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Monetary-Fiscal policies and stock market performance: Evidence from linear ARDL framework

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ABSTRACT

Objective – To explore the impacts of monetary and fiscal policies, the appropriateness of both policies and how the stock market is affected by their adoption and implementation in the United States (US). Hence, this study aims to determine the short and long run relationships between monetary and fiscal policies and stock market performance as well as establish potential factors and policies contributing to the highs and lows.

Methodology/Technique – We use autoregressive distribution lag (ARDL) developed by Pesaran et al. (2001) to achieve the objective. In this study, annual time series data from the Federal Reserve, World Bank, and International Monetary Fund, from 1986 to 2017 pertaining to the American economy, was used.

Findings – The results show that both policies play a significant role in the stock market. We find a significant positive effect of real gross domestic product (RGDP) and the interest rate on the US stock market in the long run and significant negative relationship effect of the consumer price index (CPI) and broad money on the US stock market both in the short run and long run. On the other hand, this study only could support the significant positive impact of tax revenue and significant negative impact of real effective exchange rate on the US stock market in the short run while in the long run are insignificant.

Novelty – As the US stock market heavily depends on the Tax Revenue in the short run, any changes in TR can impact on the US stock market considerably. Thus, shareholders can benefit from these results when they look at macroeconomic data in order to enhance their investment strategy.

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1. Introduction

Stock market is one of the channels where investors can make investments for future returns. For investors, a stock market might create profits, both as dividend and capital gains. However, due to uncertainty, market risks, and financial disorders, they might lose their capital (Rizaldi Fauzi and Imam Wahyudi, 2016). However, stabilising the market demands of the future is the central bank's monetary policy goal and it is crucial in evaluating the asset prices (Blinder et al., 2008).

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As statistics show, US securities are widely popular among a large number of international and government investors. Hence, any fiscal instability and market risks in the American economy might cause an extreme depreciation of the dollar as investors would be swayed away from the US markets and, of course, the stock market. This would then ultimately impair the country's economic (and political) positions. In addition, an extreme economic crisis in the US would spread all over the world among its trading partners and dramatically weaken their economies with potentially disastrous financial and economic consequences universally (Laopodis, Nikiforos T, 2009).

At the moment, America is the main financial market in the world, and it is argued that the US stock markets can affect major stock markets and economic situations in other countries, especially if a major event happens in the US market (Chia-Hao Lee, Pei-I Chou, 2020). Hence, understanding to what extent macroeconomic indicators can affect American stock prices and whether any long-run or short-run relationship exists between these variables in different periods is crucial.

Besides, Hamza Bennani(2019) suggests that financial markets have the most significant influence of monetary policy. On the other hand, some other researchers believe central banks should not concentrate on all macroeconomic and financial issues and instead focus only on the issue pertaining to price stability (Ferhat Çamlıca, 2016).

Bjornland and Leitemo (2009) discuss two explanations of why knowledge regarding stock prices will affect monetary policy position. The first being that stock prices can be the key drivers of the target variable. The other is that through wealth effects stock prices can influence consumption and through the Tobin Q effect stock price influence investments (Tobin, 1969). Although most literature focused on the impact of government spending proxy by the fiscal policy on the stock market, there is not sufficient information about tax revenue and consumer price index as a proxy by the fiscal policy that can influence stock market discussed.

As we know that the importance of the indicator may change depending on certain periods as the financial market is continuously changing with new arising market conditions. In order to be able to prioritize between indicators, it is important to analyze if the indicators have a short-run and/or long-run relationship with the market. In detail, to expand the concept and application of macroeconomic indicators the appropriateness of each indicator and their causality/correlation with the market should be under investigation in order to be able to prioritize between indicators when they propose different directions of the market. So, finding out the nature of the linkage among monetary policy as well as fiscal policy in the US can be helpful for policy creations and consideration of this relationship in mind. Discovering the linkage between these policies and the stock market can be helpful for investors and future opportunities if the market does not reflect all available information immediately.

Therefore, this study seeks to examine the impact of monetary and fiscal policies on stock market performance using different approach and proxy from 1986 to 2017 in the United States.

