STOCK RETURNS AND INFLATION IN FIJI

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ABSTRACT

The relationship between stock returns and inflation has important implications for monetary policy and stock market investment and has attracted growing attention from scholars over recent years. Despite this, the empirical evidence so far has been inconclusive. The main objective of this paper is to investigate the impact of inflation on stock returns in the developing stock market of Fiji. We examine the impact of inflation on stock market returns within the GARCH and EGARCH modelling framework using monthly data from 2000:02 to 2018:06 and find that inflation negatively affects stock market returns. Our results indicate the importance of ensuring price stability and suggest that stock market investment will not help hedge against inflation in Fiji. The results suggest that Fiji's stock market is likely to react more negatively to inflation in response to countercyclical monetary policy and emphasize the significance of portfolio diversification.

Keywords: EGARCH, Fiji, Inflation, Investment, Stock Returns

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1. INTRODUCTION

Following a decline in inflation at the onset of the COVID-19 pandemic, there has been a noticeable surge in inflation following a strong pickup in demand since the reopening of international borders, global supply chain disruptions, and food and oil prices volatility (Ha, Kose, Ohnsorge, & Yilmazkuday, 2023). With the Russian invasion of Ukraine in early 2022, oil prices have had a more noticeable influence on inflation (Ha et al., 2023). In the second half of 2022, the median global inflation surpassed 9% and reached its highest level since 1995 (Ha, Kose, & Ohnsorge, 2023). Inflation in advanced economies also surpassed 9% and reached its highest since 1982 (Ha et al., 2023). On the other hand, inflation was close to 10% in emerging markets and developing economies and has been the highest since 2008 (Ha et al., 2023). While inflation has started to moderate in advanced, emerging markets and developing economies, inflation remains high compared to pre-COVID pandemic levels (Ha et al., 2023). Consequently, there has been renewed interest in understanding the effects of inflation on financial markets (Cieslak & Pflueger, 2023; Jamaani & Alawadhi, 2023).

Inflationary concerns, however, are not restricted to developed and emerging economies only. High fuel prices due to the Russian invasion of Ukraine also lead to inflationary pressure in the Pacific due to higher transportation and import costs (Asian Development Bank, 2023). Inflation, on

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average, in the Pacific has been projected to reach about 5% in 2023 (Asian Development Bank, 2023). Before the general elections in December 2022, inflation was a subject of significant debate in Fiji's economic and political landscape. Given Fiji's huge reliance on imports, inflation in Fiji has been traditionally viewed as imported inflation and affected by global oil prices, exchange rate and domestic factors such as an increase in wages and salaries without matching increase in productivity, and natural disasters (Reserve Bank of Fiji, 2019). In 2022, Fiji's average monthly inflation stood at 4.3 percent, relatively high compared to the early years of COVID (Reserve Bank of Fiji, 2023a). While relatively low inflation was noted for the early months of 2023, the monthly inflation rate has been on an upward trend since August 2023 and there are anticipations of further increase (Reserve Bank of Fiji, 2023b). More recently, following the increase in the corporate tax rate from 20 to 25% and VAT from 9% to 15% as announced in the 2023-2024 budget, there has been renewed debate regarding the wider effects of inflation. In November 2023, headline inflation surged to 5.8% (Reserve Bank of Fiji, 2023b), thereby intensifying earlier concerns for economic recovery and financial markets (Islands Business, 2023; Reserve Bank of Fiji, 2023c; World Bank, 2023).

