variances assumed	256.141	0.00	-09.26	274	0.00	+42.2E+06	9.29E+04
M2	Equal variances not assumed			-359.19	97.403	0.00	+42.2E+06	1.25E+05
AWPR	Equal variances assumed	12.089	001.0	12.15	274	0.00	-4.88584	40213.0
	Equal variances not assumed			13.547	237.348	0.00	-4.88584	36066.0
AWDR	Equal variances assumed	20.195	0.00	5.906	274	0.00	-1.68565	28541.0
	Equal variances not assumed			6.815	255.173	0.00	-1.68565	24735.0

According to results in Table 3, all the variables show a statistically significant change in two periods at 5% significance level. Specially, ASPI and money supply show a growth compared to war situation while AWDR, AWPR, and inflation rate have decline. It is noted that exchange rate of SDR, USD, GBP and JPY has depreciated more in post war economy.

IV CONCLUSION

This study has some practical implications for policy makers, managers and academics in the field of study. Investors of the major industries would be able to make future finance and investment decisions by sighted at the causality and VECM among macroeconomic behaviour in post war economy. Policy makers may make their macroeconomic policy decisions in favour to the stock exchange investments and industrial developments. The mangers can predict the share market performance with the change of monetary policy instruments and exchange rates.

The findings of this study indicate support for the model development for ASPI behaviour in Sri Lankan context. In this context, monetary policy variables, price level and exchange rate policies significantly affect the ASPI behaviour. Secondly, the study bridges a theoretical gap in the macro economy and finance literature. The findings provided some interesting insights into how the two aspects macro economy affects share market.

The variation in the past ten years shows that ASPI represent highest volatility more than 50 percent of coefficient of variation and in addition macroeconomic variables of inflation rate and money supply (M2 and M2b) of the country represent highest volatile in macroeconomic environment. Also the study reveals that there is a growth in ASPI and decline in inflation and interest rates. However, policy makers of the country should establish proper policies to control depreciation of the currency against USD, GBP, JPY and SDR in post war economy.

REFERENCES

- [1] Aydemir, O. and Demirhan, E. (2009), "The relationship between stock prices and exchange rates: Evidence from Turkey", *International Research Journal of Finance and Economics*, Issue 23, pp. 207- 15.
- [2] Bilson, C. M., Brailsford, T. J., & Hooper, V. J. 2001. Selecting macroeconomic variables as explanatory factors of emerging stock market returns. *Pacific-Basin Finance Journal*, 9(4), 401–426
- [3] Chen, N. F., Roll, R. & Ross, S. 1986. Economic forces and the stock market. *Journal of Business* 59(3): 83-403. *Economic Review* 71(4): 45-565.
- [4] Fama, E. F. 1981. Stock returns, real Activity, inflation and money. *The American Economic Review*
- [5] French, K.R., Schwert, G.W. and Stanbaugh, R.F. (1987), "Expected Stock Returns and Volatility", *Journal of Financial Economics*, Vol. 19 Issue 1, pp. 3-29.
- [6] Gunasekarage, G., Pisedtasalasai, A. and Power, D.M. (2004), "Macroeconomic Influence on the Stock Market: Evidence from an Emerging Market in South Asia", *Journal of Emerging Market Finance*, Vol. 3 No. 3, pp. 285-304.
- [7] Husam Rjoub, Turgut Türsoy, Nil Günsel, (2009) "The effects of macroeconomic factors on stock returns: Istanbul Stock Market", *Studies in Economics and Finance*, Vol. 26 Iss: 1, pp.36 - 45
- [8] Ibrahim MH (1999). Macroeconomic variables and stock prices in Malaysia: an empirical analysis, *Asian Econ. J.*, 13(2): 495-574
- [9] Islam, M. 2003. The Kuala Lumpur stock market and economic factors: a general to- specific error correction modeling test. *Journal of the Academy of Business and Economics*
- [10] Karam Pal and Ruhee Mittal. 2008. Impact of macroeconomic indicators on Indian capital markets. *Journal of Risk Finance*. Vol. 12 Iss: 2
- [11] Maysami, R. C. & Koh, T. S. 2000. A vector error correction model of the Singapore stock market. *International Review of Economics and Finance* 9: 79-96.
- [12] Maysami, R. C. & Sim H. H. 2001a. An empirical investigation of the dynamic relations between macroeconomics variable and the stock markets of Malaysia and Thailand. *Journal Pengurusan* 20: 1-20.
- [13] Maysami, R. C. & Sim, H. H. 2002. Macroeconomics variables and their relationship with stock returns: error correction evidence from Hong Kong and Singapore. *The Asian Economic Review* 44(1): 69-85.
- [14] Maysami, R.C., Howe, L.C. and Rahmat, M.A., 2005. Relationship between macroeconomic variables and stock market indices: Cointegration evidence from stock exchange of Singapore's All-S sector indices. *Jurnal Pengurusan (UKM Journal of Management)*, 24.
- [15] Mukherjee, T. K. & Naka, A. 1995. Dynamic relations between macroeconomic variables and the Japanese stock market: an application of a vector error correction model. *The Journal of Financial Research* 18(2): 223-237.
- [16] Samarakoon, L.P. (1996), "Stock market returns and inflation: Sri Lankan evidence", *Sri Lankan Journal of Management*, Vol. 1 No. 4, pp. 293-311.
- [17] Ta, H. P. & Teo, C. L. 1985. Portfolio diversification across industry sectors. *Securities Industry Review* 11(2): 33-39.
- [18] Wickremasinghe, G. (2011), "The Sri Lankan stock market and the macroeconomy: an empirical investigation", *Studies in Economics and Finance*, Vol. 28 Issue 3, pp.179 - 195

AUTHORS

First Author – DHD Nadeesha, Institute of Human Resource Advancement, dilruknad@gmail.

Correspondence Author – DHD Nadeesha, Institute of Human Resource Advancement, dilrukna@gmail.