The following section presents a review of the literature. The research methodology and empirical findings will be reported, followed by a discussion on the similarity and differences between previous research in the United States as well as other countries. The final part is about results, discussion and conclusion.

Literature Review

According to Fama, E. F. (1995) The market theory as efficient or semi-strong efficient defined as a random walk. It says that any movement in price in individual stocks is independent so there is no memory for a series of stock price changes; thus, the series in the past cannot give any useful information that can be used for predicting stock price movement for the next event. Scientific evidence demonstrates that, if the stock market is efficient, stock values are appropriate representations of intrinsic value at any point of time, then further research is unnecessary except if the researcher has additional (private) knowledge or insights.

However, investors typically assume that macroeconomic events and monetary policy have a major effect on stock market fluctuations. This means that macroeconomic variables can affect investment decisions by investors and motivates many researchers to examine the linkage among macroeconomic variables and share returns Gan, Lee (2006).

Still, the theory of efficient market hypothesis is arguable for researchers, for example, Mbanga and Darrat (2016) evaluated the influence of fiscal and monetary policies on the US stock market and the results indicate that fiscal policy plays a major role over long-run equilibrium on the stock market. Also, the other results that put market efficiency into question are that it has a noticeable short-run impact on present stock returns. Hence, understanding to what extent macroeconomic indicators can influence American stock prices and whether any long-run or short-run relationship exists between these variables in different periods is crucial.

Theoretically, the impacts of fiscal policy depend on three major perspectives: Keynesian, Classical or Ricardian (Bernanke and Gertler, 1989).

Many scholars such as Mishkin (1995) Afonso and Sousa (2011,2012) have shown that the stock market can be affected by five possible channels: interest rate channel, the credit channel, the wealth effect, the exchange rate channel, and the monetary channel.

Adedoyin Isola Lawal (2018) finds a long-run relationship directly through the interest rate channel between all share index and monetary policies and a negative relationship indirectly between the money supply and all share indexes. The ARDL result confirms the theory of monetary policy channel through the interest rate, even though it was rejected by Castelnuovo and Nistico (2010).

Ioannis Chatziantoniou (2013) shows that the US money supply affects interest rates, and it negatively affects the stock market. When the central bank lowers the interest rate too much, it can by itself lead to a financial crisis, for instance, Japan 1988–1992 or the USA 2002–2004. In the case of Malaysia, Abdelkader O. El Alaoui (2019) finds that the money supply and interest rate are negatively correlated in the short term.

Duy-Tung, B.U.I (2018) presents a discussion on the effect and directions between taxing policies on asset prices in terms of both practical and theoretical points of view. For example, Afonso and Sousa (2011) found a positive effect of taxes on asset prices; however, Tavares and Valkanov (2001) observed a negative effect of taxes on asset prices via both straight and indirect paths in the USA between 1960 and 2000.

Humpe and Macmillan (2009) tested the influence of macroeconomic elements on the stock market in the US and found negative direction in both customer price index and interest rate. Interestingly, they found a direct relationship between US stock price and money supply, but a negative relationship between them in the case of Japan.

Gamze Oz-Yalaman (2019) suggests that government policy should pay more attention to increasing tax revenue by considering the determinants of tax revenue.

In the conclusion of the literature review, it can be said that extensive discussion exists on the macroeconomic variables and their effects on the stock market and some empirical evidence also exist in different countries. Therefore, it is significant to study these effects and their influences in the long term and short term with all share indexes in the US to assess if they are in the same line with the prior studies. Thus, we examine whether monetary and fiscal policies have an effect on stock prices in the United States.

Research Methodology

In this study, annual time series data of 32 years from 1986 to 2017 are analysed. The all-share index (ASI) proxy for stock markets is used as the dependent variable, and consumer price index (CPI), real gross domestic product (RGDP), tax revenue (TR), broad money (M3), real interest rate (RINT) and real effective

exchange rate (REXC) are used as independent variables. The data for these variables are obtained from the Federal Reserve, World Bank and International Monetary Fund.

