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# FISCAL POLICY AND STOCK MARKET EFFICIENCY IN THE NETHERLANDS: AN ARDL BOUNDS TESTING APPROACH

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# ABSTRACT

This paper aims to assess the effect of fiscal policy on the stock market efficiency in the Netherlands. This study is quantitative in where the data has been gathered from the World Data Bank and other databases. The variables included in the study are inflation, fiscal balance, industrial production index, stock prices/ returns and oil prices. In terms of the analysis, the Augmented Dickey-Fuller (ADF) has been used to determine the unit root. Moreover, the effect has been estimated through Bounds test. It has been determined from the analysis that interest rate, inflation, industrial production index and oil prices have a significant effect over the stock returns of the Netherlands. However, the Fiscal balance of GDP was determined to have insignificant influence over the stock returns of the Netherlands. The results of this study are restricted to the stock market of the Netherlands. With respect to the implications, there is a huge significance of these results as the stock returns of the Netherlands can increase while considering these factors.

# **Contribution/ Originality**

This study contributes to existing literature by assessing the effect of fiscal policy on the stock market efficiency in the Netherlands.

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# **1. INTRODUCTION**

In light of the study conducted by Stoian and Iorgulescu (2020) the efficient market hypothesis is one of the most debated phenomena in finance and economics which reflects that the information disseminated to the investors is accurate. However, due to dissonance, the implications are numerous and this further indicates that no investor can beat the market. It is assumed that if the market is efficient then the investors can predict the value of shares more accurately since all the information

required and associated with the shares would be available to them. In the context of the information, the study carried out by Chatziantoniou, Duffy, and Filis (2013) asserted that the fiscal news is also of significant importance that affects the stock market. The study further stated that the fiscal news is mostly linked with the fiscal policy and this can be utilised to explain the recent fluctuations. As an implication, it can be said that stock prices become predictable.

Concerning the Netherland's market, it has been reported by Klok (2020) that the Dutch economy is one of the strongest economies in the world and the fiscal position in it holds is also strong. This has resulted in a decrement in the public debt leading to substantial fiscal space. Besides, it has already been elaborated that there is evidence present that examines the effect of fiscal policy on the stock market is present. However, when it comes to the Netherlands, the gap is present since limited studies have tested the effect of fiscal policy on the stock market. Therefore, to address this gap, the following research intends to examine how fiscal policy affects the Netherland's stock market and what could be the implications. It has further helped to evaluate the dynamism of the Netherlands in comparison with the studies conducted prior to this in the context of fiscal policy and performance of the stock market. At some instances, the studies have found bidirectional causality, therefore, it becomes crucial to study this aspect in the context of the Netherlands.

#### **2. LITERATURE REVIEW**

This paper aims to investigate the strong forces that impact market efficiency and the stock market evaluation concerning the fiscal policy implementations. The stock market is one of the major contributors to the economy and various people are investing in the stock market that holds vital importance for the investors. Macroeconomic and Microeconomic both factors are very critical for the stock market evaluation and the data is analyzed in examining long term and short term efficiencies. However, in the short run, fiscal policies have a major role to play in the stock market. The sustainability in the policy information is very critical in examining the stock prices in a region (Stoian & Iorgulescu, 2020). Therefore, government intervention is a mandatory action that is taken to improve the stability in the market. The market is determined through the trading of information and how each information is analyzed that impacts the stock prices and determines the unexpected fiscal policy news.

Budget Balance to GDP ratio is one of the main factors which enlightens the participation of the government in the economy. The debate concerning public revenues and the budget balance that affects the economic prosperity. Budget balance to GDP ratio is one of the significant factors that influence the GDP growth. The income and the flow of money is a very significant aspect that strengthens economic prosperity and increases the capabilities of production. The main reason to outline the economic stability and inducing economic stability and budget surplus that effects the stock market returns in the region (Todorova, 2019). Moreover, developing effective control and measures that outlines the necessity of the economic regulations and to improve production to increase the GDP and budget balance.