Unfortunately, the empirical literature on the stock return and inflation relationship has been inconclusive. Furthermore, a major shortcoming of the above studies is there is a large body of literature on developed and emerging market economies relative to developing economies (Al-Khazali, 2003; Chiang & Chen, 2023; Lee, 2010; Li, Narayan, & Zheng, 2010; Zhang, 2021). Subsequently, the inflation-stock return is less well understood in the context of small developing economies. With a stable macroeconomic climate, political environment, and supportive fiscal incentives, better investor confidence in recent years has supported the growth of Fiji's stock market (Sami, 2020; South Pacific Stock Exchange (SPSE), 2016). Understanding the relationship between inflation and stock return is important from both financial markets and macroeconomic perspectives for at least two main reasons. First, a better understanding of the correlation between stock returns and inflation will enable investors to develop better trading and risk management strategies to earn positive returns. More specifically, given the recent surge in inflation, it will help investors better understand whether investing in stocks will help hedge against inflation. The availability of such empirical evidence will significantly assist investors with portfolio diversification. Second, the negative correlation also has important implications for the future conduct of monetary policy by the Reserve Bank of Fiji and its implications for the stock market. If inflation adversely affects stock market returns, the major policy implication will be that the Reserve Bank of Fiji should keep a more careful tab on price stability, to minimize unnecessary adverse effects on stock returns, and encourage stock market investment. The inconclusive evidence in the global context suggests investors and policymakers are unaware of the possible downside risks of high inflation for Fiji's stock market, thereby increasing the risk of poor monetary policy and investment decisions. Despite rapid growth in Fiji's stock market and the recent surge in inflation, no empirical study has investigated the effects of inflation on stock returns. Motivated by the lack of literature in Fiji's context despite the recent inflationary environment, the main goal of this paper is to fill the gap in the literature by investigating the relationship between inflation and stock returns and providing new insights into a developing stock market context.

This study contributes to the literature in three ways. First, this study is the first attempt in the literature to examine the effects of inflation on stock returns for the developing stock market of

Fiji within a generalized autoregressive conditional heteroscedasticity (GARCH) modelling framework. Second, this study supplements past research in the context of developed, emerging markets, and developing economies, and provides updated empirical evidence on whether inflation also has a negative impact on stock returns in economies with small developing stock markets like Fiji. The results of this study will enable investors and policymakers to better understand the effects of inflation on stock market returns and design better strategies to safeguard financial stability and investor welfare. Third, our study adds to a small but emerging body of literature on Fiji's stock market. In recent years, an emerging strand of studies has examined issues in Fiji's stock market. These include studies on: stock market volatility (Mala & Reddy, 2007); stock market development (Sharma & Nguyen, 2011; Saliya, 2020); macroeconomic activities and stock prices (Puah & Jayaraman, 2007); factors affecting listing on the stock exchange (Mala & White, 2009); stock price clustering (Narayan & Smyth, 2013); random walk hypothesis (Sami, 2021); portfolio performance and diversification (Kumar & Stauvermann, 2022; Kumar, Stauvermann, & Samitas, 2022); and the effects of weather on stock returns (Sami, 2023). Thus, this study adds to this strand of literature by empirically investigating the effects of inflation on stock market returns in Fiji.

The rest of the paper is structured as follows. Section 2 discusses the literature review; Section 3 explains the data source and methodology. Section 4 discusses the main results and finally, Section 5 provides the concluding remarks.

2. LITERATURE REVIEW

In recent years, an emerging body of empirical literature has studied the relationship between stock returns and inflation. For example, Chiang (2023) finds that real stock returns and inflation are negatively correlated in 12 advanced economies. Omer and Ahmed (2020) examine the effect of inflation on stock return in Sudan and find evidence of significant negative effects of inflation on stock returns in the short run and long run. Alqaralleh (2020) applied the nonlinear ARDL cointegration technique and showed that inflation has an asymmetric effect on stock returns in G7 countries. Bhandari and Bandi (2018) examine the relationship between stock returns and inflation in India using monthly from 1994:5 to 2014:11 and find that stock returns do not help hedge against inflation. In contrast, Bhanja and Dar (2019) examine the relationship over the five decades (1960-2014) and find that stock returns and inflation are independent, suggesting stocks do help hedge against inflation. Tiwari, Cunado, Gupta, and Wohar (2019) undertake a wavelet analysis of the relationship between inflation and stock returns in the UK and find that stock returns do not hedge against inflation.

Al-Nassar and Bhatti (2019) investigate whether common stocks help hedge against inflation in twenty-eight emerging market economies and find stocks tend to be a good hedge in more than thirty percent of the cases. Al-Khazali (2004) studied evidence of a negative correlation between inflation and stock returns in Asian stock markets but did not find evidence of causality between stock returns and inflation. Spyrou (2001) investigated the relationship between inflation and stock returns in Greece using monthly data from January 1990 to June 2000. They find the relationship to be negative and statistically significant until 1995. However, after 1995, the relationship between inflation and stock returns was insignificant. Spyrou (2004) finds mixed evidence of both positive and negative relationship between stock returns and inflation using monthly data for 10 emerging

market economies. Gultekin (1983) examined the link between inflation and stock returns in 26 countries and found a consistent lack of positive relationship between the two variables in most countries. Erb, Harvey, and Viskanta (1995) examine inflation and stock return nexus in 41 developed and emerging stock markets over 22 years and find a significant negative relation for most countries.

