Ilkogretim Online - Elementary Education Online, 2020; Vol 19 (Issue 1): pp. 794-802
http://ilkogretim-online.org
doi: 10.17051/ilkonline.2020.661907

Relationship Between Interest Rate, Inflation Rate, Unemployment And The Current Account Balance With The Dividend Payout Ratio: A Case Study Of Textile Sector

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Abstract

This study pinpoints the relationship between the inflation rate, the interest rate, unemployment rate, and current account balance with dividend payout ratio from Pakistan's textile sector. The study used the time series annual data from 2001 to 2019. The study used the OLS model, of which the multiple regression is applied for the analysis of the data. Beforethe OLS, the preliminary test was checked and confirmed that the data is normal, having no multicollinearity andheteroskedasticity. Furthermore, the finding shows a positive relationship between the interest rate and current account balance. Simultaneously,a negative relationshipbetween inflation and unemployment with dividend payout ratio and the current account balance is statistically significant. The study also suggested limitationsand recommendations for future research.

Keywords: Dividend Payout Ratio;'Inflation Rate;Interest Rate;Unemployment Rate;Current Account Balance; Time Series data

1. Introduction

The policy of the company has an impact on dividend payout. The investor looks into the policy of the company as well as the economic policy of the economy. This study focuses on the macroeconomic variables, especially on the inflation rate., interest rate, unemployment rate, and the country's current account balance and reviews their relation with dividend payout technically. The dividend payout ratio shows the company's economic position. The greater the dividend payout portion, the greater the shareholders' return against their shares. The current account balance is the country's trade balance plus net income and direct income. Inflation is the real decline in the value of money;the interest rate is the cost

of funds. The macroeconomic variables show the overall position of the economy(Malik, Khan, Khan, & Khan, 2014). The higher the inflation, the higher the interest rate and the unemployment should also increase. It shows that the economy is in a recession or the foreign debt of the economy is very high. Therefore, the macroeconomicvariables show the overall position of the economy. Different authors have different views regarding macroeconomic variables such as the inflation rate, interest rate, unemployment and current account balance and the dividend payout ratio. The firm value is directly affected by the interest rate because the interest rate makesmore remarkable changes in the market discount rate and affectsit(Hussain, 2014; Malik, Anuar, Khan, & Khan, 2014).Fabris, Kilibarda, Kalezic, Radunovic, Rakocevic (2008)suggested that the current account balance of the country provided the information on economic inflows and outflows of the goods and amenities, income and recent transfer among resident and non-resident and the foreignliabilities or assets generates on the previously listed transaction. Unemployment has the worst impact on the economy because it shows the economy's overall strength that how many people are employed in the economy (Fu & Lin, 2012; F. Khan, Rasli, Khan, & Naz, 2017; F. Khan, Ullah, Ali, & Khan, 2018).

Ball, Burns and Laury, (1977), the authors' study that sustaining economic activities lead to the weakness of balance of payment and cause to decline exchange rate and may cause inflation. Therefore, the unemployment rate associated with this activity is related tothe balance of payment. The authors study that the current account balance is closely related to the business cycle of the country. In a recession, the economic demand for the foreign goods decrease and the balance of payment increase and the current account of balance worse during possession (Freund, 2000; Haider, Anjum, Sufyan, Khan, & Ullah, 2018).

The current study's main theme is to show the relationship of the inflation rate, the interest rate, the unemployment and the current account deficit and their relation with the dividend payout ratio. These factors affect the dividend payout ratio of the country. The textile sectors for this study are selected because the textile sector contributes to Pakistan's economy. In 2018- 2019 the largest export of the country was the Textile sector. It has a 60% contribution to the export and 8.5% contribution to the GDP of Pakistan. It provides 30% employment to the workforce of the country.

2. Literature Review

Many scholars conducted the study on the dividend payout ratio and the unemployment, interest rate, inflation rate and the current account balance. Prempeh (2016) pinpoint the macroeconomic variables and the stock price volatility in Ghana from 1990 to 2014. The granger causality test was used for the analysis(Khan., Yusoff, & Khan, 2014). The result showsno granger causality in the inflation and the interest rate and the gross domestic affect the rate price in the stock exchange.

