

LENDING RATE, DEPOSIT RATE AND STOCK PRICES: EVIDENCE FROM COLOMBO STOCK EXCHANGE

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Introduction

The development of share market ensures the development of money market activities in a country. For this reason, the changes of share prices are provide a measurement tool to investors, policy makers, and other related parties who ensure long - term commitment in share market activities. The matured share market provide barometer of economic health and create confidence of local as well as foreign investors.

It is a common trend that the stock prices fluctuated time to time according to the economic and market condition. The ASPI and MPI on the Colombo Stock Exchange (CSE) are affected by a number of factors occurring within and without the economic system. Corrado and Jordan (2002) indicate that the stock prices are influence by companies' profit, political factors, and economic performance. Such as interest rates, inflation rates, Real Domestic Products, and shareholders level taxes.

Interest rate is one of the macro - economic variable and it is directly related with the cost of capital. There are two interest rates deposit rate and lending rate, play major role in an economy and it's beneficiaries. If the banks paid more interest for their depositors, people switch their capital from share market to bank deposit. This change influences to decrease the demand of shares, decrease the price of shares, and vice versa. Further, the lending behaviour of banks is crucial for the transmission of monetary policy in Sri Lanka because of the elevated function which the banks play in conveying monetary policy impulses.

The stock price theories - Fundamental Theory, Technical/Chartist Theory, and Random - walk Theory - related for predicting the share price behaviour. The fundamental analysis is based on the intrinsic value or true value. As a basic valuation model, it is consider the environment within the company and its react to the environment factors for their investment and financing policies, which determine the future net receipts. Therefore, the theory concluded that the intrinsic value is higher than the market; the investors should buy or vise versa.

Technical/ Chartist theory argue that the future patterns of the share prices determine by the price movement in the past. Akinsulire (2006) argue the historical price patterns are repeated in future. Corrado *et al.*, (2002) indicate the movement of future stock prices determines by historical prices, volume behaviour and investment sentiments.

Random - walk theory reject the chartist theory and argue the share prices are totally independent from historical charts. It is depends on reaction of investors to new, relevant information about the share.

Recent global financial market fluctuations, especially the credit crunch and the consequent near collapse of stock mar-

kets across the world, have brought to the open the collective vulnerabilities of sovereign economies. The financial crisis of 2007 - 2010 required to renew the theories related to stock prices. Therefore, the present study focuses on "how far lending rate and deposit rate determine the stock prices of CSE, Sri Lanka".

Literature of the Study

Several studies examined the empirical relationships between stock market capitalization rate and interest rates. The relationship between macroeconomic variables and stock prices has been a widely accepted theory for a long period. But, the serious attempt for verification started from 1980s.

The findings from Random - walk theory the stock prices depends on various information regarding relevant to investors. Fama (1965), and Samuelson (1965) accepted this argument. There are evidences that the stock prices follow Random - walk and there are some reasons to follow Random - walk.

Zhou (1996) indicated the relationship between interest rates and stock prices using regression analysis. He found that interest rates have an important impact on stock returns, especially in long-term investment horizons, but the hypothesis that expected stock returns move one-for-one with ex ante interest rates is rejected. In addition, his results showed that long-term interest rate explains a major part of the variation in price dividend ratios. Besides, he suggests that the high volatility of the stock market is related to the high volatility of long-term bond yields and may be accounted for by changing forecasts of discount rates. Hising (2004) found that there is an inverse relationship between stock prices and interest rates.

Wong *at al.*, (2005) examine the long - run equilibrium relationship between the major stock indices of Singapore and US by using selected macroeconomic variables of money and interest rate. They found that before Asian crisis of 1997, stock market in Singapore moved in tandem with interest rate, but after the crisis, this pattern was not observed. In US, before 1987 equity crisis stock prices were strongly co - integrated with macro economic variables, but after crisis it was impaired.

Alam and Uddin (2009), in their study (based on the monthly data from January 1988 to March 2003) found that interest rate exerts significant negative relationship with share price for markets of Australia, Bangladesh, Canada, Chile, Colombia, Germany, Italy, Jamaica, Japan, Malaysia, Mexico, Philippine, South Africa, Spain, and Venezuela. For six countries from this sample, they argued on the availability of significant negative relationship between changes of interest rate and changes of share price.

Khrawish *et al.*, (2010) examine the effect of interest rate on stock market capitalization rate. They used multiple regression model and simple regression model, the time series analysis proved that there is a significant and positive relationship between government prevailing interest rate and stock market capitalization rate.

Methodology

The paper examines the effect of lending rate, deposit rate on Stock Prices of CSE, Sri Lanka with the period of 2005 to 2011.

The related data gathered for the study from Selected Economic indices published by Central Bank of Sri Lanka. The data includes monthly observation from January 2005 to October 2011.

Variables and Hypothesis:

The effect on stock price is calculated by using explanatory variables of long term lending interest rate and one year deposit rate. Both rates are chosen from National Saving Bank, Sri Lanka, because it is the bank only for saving activities. All share price index (ASPI) and Milanka Price Index (MPI) are considered as stock price.

The prior literatures provide evidences that the lower deposit interest rate will result in high liquidity and ultimately increases stock prices; and lower lending rate will result high liquidity and ultimately increases stock prices. Therefore, the null hypothesis is:

H₀: Lending Interest rate and deposit interest rate do not have a significant influence on share prices of CSE, Sri Lanka.

Models of the Study and Data Analysis:

$$ASPI = \alpha_0 + \alpha_1 Le_int + \alpha_2 De_int + \varepsilon \quad (1)$$

$$MPI = \alpha_0 + \alpha_1 Le_int + \alpha_2 De_int + \varepsilon$$

Where:

ASPI - All Share Price Index

MPI - Milanka Price Index

Le_int - Lending Interest Rate

De_int - Deposit Interest Rate

Descriptive statistics is the first step in the analysis; it describes relevant aspect of phenomena of each variables. The second step is the Augmented Dickey - Fuller Unit Root test to prove that the variables do not have serial correlation problem. The third step is the correlation analysis; the correlation models, specifically Pearson correlation to

measure the degree of association between different variables under consideration and Variance Inflation Factor (VIF) uses to avoid Multicollinearity among the variables. The fourth step provides the Regression analysis; this analysis to estimate the casual relationship between stock price and lending interest rate and deposit rate.

Conclusion

The study includes different econometric analysis. It identified critical interest factors, and identifies the critical stock price relationship. It focuses the relationship between various interest rates (one-year maturity Saving Bank Fixed Deposit rate, and long term Saving Bank lending interest Rate) and stock prices (All Share Price Index and Milanka Price Index) of Sri Lanka. Eighty - two (82) monthly time series data gathered for the critical analysis. The ADF Unit Root test proved that there is no serial correlation problem and Durbin - Watson statistics value for all variables around two (2).

The Multicollinearity test identifies the existence of Multicollinearity between variable and VIF test proved that there is no Multicollinearity problem between fixed deposit rate and lending interest rate. The stock prices highly determines by lending and deposit interest rates.

Therefore, the study concludes that the interest rates are important macroeconomic variable to determine the stock prices. Lending and deposit interest rates have different affect on stock prices. It is an indicator and should consider to implement new decision by policy makers, investors, government and other related parties.

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