We follow Lawal et al. (2018)

The model specification is:

SM= (MP, FP)

(1)

SM denotes stock market proxy by all-share index (ASI); MP indicates monetary policy that is proxy by money supply (M3), real effective exchange rate (REXC) and interest rate (INT). FP is fiscal policy that is proxy by real gross domestic product (RGDP), tax revenue (TR) and consumer price index (CPI).

The variables for monetary policy (MP) and fiscal policy (FP) from the previous equation are explained in this estimation model as following:

$$\mathrm{LnASI} = \beta_0 + \beta_1 \mathrm{LnCPI} + \beta_2 \mathrm{LnM3} + \beta_3 \mathrm{LnREXC} + \beta_4 \mathrm{LnRGDP} + \beta_5 \mathrm{LnTR} + \beta_6 \mathrm{RINT} + e_t, \quad (2)$$

Where Ln is the natural logarithm, β0 is the constant term and β1–β6 are the independent variable coefficients and et is the error term for evaluating short and long run effects.

The majority of the economic and financial data deal with trending behaviour; so, it is non-stationary. In the non-stationary time series, the mean and variance depend on time.

Thus, in a regression framework, the use of non-stationary time series may lead to misspecification regression and it might not give us a meaningful result unless cointegration tests are performed.

Unit root offers scientific proof that a provided series is stationary. However, the problem with DF test is that the error term may be correlated. That is the reason why forgo DF test and use ADF and PP tests for a unit root. The critical values for ADF tests are the same as that for the DF test.

The null hypothesis contains a unit root with a constant and a time trend and refers to the critical values tabulated by MacKinnon Dickey and Fuller (1979, 1981) and Phillips and Perron (1988).

In both tests, the null hypothesis (H0: y) indicates a non-stationarity, while the alternative hypothesis (H1: y) indicates that the data are stationary. Once the variable is stationary, then it is integrated of the order equal to the number of differencing.

For estimating the cointegration between the all-share index and the economic variable, we use the model ARDL-bound approach introduced by Pesaran et al. (2001). We use it because all variables are not stationary at the same order I(0) or I(1) and also because the small sample size cannot be used by VAR framework and other estimations As for illustration by Engle and Granger (1987), Johansen and Juselius (1990) and Gregory and Hansen (1996). However, this method can be used only when there is no variable stationery at lag (2).

The ARDL framework is as follows: (3)

$$\begin{aligned}\Delta \mathrm{Ln\,ASI}_t = {} & \mathrm{B}_{01} + \sum_{i=1}^{n1} \mathrm{B}_{11}\, \Delta \mathrm{Ln\,ASI}_{t-i} + \sum_{i=0}^{n2} \mathrm{B}_{12}\, \Delta \mathrm{Ln\,CPI}_{t-i} + \sum_{i=0}^{n3} \mathrm{B}_{13}\, \Delta \mathrm{Ln\,M3}_{t-i} + \\ & \sum_{i=0}^{n4} \mathrm{B}_{14}\, \Delta \mathrm{Ln\,REXC}_{t-i} + \sum_{i=0}^{n5} \mathrm{B}_{15}\, \Delta \mathrm{Ln\,RGDP}_{t-i} + \sum_{i=0}^{n6} \mathrm{B}_{16}\, \Delta \mathrm{Ln\,TR}_{t-i} + \sum_{i=0}^{n7} \mathrm{B}_{17}\, \Delta \mathrm{RINT}_{t-i} + \\ & \emptyset_{11}\, \mathrm{Ln\,ASI}_{t-1} + \emptyset_{12}\, \mathrm{Ln\,CPI}_{t-1} + \emptyset_{13}\, \mathrm{Ln\,M3}_{t-1} + \emptyset_{14}\, \mathrm{Ln\,REXC}_{t-1} + \emptyset_{15}\, \mathrm{Ln\,RGDP}_{t-1} + \\ & \emptyset_{16}\, \mathrm{Ln\,TR}_{t-1} + \emptyset_{17} \mathrm{RINT}_{t-1} + e_{t-1}\end{aligned}$$

Where *Ln* is the log of the variables, Δ expresses the first difference operator. β01 denotes the constant term; β11 …. β17 indicate the short-run coefficients, Ø11 …. Ø17 are the long-run coefficients, n1 …. n7 are the lag length and et-1 represents the white noise error terms.