# H1: There is a positive impact of the Budget Balance to GDP ratio on the stock price return at the Netherlands.

Short Term Interest Rate to control the variable that could affect the market performance in a state and to develop a connection between budget and capital market performance that determines the stock market. As each company is listed in the stock market, and stability of the company operations adds value in the stock prices. Moreover, trading in the stock influences the tax regime system. According to the Anghelache, Jakova, and Oanea (2016) short term interest rate policies can affect the economic growth to the capital markets and to control the imperfections that could lead to the development of the interest rate and inflation rate in a state. Each stakeholder such as banks, stock market and financial institution are considered as the huge contributor the economy and the short term interest rate policies are shaped by the regime to develop stability in the production sector Uddin and Alam (2010). Moreover, taxes, government spending's, stocks, government bonds and corporate bonds pose a significant impact over the economic growth. Private investment in form of stocks is determined through the performance of the firms and organizational performance is dependent on the investor's initiatives. Short term interest rate encourages and to increase the

investment return for the investors. Sock volatility and changes in the stock returns are highly dependent on the budget income and requirement to run the affairs of the state (Da, Warachka, & Yun, 2012).

H2: There is a positive impact of the short term interest rate on the stock price return at the Netherlands.

Inflation is considered as a third factor that impacts the stock market returns in the region. Moreover, it impacts the stock market efficiency. However, inflation in the private and public sector such as setting up industries and production plants, school and education system, setting up effective healthcare system and spending on infrastructure contributes towards the economic and stock market efficiency (Belo & Yu, 2013). Each regime strives to develop effective market evaluation via stabilizing the business cycle via reducing inflation in the country and to enhance the development of the business sector is very critical in determining the stock returns in the market. Moreover, stabilization in inflation through government spending on the businesses positively impacts in terms of growth for the business aspect that enhances stock return (Ibor, Eba, & Emori, 2018).

As a constant increase in the inflation on such aspects such as education, healthcare, and infrastructure shows the government support for the business sector that influences economic output and generation of high taxes in the state. Moreover, stock market responses towards inflation are determined that the fewer investors would be available in the market (Chatziantoniou et al., 2013). Stock market performance holds vital importance in determining the economic and business prosperity.

H: There is a positive impact of the Inflation rate on the stock price return at the Netherlands.

The fourth factor is the industrial production index that regulates economic output and hence it is very crucial in determining the importance of the taxes income for the government. Moreover, an adjustment in the production index is done to control the business variable and to adjust the imports and exports of the state. Stock return performance in the countries is effected through the intensity of the production index (Attari, Taha, & Farooq, 2014). To set out high growth, production increase or decrease is very essential to support the business environment. Revenue collection through adjustment in the production system is very critical in determining the growth and performance of the business sector. The country growth rate can stabilize the stock market and arrange those policies that are suitable for organizational shareholders to provide an effective business environment. Financial market performance is a necessary factor that could enhance stock return for the investors (Arin, Mamun, & Purushothman, 2009).

H4: There is a positive impact of the Industrial production index on the stock returns at the Netherlands.

The last factor is the oil price that impacts the oil production system and also impacts the overall economy. The higher dependency on oil exports impacts negatively on stock returns. The developments of the energy market that include crude oil, gas, coal, and other elements or utilities are many factors that impact energy utilities. Prices of oil globally have a high impact on the country's economic prosperity and development that influence the stock returns (Atiq & Farhan, 2018).

H5: There is a positive impact of the Oil prices on the stock returns at the Netherlands.

The conceptual model is also highlighted that provides a detailed overview of the relationship of variables.