Ozer, Zugic and Tomas-Miskin, (2018) studied the current account deficit and the growth in Montenegro. The authors collected data from 2011 to 2016. From the analysis of the data, it’s concluded that in the short-run, there is a negative relationship between the

GDP growth with the current account deficit and a positive relationship in the long run. The authors studied the macroeconomic variables and stock prices of Singapore. The authors used the vector error correlation method. The analysis concluded a significant relationship between money supply and real economic activity and an insignificant relationship between the interest rate and total economic activity (F. Khan et al., 2014; Q. Khan, Sultana, Bughio, & Naz, 2014; Maysami, Howe, & Rahmat, 2005).

Fitri, Hosen and Muhari, (2016)studied the factors of analysis that Impact the Dividend Payout Ratio of the Listed Companies at Jakarta Islamic Index. The studies cover the period from 2009 to 2014. The study used the annual report of the selected sector. It can be concluded from the analysis that there is a positive correlation between their ROA and the dividend payment rate. Simultaneously, there is no significant relationship between the debt-to-equity ratio and the dividend payment rate. Scholars pointed out the macroeconomic development and capital structure decision-making of enterprises. The author used panel data from 1990 to 2004. The analysis of data shows that bank credit is of great significance for predicting enterprises' choice of capital structure. There is a negatively significant relationship between GDP and the choice of capital structure. There is a positive correlation between inflation and interest rates, while there is no correlation between stock market development and capital structure decisions(Bokpin, 2009).

Ullah, Anjum, Ali and Khan, (2018) pinpoint the impact of macroeconomic variables on dividend payout rates: evidence from the Pakistan stock market. The author collected data on Macroeconomic variables from the National Bank of Pakistan and dividend payment rate data gathered from these companies' official websites. For data analysis, the OLS model is used, and the multiple regression model is used for data analysis. The author concludes that the inflation rate has a negative impact on the dividend payment ratio, and interest rates and exchange rates have a positive correlation with the dividend payment ratio.The author points out the relationship between the textile sector's macroeconomic variables listed on the Pakistan stock market and the dividend payout rate. The research covers the period from 2001 to 2017. Use the OLS model to analyze the data. The analysis of the data shows a positive correlation between the exchange rate and the unemployment rate, and a negative correlation between the exchange rate and the rate of inflation, interest rates and gross domestic product, and the dividend payment rate(F. Khan, et al., 2018).

Haider, Anjum, Sufyan, Khan and Ullah, (2018) studied The impact of macroeconomic variables on financial performance: evidence from the Pakistan Stock Exchange's auto assembly industry from 2007 to 2016. GMM is applied for data analysis. It can be concluded from the study analysis that interest rates, gross domestic product and exchange rates are negatively correlated with ROA, ROE and GPM. In contrast, inflation rates are positively correlated with ROE and negatively correlated with ROA and GPM.

According to Elly and Hellen (2013),The relationship Between the inflation rate and the dividend payout rate of companies listed on the Nairobi Stock Exchange. This study covers the period from 2002 to 2011. According to the Nairobi Stock Exchange, the inflation rate has nothing to do with the dividend payment rate and exchange rate and the Treasury bill is positively correlated with the dividend payment rate and money supply is not related to currency payment. Impact on dividend payout ratio. Similarly, the research is

based on the latest databases of social sciences. Through the analysis of the study, scholars have concluded that academicians, students, decision-makers and managers must be aware of work pressure, burnout, needs and resources, and propose coping mechanisms and framework policies to make the work environment suitable (F. Khan, et al., 2017).

Khan, Khan, Ahmad and Bashir, (2018), pointed out the impact of macroeconomic variables on stock takings. The author used monthly stock price data from 2008 to 2012. Through the analysis of the data, the author concludes that exchange rates have a positive impact on the stock market, while interest rates and inflation rates have a significant adverse effect on the stock market—the effect on stock market returns. The author discovered the impact of the dividend policy on Pakistan's stock price risk. The author collected data from 2005 to 2009. Regression analysis was performed on the data. It can be concluded from the research results that price fluctuations have a negative correlation with asset growth(Asghar, Shah, Hamid, & Suleman, 2011).