The null hypothesis in the equation is (4)

$$\mathrm{H}_0: \emptyset_{11} = \emptyset_{12} = \emptyset_{13} = \emptyset_{14} = \emptyset_{15} = \emptyset_{16} = \emptyset_{17} = 0$$

$$H_1: \emptyset_{11} \neq \emptyset_{12} \neq \emptyset_{13} \neq \emptyset_{14} \neq \emptyset_{15} \neq \emptyset_{16} \neq \emptyset_{17} \neq 0$$

For achieving the main objective of this study, namely, to examine the long-run relationship between monetary and fiscal policies on the stock market, we use the ARDL model through the Schwarz Bayes criterion (SBC) because the number of observations in this study is 32.

If the value of F-statistic is greater than the upper bound, a cointegration exists between the variables and, therefore, the null hypothesis will be rejected.

The Error Correction Model (ECM) of the ARDL model is as below: (5)

$$\Delta LnASI_t = B_{01} + \sum_{i=1}^{n1} B_{11}\,\Delta LnASI_{t-i} + \sum_{i=0}^{n2} B_{12}\Delta LnCPI_{t-i} + \sum_{i=0}^{n3} B_{13}\,\Delta LnM3_{t-i} + \sum_{i=0}^{n4} B_{14}\Delta LnREXC_{t-i} + \sum_{i=0}^{n5} B_{15}\,\Delta LnRGDP_{t-i} + \sum_{i=0}^{n=6} B_{16}\,\Delta LnTR_{t-i} + \sum_{i=0}^{n=7} B_{17}\Delta RINT_{t-i} + \alpha ECM_{t-i}$$

The error correction model (ECM) demonstrates that after a short-term shock, the speed of adjustment moves back to the long-term equilibrium. The coefficient is statistically significant (verifying the cointegration relationship between X and Y). If the coefficient of ECT is negatively signed, the indication is that it is converging towards equilibrium. If the coefficient is positively signed, the result means that it is diverging from equilibrium. A value of 0 for the coefficient indicates no adjustment and a value of 1 indicates full adjustment. If the coefficient is greater than 1, it means that the adjustment is less than the period.

For ensuring the goodness of fit of the model, some diagnostic check has been conducted. This was needed to check whether the model is not suffering from serial correlation and heteroscedasticity and to check for stability and normality of the coefficient (Pesaran et al., 2010).

Results and Discussions

The findings of the Jarque-Bera, skewness and kurtosis tests show the normality of the analysed data. The findings of lower values from the standard deviation, therefore, suggest that the data series are consistent over time (Table 1).

Table 1 Descriptive Statistics

	LASI	LCPI	LM3	LREXC	LRGDP	LTR	RINT
Mean	3.837850	1.361211	4.310176	4.688005	16.34387	27.71968	4.099749
Median	4.069027	1.444762	4.288971	4.683204	16.39006	27.77482	4.255498
Maximum	4.708786	1.931225	4.509469	4.840330	16.68970	28.47603	7.148192
Minimum	2.600324	0.134927	4.088642	4.553997	15.90386	26.86623	1.137338
Std. Dev.	0.648121	0.359125	0.127745	0.077043	0.244095	0.441331	2.009222
Skewness	-0.553770	-1.512982	0.098573	0.341106	-0.325763	-0.249481	-0.000540
Kurtosis	1.932223	6.236310	1.938955	2.386356	1.726622	2.038633	1.501484
Jarque-Bera	3.155724	26.17355	1.552911	1.122630	2.727970	1.564253	2.994069
Probability	0.206416	0.000002	0.460034	0.570459	0.255640	0.457432	0.223793
Sum	122.8112	43.55875	137.9256	150.0162	523.0038	887.0296	131.1920

Sum Sq. Dev.	13.02189	3.998094	0.505884	0.184003	1.847048	6.037965	125.1461
Observations	32	32	32	32	32	32	32

The Augmented Dickey-Fuller (ADF) results in Table (2) reveal that the real effective exchange rate and consumer price index are significant at level, while other variables are significant at the first difference. The Phillips Perron (PP) test shows that the consumer price index is significant at level, while other variables are significant at the first difference.