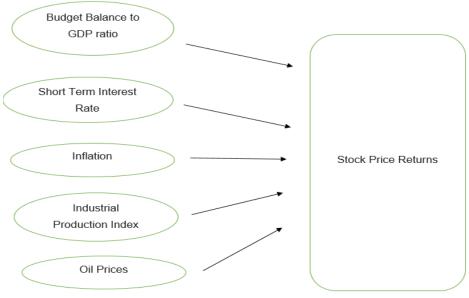


Figure-1. Relationship.

The above diagram or model provides an overview of the relationship between the independent and dependent variables. Five independent variables are taken in this study are budget balance to GDP ratio, short term interest, inflation, industrial production index, oil prices. The researcher aims to measure the effect of these variables on the stock returns efficiency of Netherlands.

#### **3. THEORETICAL FRAMEWORK**

### 3.1. Capital Asset Pricing Model

CAPM model is widely used by the financial analysts that evaluate the stock market. Stock evaluation is done based on the return on each stock and evaluation is done and hypothesize the high rate of returns on the predicted systematic risk. The model is used for not only stocks but various other financial commodity and bonds to access the risk and financial stability of the stock market can be done based on the CAPM model. Despite many challenges, the CAPM model is effective to measure and estimating the cost of capital for firms and to evaluate the performance of the managed portfolios (Shaikh, 2013). Investors in the stock market require a high rate of return on the managed portfolios and model is used to determine the risk on each stock and what factors could conclude the amount of risk associated with the stocks. CAMP model is derived out of modern portfolio theory and deals to examine the portfolio selection and could evaluate which stock portfolio and company stocks are better to invest and which stock is risker than the others (Coffie & Chukwulobelu, 2012).

#### 3.2. Capital Market Theory

The capital market theory aims to determine market efficiency and how stable the stock market can function. It also explores the normative theory of perfect capital markets and various forms of efficiency regarding the stock market can be evaluated. Such as if all the price reflects on the available information and change to the new equilibrium values. Moreover, the intervention of economic outcomes on the stock market has a strong influence over the stock market of their respective country (Erten, Korinek, & Ocampo, 2019). The capital market theory deals to analyze the stock market fluctuations and analyze the stock prices that change based on the various factors affecting the company overall performance. Moreover, information trading in the stock market affects the capital market and deals to predict the price movement of the stocks and market behaviour without the assumptions of trader behaviour. The theory reflects the understanding of the capital that is generated through the integration of both price and trader behaviour (Malinowski, 2013).

#### 3.3. Arbitrage Pricing Theory

Arbitrage pricing theory is a general theory of asset pricing that postulates expected return on a financial asset or stock is evaluated through theoretical market indices. Sensitivity in the market is evaluated through risk premium, the slope of the term structure of interest rates. The arbitrage theory is widely used by the financial institution for the strategic portfolio planning and to predict the portfolio and develops an asset's portfolio strategy (French, 2017). APT measures the asset's return in the stock market that impact upon the firm. The stock market evaluation or asset pricing model is done by identifying the forces that impact the stock's prices. Portfolio and stock planning can be done via the arbitrage pricing of the stocks that can be used to develop stability (Burzoni, Frittelli, Hou, Maggis, & Obłój, 2019).

# 4. DATA AND METHODOLOGY

#### 4.1. Data

The following study intends to utilise secondary data that have been obtained from authentic sources. Those sources include World Data Bank, Fred Louis database and other sources. In addition, to strengthen the analysis, the researcher has used quantitative data which is accompanied by qualitative data based on journal articles, books, and other authentic publications to triangulate the results. The variables that have been obtained are based on the interest rate to operationalise the fiscal policy and stock prices/ returns to capture stock market performance. It also includes some control variables that are inflation and oil prices. The annual series of each variable has been considered in this study ranging from 1988 to 2019. The underlying reason for considering only the last 32 years in the analysis is associated with the fact that limited data were available. The variables comprising of whole numbers were log-transformed to obtain appropriate results. The analysis techniques include descriptive statistics, unit root testing since the data is time-series and Autoregressive Distributed Lag Model (ARDL) while for testing the long-run association, bound testing is conducted on Stata.