3. Data and Methodology

This research aims to find the relationship between interest rate, inflation rate, unemployment rate, and current account balance and dividend payment rate. These data are collected from the textile sector listed on the Pakistan stock market. The authors collected secondary data from 2001 to 2019. Interest rate data, inflation rate data, unemployment data and current account balance data are collected from the State Bank of Pakistan, and dividend payment rate data is collected from the official website for the selected textile types.

The study aims to find the relationship between interest rate, inflation rate, unemployment and current account balance with the dividend payout ratio., where has been conducted in the textile sector listed in Pakistan. This study is based on the time series data starting from 2001 to 2019. For this purpose,the ordinary least square method of which multiple regression is applied. Before applying the variousregressions, some of the preliminary testsare also involved. The stationarity of data is checked through the Augmented Dickey-Fuller test. The multicollinearity is checked through the Breusch-Godfrey Serial Correlation LM Test, the normality checked through the Jerque Berra Statistics and the heteroskedasticity checked through the Breusch Pagan-Godfrey test.

Regression Equation

The regression equation for this study is

$$DP_t = \alpha_t + \beta_1 INF_t + \beta_2 INT_t + \beta_3 UN_t + \beta_4 CAB + \varepsilon_t$$

Whereas
t = Times Series
DP = Dividend payout ratio
INF = Annual Inflation rate
INT = Annual Interest rate

UN = Unemployment rate
CAB= Current Account Balance
ε_t = Error term

4. Empirical Evidence

There are some preliminary tests which are needed to be done. The stationarity of the data is checked through the Augmented Dickey-Fuller test. The result shows that there is no stationarity in the data. The heteroskedasticity of the information is shown in Table 1.

Table 1 Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.566701	Prob. F(4,14)	0.691	Conclusion
Obs*R-squared	2.647677	Prob. Chi-Square(4)	0.6184	Heteroskedasticity

Table 1 shows the heteroskedasticity and is checked through the Breusch-Pagan-Godfrey model. The result of the analysis showed that the probability is 0.69, which is greater than 0.05. Therefore it's concluded that there is no heteroskedasticity in the data which is used in this data.

Table 2 Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.931372	Prob. F(2,12)	0.4207	Conclusion
Obs*R-squared	2.55304	Prob. Chi-Square(2)	0.279	Serial correlation

The most important problem in the time series data is the serial correlation. For this purpose, the serial correlation is checked through the Breusch-Godfrey serial correlation LM test. The data results show that the result is 0.42, indicating no serial correlation in the data.

Table 3 Least Square Method

DV: Dividend; Method: Least Squares; Included observations: 90 levels of significance 5*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.30	0.16	8.26	0.00
Inflation rate	-0.06	0.23	-0.25	0.81
Interest rate	0.05	0.13	0.38	0.71
Unemployment	-0.07	0.14	-0.50	0.63
Current Account balance	0.11	0.04	2.82	0.01
R-squared	0.40			
Adjusted R-squared	0.23			
F-statistic	2.35			
Prob(F-statistic)	0.10			
Durbin-Watson stat	1.32			