Table 2 ADF and PP Unit Root Tests (Without Trend and Intercept)

	ADF (level)	ADF (1st difference)	PP (level)	PP (1stdifference)
LASI	-2.056816	-3.334739**	-1.514800	-4.234031***
	4	3	4	3
LRGDP	-2.189309	-3.328467**	-2.189309	-3.251587**
	0	0	0	4
LM3	0.015604	-3.653282**	-0.496680	-3.727383***
	0	0	3	2
RINT	-1.909080	-3.826184***	-1.591692	-3.589236**
	1	0	3	6
LREXC	-2.843683*	-4.437645***	-2.582224	-4.433645***
	3	0	3	1
LCPI	-3.751923***	-5.409630***	-3.754643***	-21.96685***
	0	4	2	29
LTR	-0.965799	-3.993112***	-0.950441	-4.037779***
	0	0	9	13

Note: *** and *** indicate the variable is stationary at 10%, 5% and 1% respectively.

The ADF results in Table (3) also indicate that the real interest rate and consumer price index are significant at level, while other variables are significant at the first difference. The PP test shows that the consumer price index is significant at level, while other variables are significant at the first difference.

Table 3 ADF and PP Unit Root Tests (With Trend and Intercept)

	ADF (level)	ADF (1st difference)	PP (level)	PP (1st difference)
LASI	-2.014657	-3.729222**	-1.852345	-4.094788***
	1	3	2	4
LRGDP	-1.382595	-3.549992*	-0.803445	-3.371855*
	1	0	0	5
LM3	-2.430473	-4.113983**	-1.584739	-4.113983**
	1	0	1	0
RINT	-3.665208**	-3.756576**	-2.472602	-3.482721*
	1	0	3	6

LREXC	-2.771537 3	-4.318262*** 0	-2.306646 3	-4.313612*** 1
LCPI	-5.343478*** 0	-5.241068*** 4	-7.171143*** 13	-21.28755*** 29
LTR	-3.128249 1	-3.884808** 0	-2.182854 5	-3.777832** 13

Note: *, ** and *** indicate the variable is stationary at 10%, 5% and 1% respectively.

Since F-statistic (4.17) is greater than the upper band at 1% (3.99), a cointegration exists between variables, and the null hypothesis is rejected.

The result shows that LRGDP, RINT and LM3 are highly significant at 1% and LCPI is significant at 5%, while LREXC and LTR are not significant in the long run. Interestingly, in the short run, LTR and LREXC are highly significant.

The impact of the real effective exchange rate on all share indexes, in the long run, is not significant, and both the short-term and long-term effects are inconsiderable. Recent studies argue that asymmetric information exists in the case of the exchange rate and should be analysed by NARDL approach. However, some researchers, for example, MohsenBahmani-Oskooee and Sujata Saha (2016), believe that the stock price can change positively or negatively when the exchange rate changes because companies depend on whether they import or export.

In addition, the results showed the existence of an indirect relation between the all-share index and broad money. It is assumed that a collision in the money supply process causes a negative effect on interest rates, which in turn causes a negative impact on the stock market. As a result, the relation between money supply and interest rate theoretically counts an as indirect one (Chatziantoniou et al., 2013).

The results about tax revenue, money supply and consumer price index on all share indexes are similar to the findings of Ilievski (2015) and Adedoyin Isola Lawal (2018), Humpe and Macmillan (2009), respectively.

However, Adedoyin Isola Lawal (2018) found a positive relationship between the consumer price index and all share indexes in the case of Nigeria while in the United States the relationship is negative and significant.

Ilievski (2015) estimate models of tax-to-GDP and found a positive effect of stock on tax using panel data from 96 countries including the United States as a group of high-level income and the result is consistent with this study.

The relationship between the consumer price index and all share index is negative and significant both in the short and long run. However, in the case of Japan and the United States from January 1981 to May 2012 Humpe and Macmillan (2009) found that the relationship between stock returns and macro variables depend on the areas.

