Impact of Macroeconomic Variables on the dividend payout ratio:Evidence from the Textile Sector listed on the Pakistan Stock Market

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Abstract

Thecurrent study investigates the relationship between the macroeconomic variables and the dividend payout ratio in Textile sector, Pakistan for the period from 2001 to 2015.The macroeconomics variables especially the inflation rate, the interest rate and the exchange rate are the most important factors in this context. The data for dividend payout ratio hasused from the financial statements of the Textile Sector. The Textile Sector has 57% revenue in Pakistan of the Total export. The time series data on yearly basis on macroeconomic variables has taken from the State Bank of Pakistan. The stationarity of the data was checked through Augmented Dicky Fuller test and it was found the all the data was stationary at level. For analysis, OLS and Multiple regressions have used. Autocorrelation and Multicollinearityhave not found. The finding of the study states that the macroeconomic variables have a significant impact on the dividend payout ratios. The coefficient of the inflation rate shows that the inflation rate has a negative relationship with dividend payout ratios. The coefficient of the interest rate show that the interest rate has insignificant impact on the dividend payout ratio and the coefficient of the exchange rate have a positive impact on the dividend payout ratios in the context of Pakistan.

Keywords: Dividend Payout Ratio, Interest Rate, Inflation Rate, Exchange Rate

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1. Introduction

Corporate dividend payout ratios and the macroeconomic variables such as the inflation rate, the interest rate and the exchange rate is an important concept in the financial economics. The dividend payout ratios show the financial profitability position of the firms. The dividend payout is thepercentage of the market price of a share a company annually pays to its stockholders in the form of dividends (accounting formanagement.org). The dividend payout ratios is the decision of the company's management decision that shows that how much portion of the earning should be invested and how much distributed between the shareholders [1].

The firm's performance is affected by the inflation rate. During higher inflation the interest rate can decreases. Pakistan also faces inflation and this inflation rate has a huge impact on Pakistan economic market. According toTinashe[2],that in hyperinflation the value of currency decrease and that it has an indirect impact on the dividend payout ratio. The scholars concluded form his study that the inflation has a significant impact on the dividend payout ratios, that when the inflation increase the dividend payout ratios should also increase [3].AckeraandDuck, [4], concluded from his study that inflation is positively related with dividend payout

The interest rate also effects the economy performance. It is a common phenomenon that when the interest rate increase then the investor deposit their funds in the Banks and when the interest rate decrease the investor invest their funds in the Stock market for the positive future return.Rjoub, Tursoy&Gunsel, [5], studied the interest rate and concluded that the interest rate has a significant impact on the stock return. The authors found that increase in payout ratio make it more possible that for a dividend payer it is less possible to pay interest on equity because it will increase the non-equity tax shield [6].Ouma&Muriu[7], concluded from his study that the inflation has no impact on stock market return. Khan, MeherandSyedn[8], concluded from his study that the interest rate has a negative impact on the dividend payout ratio.

The exchange rate effect the performance of an economy, because when the currency value depreciate the economy in worst condition and when the currency value appreciate the economy will in better position in that situation the economy import increases and export decreases.Elly&Hellen[9], concluded from his study that the exchange rate has a negative relationship with dividend payout ratio. Kandir, [10], concluded that the exchange rate has a negative impact on the stock price.

Different scholars conducted their studies on the macroeconomic variables and find their relationship with the stock price, stock market return and some scholars conducted their study on microeconomic variables and found their relationship with dividend payout ratio. But in Pakistan there is no such study found. So our study conducted in Pakistan as to find the Impact of Macroeconomicvariables on the Dividend payout ratio: Evidence from the Textile Sector listed on Pakistan Stock Market. The Textile Sector is selected because the Textile Sector in Pakistan has 8.5% contribution towards GDP, 45% contribution towards the labor force and is the 4^{th} largest cotton producer in Asia. The Textile Sector has 57% revenue in Pakistan of the Total export.

2. Literature Review

Elly&Hellen[9] investigated the relationship between inflation and dividend payout like inflation, interest rate and exchange rate on dividend payout ratios. The authors concluded from his study that inflation has negative impact on dividend payout and there is converse correlation between interest rate, money supply on dividend payout and exchange rate and T-bills has a direct impact on dividend payout**.**

Makori and Jagongo[11],investigated the relationship between inflation and the dividend payout ratios and concluded that the macroeconomic variables such as the inflation, the interest rate, the exchange rate and money supply has a significant effect on the dividend payout ratios. The interest rate and the inflation are positively related to the dividend payout ratios and the exchange rates are negatively related with the dividend payout ratio.