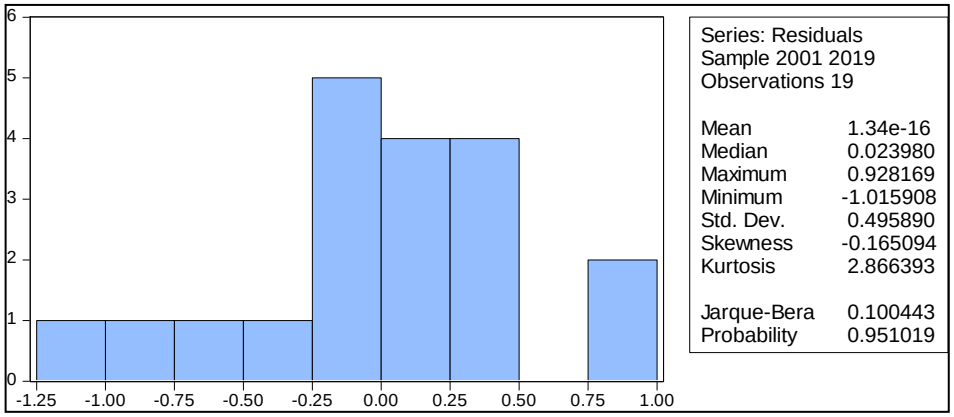

Figure 1 Normality

The normality function, which is the major problem in the time series data, is the normality. The normality of the data is checked through Jarque-Bera statistics. From the result of the data, it's concluded that there is no normality in the data. The normality result is 0.1, which is greater than 5%, so there is no normality in the data. The multicollinearity is checked through the correlogram and the result shows that there ismulticollinearity found in the said data.

The least-square model is shown in table 3. The inflation and unemployment coefficient indicates a negative correlation between the dividend payout ratio and inflation and unemployment. It also shows that these variables arestatistically insignificant. The coefficient of the interest rate and the current account balance deficit show that they are positively correlated. The inflation coefficient shows that for every one percent increase in

the inflation rate, the dividend payout ratio should decrease 6 percent and is statistically insignificant. The coefficient of interest rate shows that for every one percent increase in the economy's interest rate, the dividend payout rate is increased 5 percent and statistically insignificant. The unemployment rate coefficient shows that for every one percent increase in the economy's unemployment rate, the dividend payout ratio decreases7 percent and is statistically insignificant. The coefficient of the current account balance of the economy shows that for every one percent increase in the economy's current account balance, the dividend payout ratio increase 11 percent and is statistically significant. The data's overall explanatory power showed by the variance (ANOVA) analysis and the ANOVA result shows more chances to accept the null hypothesis and reject the alternate hypothesis.

The stability of the model is checked through CUSUM. The CUSUM result shows that the red line's residual lies in the mid of the blue lines. It shows that the model is stable.

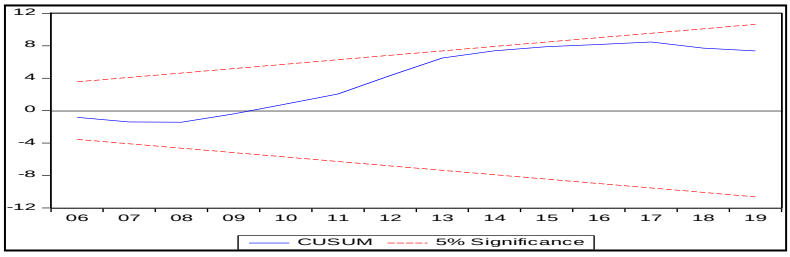

Figure 2 CUSUM stability test

5. Conclusion

This study aims to find the relationship between inflation rate, the interest rate, unemployment, and the current account balance with dividend payout ratio. For this purpose, the Textile sector, which is listed on the Pakistan Stock exchange, waschosen. The time-series data covered the period started from 2001 to 2019. The data analysis shows a correlation between the selected macroeconomic variables and the dividend payout ratio. All the data are at leveled stationary, which is checked through ADF. The normality of the data is checked through Jerque Bera's statistics. It shows no normality in the data. Autocorrelation is checked through the Breusch-Godfrey Serial Correlation LM Test. There is no autocorrelation in the data and the heteroskedasticity is checked through the breusch-pagan-godfrey and the result shows no heteroskedasticity in the data. The stability of the model is checked through CUSUM and it shows that the model is stable. The relationship of the data is checked through the OLS. The data result showed a negative correlation between the inflation rate, unemployment rate, and the dividend payout ratio and is statistically insignificant. The interest rate correlation shows a positive correlation between the interest rate and the dividend payout ratio and is statistically insignificant. The correlation of the current account balance shows a positive correlation with the dividend payout ratio. The ANOVA indicates the overall explanatory power of the data. The

ANOVA result shows that there is more chance to accept the alternate hypothesis and reject the null hypothesis. The study recommends future studies using the other macroeconomic variables investment index, corporate tax, money supply, and retail sales. The study also suggested finding the impact of macroeconomic variables on the stock prices of the economy.

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