#### 4.2. Unit Root Testing

This study has included some macroeconomic variables and the data is time-series, because of which the data is tested for the existence of unit root. According to the study conducted by Patterson (2012) the presence of unit root exhibits the characteristics of the data series which is non-stationary on which certain statistical tests cannot be implemented. It is important to test the data for the existence of unit root to determine the tests that are to be applied, the following equation shows the ADF testing:

$$\Delta m_t = \mu_0 + \mu_1 t + \mu_2 m_{t-1} + \sum_{i=1}^n xm \, 1 \, \Delta m_{t-1} + \omega$$

The above equation indicates  $\Delta$  as the difference operator and  $\omega$  is the random error of stationarity or the white noise. All the independent variables of this study are indicated by 'xm' as shown in the above equation. The non-stationary series in the above equation is represented by  $m_{t-1}$ . Moreover,  $\mu_0$  is the constant,  $\mu_1$  is the coefficient of the variable representing trend while  $\mu_2$  is the coefficient for the lagged dependent variable. In addition, 'n' is depicting the lag order starting from i=1 and end at 'n'.

#### 4.3. Autoregressive Distributed Lag Model (ARDL)

In accordance with the study conducted by Aljandali and Tatahi (2018) the ARDL approach to cointegration is one of the methods that are effective when the time-series is found to be first-order stationary or I(1). Anh, Kreinovich, and Thach (2017) have stated that cointegration helps in determining a linear combination between two non-stationary series, however, old methods, for instance, the methods proposed by Engle-Granger and Johansen can be biased. To overcome this issue, Pesaran, Shin, and Smith (2001) proposed to use the ARDL method to produce unbiased results. As mentioned previously the ARDL model has been used to study the long term and short

term effective between the dependent and independent variables of the study. The following equation represents the single equation regression:

$$S_t = \tau + \alpha X M_t + + \vartheta_t$$

 $S_t$  in the above equation is the dependent variable in the research model, and the predictors of the model are represented by XM in the above equation. The error term in the equation is represented by  $\vartheta_t$ . The following equation indicates the mathematic model for the ARDL model implemented in this research:

$$\Delta S_t = \tau 1 + \sum_{i=1}^{f_1} \theta_{1i} \Delta S_{t-i} + \lambda_1 S_{t-1} + \lambda_2 X M_{t-1} + \vartheta_t$$

Furthermore, to understand the short-term and long-term relationship between the variables of the model, the following mathematical models are shown:

$$\Delta S_{t} = \tau 2 + \sum_{i=1}^{f^{2}} \psi_{2i} \Delta S_{t-i} + \sum_{j=0}^{g^{2}} \psi_{2j} \Delta X m_{t-j} + \vartheta_{2t}$$
  
$$\Delta S_{t} = \tau 3 + \sum_{i=1}^{f^{3}} \lambda_{3i} \Delta S_{t-i} + \sum_{j=0}^{g^{3}} \psi_{3j} \Delta X m_{t-j} + \phi_{1} S_{t-1} + \phi_{2} X M_{t-1} + \rho \varepsilon_{t-1} + \vartheta_{3t}$$

In the above equation,  $\rho$  shows coefficient that is statistically significant which is also corrected for errors in the model. Moreover, in the above equation, the  $\emptyset$  symbol is used to denote the coefficients of the independent variables used in the model.

#### 4.4. Bounds Testing

For the purpose of testing the long-run association in the ARDL approach to cointegration, Pesaran et al. (2001) proposed using bounds testing. This helps in deriving the unrestricted error correction model (UECM) using a linear transformation technique. Concerning this, the bounds testing approach tests the following hypotheses:

H0:  $\emptyset_1 = \emptyset_2 = \emptyset_3 = \emptyset_4 = \emptyset_n = 0$ H1:  $\emptyset_1 \neq \emptyset_2 \neq \emptyset_3 \neq \emptyset_4 \neq \emptyset_n \neq 0$ 

Here, the value of f-statistics is obtained which is then compared to its critical values at 10%, 5% and 1% significance level based on I(0) and I(1). The mentioned null hypothesis is rejected only when the critical value is below the computed f-statistics concerning I(1). However, if the f-statistics computed in the study is found to be lower than the critical bounds then the null hypothesis is not negated. Hence, with the mentioned threshold levels and the criterion, the long-run association between the concerned variables is tested in the ARDL model.