Tinashe[2], Basse&Reddemann[12], Ackera& Duck[4]and Ghafoor et al [13]investigated the relationship between inflation and the dividend payout ratio by using different method and concluded that inflation has a positive relationship with dividend payout ratio. The scholarinvestigated the asymmetric effect of inflation on the dividend payout ratio and concluded that the inflation has an inverse relationship with dividend payout ratio[14].Khan, Meher&Syedn[8],Investigated**.** The authors concluded from his study that interest rate has a negative impact on the dividend payout ratios**.**

Rjoub, Tursoy&Gunsel[5], Ouma&Muriu[7] and Issahaku, Ustarz&Domanban[15], investigated the relationship between the macroeconomicvariables on stock return and concluded that the interest rate and the inflation rate has a significant impact on the dividend payout ratio. The authors also concluded that the exchange rate has a negative relationship with dividend payout ratio[7].Menike[16], investigated the relationship of the macroeconomic variables on stock price and concluded that the interest rate, the money supply and the exchange rate are negatively related to stock prices.

3. Data and Methodology

The target sample of this study is the Textile sector listed on the Pakistan Stock Market, in which 25 firms is selected through the stratified random sampling. The study covers the period of 15 years from 2001 to 2015. The macroeconomic variables data has been taken from the State Bank of Pakistan[17].

Methodology

This study is based on the time series data started from 2001 to 2015. For the analysis of the data the Ordinary Least Square Method of which the Multiple Regression model is used. For using the OLS Model the stationarity of the data, Multicollineariry and autocorrelation is checked[18]_ENREF_18. The stationarity of the data is checked through the ADF test, all the data are leveled stationary. The autocorrelation is checked through the Durbin Watson Test and there is no autocorrelation function in the data and the Multicollinearity is checked through VIF, test and there is no Multicollinearity function in the data.

Regression Equation

$$\mathbf{DP_t = \alpha_t + \beta_1 INF_t + \beta_2 INT_t + \beta_3 EXR_t + \varepsilon_t}$$

Where as

t = Times Series

DP = Dividend payout ratio

INF = The annual Inflation rate

INT = The annual Interest rate

EXR = The annual Exchange rate of a currency.

ε_t = Error term

Ordinary Least Squares Method

Dependent Variable: Dividend Payout ratio.
Method: Least Squares
Sample: 2001-2015
Included Observation: 15

Variables	**Coefficient**	**Std.Error**	**t-Statistic**	**Prob.**
C	-0.455591	0.857443	-0.53134	0.6057
Inflation rate	-14.84412	4.615724	-3.21599	0.0082
Interest rate	7.246287	7.009679	1.033754	0.3234
Exchange rate	0.027028	0.008385	3.223328	0.0081
R	0.777			
R-squared	0.603902			
Adjusted R-squared	0.495876			
S.E. of regression	0.501125			
Sum squared resid	2.762386			
Log likelihood	-8.594413			
F-statistic	5.590306			
Prob(F-statistic)	0.01411			

4. Finding of the Study

From the above table it has been found that the macroeconomic variables have a significant impact on the dividend payout ratios. The coefficient of the inflation rate shows that the inflation rate has a negative impact on the dividend payout ratio and is statistically significant. The interest rate has a positive relationship with dividend payout ratio and is statistically insignificant. The exchange rate has a positive relationship with dividend payout ratio and is statistically significant. The value of R shows that when the values of the macroeconomic variables increases 100%, the dividend payout ratios increase up to 77.7%.The value of coefficient of determination (R-squared) shows the overall strength of the model. The R-squared is measure the proportion of variation in the dependent variable explained by the independent variables. The value of R-squared 0.60 shows that 60% variation in the dividend payout ratios is caused by the inflation rate, interest rate and the exchange rate. The Adjusted R-square shows the percentage of the variation explained by the inflation rate, the interest rate and the exchange rate that affect the dividend payout ratios. The value of Adjusted R-square 0.4958 shows that 49.8% variation in the dividend payout ratios is caused by the inflation rate, the interest rate and the exchange rate. The overall explanatory power of the regression model is tested through the analysis of variance (ANOVA). The value of F-statistic shows that there are more chances to accept the alternative hypothesis and not accept the alternate hypothesis. The significant level shows that are 98.6 % chances to accept the alternative hypothesis and not accept the alternative hypothesis. The value of the inflation rate, the interest rate and the exchange rate are not equal.

5. Conclusion and Recommendation

Form the study it is concluded that there is a direct relationship between the macroeconomic variables such as the inflation rate, the interest rate, exchange rate and the dividend payout ratio. It is concluded that the inflation rate has a negative impact on the dividend payout ratios and is statistically significant, the interest rate has a positive impact on the dividend payout ratios, but it is statistically insignificant, because the data covered the period of fifteen years started from 2001 to 2015. In 2007-2008 due to the financial crisis the interest rate decreases. Therefore the interest rate has insignificant impact on the dividend payout ratio and the exchange rate has a positive impact on the dividend payout ratios and is statistically significant.

The study recommends the future research by using the same macroeconomic variables from the other sector which is listed on the Pakistan Stock Exchange, and also to find their impact on the dividend payout ratio. The study also recommends that to use the non-stationary data and to find their impact on the dividend payout ratio. The study also recommends the use of the same macroeconomic variables for the other developing countries of the world.

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