According to Boonyanam (2014), escalation in money supply decreases interest rates, which leads to an increase in investments, gross domestic product and, subsequently, stock prices. However, Fama (1981) disputed this theory by arguing that inflation, which could decrease stock prices in the short term, could escalate the money supply.

Due to the substitution effect in terms of stock prices and money demand, when all share indexes increase, equities become more attractive than the other parts in a portfolio; hence, there may be a switch-over from money to stocks.

The interest rate might also represent a benchmark for the required return on capital. Thus, investors start expecting higher profitability from firms as a result of the escalation of interest rates.

Mbanga and Darrat (2016), in their study on the impact of stock market return on fiscal and monetary policy in the United States, found the existence of long-run and short-run relationships between stock prices and fiscal policy. However, the results could not justify the long-run relationship between stock prices and monetary policy. In addition, ECM is not significant for stock return and previous monetary policy.

In this study, ECM t-statistic is 6.71 (0.698/0.104). It is significant at 1%, confirming the cointegration result. The negative sign of coefficient on the error correction term indicates that it will move back towards long-run equilibrium (and the model is stable).

The coefficient of –0.7 shows a 70% movement back towards equilibrium in one year. Full adjustment occurs in: 1200/70 = 17.

It means that it takes 1 year and 5 months for any short-run deviation to converge towards long-run equilibrium.

Table 4 Autoregressive Distributed Lags (ARDL) Results

Variable	Long run Coefficient	Short run coefficient
LCPI	-0.170747** (-2.544)	-0.119223*** (-2.833)
LM3	-0.654264*** (-3.699)	-0.456835*** (-3.329)
LREXC	-0.003525 (-0.016)	-0.002461*** (-0.016)
LRGDP	2.384158*** (5.355)	1.664722 (3.824)
LTR	0.318509 (1.448)	1.170708*** (13.746)
RINT	0.049719*** (2.884)	-0.024185** (-2.624)
C	-41.14363*** (-19.158)	-28.72826*** (-4.230)

Note: *, **, *** indicate the variable is stationary at 10%, 5% and 1%, respectively, and the value of the

parentheses () denote the T-statistic value.

The normality of the data, as skewness is near 0, Kurtosis is near 3 and Jarque-Bera is not significant.

The model is not suffering from serial correlation and heteroscedasticity, as p-value is not significant (see table 5).

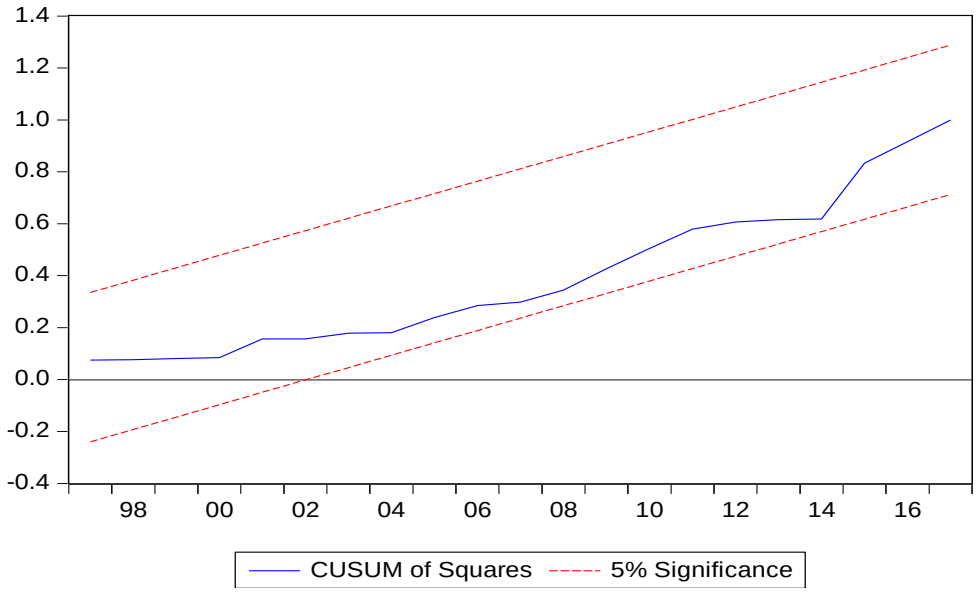
The CUSUM of squares test in Table 6 show that the blue line lies within the 5% significance levels, suggesting that the residual variance is stable (Cheng-Feng Wu Shian-Chang Huang 2020).