# 5. RESULTS AND ANALYSIS

# 5.1. Descriptive Statistics

From the Table 1, the descriptive statistics of the variables can be determined which have been adopted in this study. In this manner, it can be identified that the mean value for the real interest rate of the Netherlands is 1.22 which depicts that the average interest rate for the Netherlands is 1.22%. Similarly, the standard deviation was determined to be 1.492 which depicts that the real interest rate will deviate from 1.492%. On the other hand, the mean value for inflation was computed to be 1.99 which depicts that the average inflation of the Netherlands was 1.99%. While the standard frication for inflation was computed to be 0.864 which posits that the inflation of the Netherlands will deviate from 0.864%. In addition to this, the mean for fiscal balance was determined to be 7.437 which shows that average fiscal balance for the Netherlands is 7.437%. In this manner, the standard deviation for Fiscal balance of Netherlands was determined to be 2.087 which posits that the fiscal balance of the Netherlands will deviate from 2.087%. Moreover, the mean value for the industrial

performance index is obtained as 101.786 which shows that the average industrial performance index for the Netherlands is 101.786 points. In this manner, the standard deviation for the industrial performance index is determined to be 1.694 which depicts that the industrial performance index of the Netherlands will deviate from 1.694 points. The mean value for the stock price is determined to be 357.907 which depicts that the average stock price for the Netherlands is  $\in$  357.907 while the standard deviation for the stock price is computed to be 156.449 which depicts that the stock price will deviate from  $\notin$  156.449. In contrast to this, the mean value for stock return is determined to be 0.005 which shows that the average stock return is 0.005% while the standard deviation was determined to be 0.019 which shows that the stock return will deviate from 0.019%. Moreover, the mean value for oil prices was determined to be 47.584 which shows that the average oil prices was computed to be 32.594 which depicts that the oil prices will deviate from  $\notin$  32.594. Lastly, the mean value for Oil return was obtained as 0.003 which shows that the oil return will deviate from 0.030%.

Tabl	e-1. L	Descr	1pt1ve	statis	ics.	
			-	_		2

Variable	Obs	Mean	Std. Dev	Min	Max
Real Interest Rate (%)	32	1.227	1.492	-2.206	3.205
Inflation Rate (%)	32	1.990	0.864	0.316	4.155
Fiscal Balance (%)	32	7.437	2.087	3.486	11.102
Industrial Production Index (Points)	32	101.786	1.694	94	104.2
Stock Price (€)	32	357.907	156.449	101.286	659.606
Stock Returns (%)	32	0.005	0.019	-0.061	0.034
Oil Price (€)	32	47.584	32.594	13.428	112.257
Oil Returns (%)	32	0.003	0.030	-0.060	0.072

#### 5.2. Augmented Dickey-Fuller (ADF)

On the basis of the past patterns, the unit root is regarded as a significant aspect in terms of calculating the values and predicting on the basis of it. According to the study of Paparoditis and Politis (2018) historical data makes it challenging to assess future values while using conventional inferential statistics. Therefore, the Augmented Dickey-Fuller (ADF) has been sued for the purpose of testing the unit root in the data.

Augmented Dickey-Fuller test statistic	t-Statistic	Prob.*
Real Interest Rate	-0.236	0.934
Inflation Annual	-2.978	0.037
Fiscal Balance of GDP	-1.710	0.425
Industrial Production Index	-8.582	0.000
Stock Return	-5.393	0.000
Oil Return	-6.765	0.000

Table-2. Augmented Dickey-Fuller (ADF).

From the above <u>Table 2</u>, the results of Augmented Dickey-Fuller (ADF) can be determined with respect to the variables adopted in this study. The null hypothesis of Augmented Dickey-Fuller (ADF) is grounded on the claim that there is the presence of unit root in the data while the alternate hypothesis denotes that there is no presence of unit root in the data. Therefore, it can be determined from the above <u>Table 2</u> that there is the presence of unit root in real interest rate as t = -0.236 [p= 0.934] which is above the threshold of 0.05. In addition to this, there was no presence of unit root in Inflation annual as t = -2.978 [p= 0.037] which is below the threshold of 0.05.

#### 5.3. Bound Testing

With respect to the ARDL bounds test, it has been determined that F-statistics was 6.837 while the value for t-statistics is determined to be -5.227. In this context, the study of Pesaran et al. (2001) suggest that the criterion of bounds test is that the values for F-statistics and t-statistics must be

above the critical value for I(1). Therefore, considering 5% threshold, the f-statistics is computed to be 6.83 which is greater than 4.962, thus, a long-run association is found. The results can be viewed in Table 3.

		,	Table-3. Bour	nd Test.				
Model: F (Stock Return, Real Interest Rate, Inflation Annual, Fiscal Balance of GDP,								
Industrual Prod	Industrual ProductionIndex)							
Optimal Lag Le	ength: ARD	L(2,2,0,0,2	2,2)					
F = 6.837; t-statistics= -5.227								
	10% 5% 1%					%		
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)		
F	2.585	4.077	3.213	4.962	4.837	7.228		
t	-2.462	-3.777	-2.867	-4.276	-3.721	-5.333		

5.4. Autoregressive Distributed Lag (ARDL)

As mixed stationery among the variables was determined from the above Augmented Dickey-Fuller (ADF) test, therefore, the ARDL model has been conducted (Oluseyi, Olasehinde, & Eweke, 2017). In this manner, it can be determined from Table 4 that there is a long term effect of the real interest rate as (p-value < 0.1). On the other hand, the effect of inflation, industrial performance index and oil price was also determined to be significant as (p-value < 0.05). However, the effect of fiscal balance is statistically insignificant in the long-run (p-value> 0.05) and this specific finding can be deemed as contradictory to the study of Todorova (2019).

Table-4. Autoregressive Distributed Lag Model for LPI (Long Run).

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long-run				
Real Interest Rate (L1)	0.007*	0.003	1.97	0.066
Inflation Annual (L1)	012**	.004	-2.84	0.012
Fiscal Balance of GDP	.004	.003	1.08	0.295
Industrial Production Index	007**	.003	-2.19	0.044
Oil Price	0003**	.0001	-2.80	0.013

Note: \*Significant at 10%; \*\*Significant at 5%; \*\*\*Significant at 1%.

Moreover, with respect to the short term, it has been determined that there is a significant effect of real interest rate and inflation as (p-value < 0.01) according to Table 5. In addition to this, the short term effect of Industrial production index was also determined significant as (p-value < 0.05). Lastly, the short term effect of oil price was also determined to be significant as (p-value < 0.01).

The Table 6 depicts the summary of hypothesis and on the basis of this, it has been determined that there is no significant effect of Fiscal balance of GDP on stock returns of the Netherlands. It contradicts with the findings of Todorova (2019) that the major reason to outline the economic stability and inducing economic stability and budget surplus that effects the stock market returns in the region. On the other hand, the real interest rate was determined to have a significant effect both on the short and long term. Similarly, the study of Anghelache et al. (2016) argued that short term interest rate policies can affect the economic growth to the capital markets and to control the imperfections. The analysis also determined that there is a significant effect of the inflation rate on both short term and long term. It has also been supported in the study of Chatziantoniou et al. (2013) that stock market responses towards inflation are determined that the fewer investors would be available in the market.