Table 5 Diagnostic Test

Diagnostic test	**F-statistic**	**P-value**
Serial correlation (LM test)	1.42	0.11
heteroscedasticity	.94	0.45

Normality (Jarque-Bera)	2.18	0.35

Figure 1 CUSUM-Square Stability Test



Bidirectional causality exists between (CPI and RGDP), (CPI and TR) and (TR and RINT), which shows that fiscal variables have a large effect on each other, and they need to be interpreted more sensitively.

Conclusions and Recommendations

We used ARDL to analyse data sourced from 1986 to 2017 in the American economy. The results show that short-term and long-term equilibrium relationships exist between some macroeconomic factors and the stock market; for instance, one of the monetary transmission mechanisms that influence stock market performance and stock price through interest rate directly (which is a negative expected sign) and credit channel indirectly (positive sign). This study found that the relationship between the RINT and stock price, in the long run, is direct through interest rate channel while in the short run the relationship is positive which is follow the indirect channel of monetary transmission mechanism that is knowns as firm balance sheet effects or credit view. This study support credit view channel in the short run for interest rate and both long run and short run for M3. Besides, Due to the substitution effect in terms of stock prices and money demand, when all

share indexes increase, equities become more attractive. hence, there may be a switch-over from money to stocks. Theoretically from the exchange rate channel, exchange rate appreciation cause increase in import and reduce export which can lead to a decrease in gross domestic product and stock prices. The results support the exchange rate channel, However, in the long run, the result is not statistically significant.

The linkage between CPI proxy by inflation and ASI is found to be negative in most of the empirical study, the theory of consumption which is Modigliani's life-cycle also identifies a channel of monetary transmission when stock markets decline following monetary contractionary to slow down overheated economic growth as a consequence of an increase of consumption that leads to inflation, the expected sign between the CPI and stock price found to be negative and the results are consistent with theory both in the long run and short run.

The linkage between tax revenue and the stock market is found to be positive in this study and support the Keynesian Positive Effect Hypothesis. As Ilievski, B. (2015), Taha, R. (2013) noted that government intervention is significant for collecting taxes since the impact of tax revenue and the stock market found to be positive and remark that the increase in stock may cause an increase in tax when governments rely more on capital taxes than on income taxes.

The results of this study are consistent with the theoretical framework and the previous empirical studies. It supports both direct and indirect effects of monetary policy on the stock market through interest rate, credit view, wealth effect and exchange rate channel as well as Keynesian Positive Effect.

Empirical evidence in this study shows that real gross domestic product (RGDP) has the most effect on the stock market in the long run while tax revenue (TR) has the biggest influence on the stock market in the short run which implies that these factors need to be taken into account when evaluating the US stock market performance during1986 to 2017.

The study confirms that both policies have an impact on stock market performance. However, due to complexity of multiple channels that can cause fall and rise in the stock market index, both policies should concentrate on price stability and lowering the volatility of the stock market and major intervention should take place when economic as well as the stock market is not performing well.

On the other hand, both government and the central bank should contribute to each other and consider one target and one system that can stabilize the economy immediately without legislation in order to overcome the instability of the economy and financial market.

Future Study

As the results show that RGDP and TR are significantly related to the stock market efficiency, researchers should consider these indicators on their model and may test causality among the variables in the SVAR framework and check whether there is any interaction between these two policies during the COVID-19 pandemic and give an appropriate suggestion that how the Central Bank and Federal Reserve can be in the same line with each other that can make both policies effective for the stock market performance. The research could be extended to another country or multiple countries, which can examine the differences and similarities, especially in the case of the fiscal policy variables such as tax revenue (TR) and evaluate with fiscal transmission mechanism.

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