Table-5. Autoregressive distributed lag model for LPI (short run).   Variable Coefficient Std. Error t-Statistic Prob.*							
	Coefficient	Stu. LITO	t-Statistic	1100.			
Short-run	1	1	r	r			
Stock Return	.240	.179	1.34	0.199			
Real Interest Rate							
D1.	0.004	0.006	0.75	0.463			
LD.	017***	.005	-2.97	0.009			
Inflation Annual							
D1.	014***	.004	-3.28	0.005			
Fiscal Balance of GDP							
D1.	.004	.004	1.08	0.296			
Industrial Production Index							
D1.	003	.003	-0.89	0.387			
LD.	004**	.001	-2.77	0.014			
Oil Price							
D1.	000*	.000	-2.11	0.051			
LD.	.0008***	.000	3.32	0.004			
С	.906	.456	1.99	0.064			
R-squared	0.865	F-statistic	-5.23				
Adjusted R-squared	0.756	Prob (F-statistic)	0.000				

Table 5 A	utoragrassiva	distributed	lag model	for LPI (short run)	

Note: \*Significant at 10%; \*\*Significant at 5%; \*\*\*Significant at 1%.

# 6. DISCUSSION AND SUMMARY OF HYPOTHESIS

Hypotheses	Proposition	Results
$H_1$	There is a significant impact of the Fiscal Balance of GDP on the stock price return at the Netherlands.	Rejected
H <sub>2</sub>	There is a significant impact of the short term interest rate on the stock price return at the Netherlands.	Accepted
H <sub>3</sub>	There is a significant impact of the Inflation rate on the stock price return at the Netherlands.	Accepted
$H_4$	There is a significant impact of the Industrial production index on the stock returns at the Netherlands.	Accepted
H <sub>5</sub>	There is a significant impact of the Oil prices on the stock returns at the Netherlands.	Accepted

Table-6. Summary of Hypotheses.

Moreover, the effect of industrial production index was also determined to be significant in both short term and long term. It has also been argued in the study of Attari et al. (2014) that stock return performance in the countries is effected through the intensity of the production index. Lastly, the effect of oil prices was also determined to be significant in the short and long term. It has also been supported in the study of Atiq and Farhan (2018) that prices of oil globally have a high impact on the country's economic prosperity and development that influence the stock returns.

# 7. CONCLUSION

Lack of effective fiscal policy has resulted in the decline of the stock market and has become an increasing concern for the countries. In this manner, this study has focused on determining the fiscal policy and stock market efficiency in the Netherlands. Therefore, the data has been gathered from the World Data Bank for the variables including Inflation, Fiscal Balance, Industrial production index, stock prices and oil prices. For the analysis of data, the ADF test has been conducted in order to test the unit root in the data. Upon testing, mixed stationery was determined which led to the ARDL model. The results of the ARDL model determined that interest rate, inflation, industrial production index and oil prices have a significant effect over the stock returns of the Netherlands.

However, the Fiscal balance of GDP was determined to have insignificant influence over the stock returns of the Netherlands.

#### 8. RECOMMENDATIONS

Based on the above analysis and discussion, it is suggested for the regulatory authorities of the Netherlands to have control over the interest rate as it has influence over the stock returns. In addition to this, it is also recommended for the authorities to have control over the inflation which can also have an effect over the returns of the stock market. Moreover, it is also suggested to improve the industrial production index along with the control over oil prices as they both affect the stock market returns of the country in both the short and long term.

# 9. LIMITATIONS AND FUTURE RESEARCH DIRECTION

The results of this study are restricted to the stock market of the Netherlands. In this manner, it is suggested for the future researcher to focus on stock markets of other countries as well to present significant findings. On the other hand, the effect of stock market return has been tested based on fiscal policy. In this manner, there are several other factors which can influence the stock market returns and future researchers must consider them.

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