However, Al-Khazali and Pyun (2004) find evidence of a negative relationship between inflation and stock returns in the short run but a positive relationship between inflation and stock returns in the long run in nine economies in the Pacific-Basin region. Shah, Nasir, and Naeem (2012) find a positive relationship between stock return and inflation in Sri Lanka, but a negative relationship between stock return and inflation in India, Pakistan, and Bangladesh. Lee (2008) also found no evidence that positive inflationary shocks have a negative effect on stock returns in the UK during the period 1970-2000. Similarly, Gavriilidis and Kgari (2016) find no evidence of a significant long-run relationship between inflation and stock market returns in Botswana over the sample period 1998 to 2013. Maulida and Yulianto (2023) find that inflation does not have a significant effect on stock returns during the COVID-19 pandemic in Indonesia. Austin and Dutt (2016) provide weak evidence that securities will not help hedge inflation in the United States. Rushdi, Kim, and Silvapulle (2012) found inflation had a significant and negative effect on stock return while expected inflation had no significant effect on stock return in Australia.

Conversely, some studies have found evidence of a positive relationship between stock returns and inflation. Boamah (2017) uses cointegration and the VECM model and finds evidence of a positive long-run relationship in G7 and BRICS economies. Shahbaz, Islam, and Rehman (2016) find evidence of a positive relationship between inflation and stock returns in both short-run and longrun in Pakistan implying that stock market investment helps hedge against inflation. In another study on Pakistan, Tiwari, Dar, Bhanja, Arouri, and Teulon (2015) also find evidence of a positive relationship between CPI-based inflation and stock returns, suggesting investing in the stock market helps hedge against inflation. Chang (2013) applies the ARDL test using monthly data from Japan for the sample period 2001M1 to 2011M7 and provides evidence that stock returns help hedge against inflation. Otieno, Ngugi, and Muriu (2019) find evidence of a positive causality from the inflation rate to stock returns in Kenya using monthly for the sample period 1993 to 2015, suggesting that stocks help hedge against inflation. In contrast, Pimentel and Choudhry (2014) find a bi-directional relationship between inflation and stock return in Brazil. Alagidede (2009) found that stocks provide a hedge against inflation in Kenya, Nigeria, and Tunisia. Zhao (2017) found that stocks were a hedge against expected inflation, and a partial hedge against unexpected inflation during the period of Chinese hyperinflation after World War II. Jelilov, Iorember, Usman, and Yua (2020) found that the COVID-19 pandemic distorted the positive relationship between stock market returns and inflation in Nigeria.

Moreover, few studies have found that the effect of inflation on stock return varies across regimes and tends to be nonlinear. Li et al. (2010) find that UK stock return fails to hedge against inflation in the short term, with mixed evidence in the medium term, and varying relationships across different inflation regimes. Lee (2010) found evidence of positive as well as negative inflationstock return correlation across two different regimes in the US and other developed economies. Liu and Serletis (2022) examine the complex relationship between inflation, inflation uncertainty, and equity returns in G7 and EM7 countries and find that the effects of inflation and uncertainty differ across countries. Sia, Leong, and Puah (2023) find that inflation has asymmetric effects on stock prices in the short run and long run in Indonesia over the period 1996 to 2020. Phiri (2017) provides evidence of a nonlinear negative cointegrating relationship between stock returns and inflation and unidirectional causality from inflation to stock returns in South Africa using monthly data over the sample period 2003:01 to 2014:12. The findings suggest that investing in stocks will not help hedge against inflation.

Studies focusing on the effects of inflation on sectoral stock returns have also found inconclusive results Ayinuola (2023) find that inflation negatively and significantly affects aggregate and sectoral stock return in the short run as well as the long run in Nigeria. Chiang and Chen (2023) assess the relationship between stock return and inflation in the US market and find that sectoral stock returns (except the energy sector) are negatively correlated with inflation. However, Osmani, Cheshomi, Salehnia, and Ahmadi Shadmehri (2023) find that inflation positively affects the nominal returns of stocks of different industries in the short term and the long term in Iran. However, inflation negatively affects real returns in the long term. Singh and Padmakumari (2020) studied the effects of inflation announcements in the Indian stock market using the event study technique during the period 2012 to 2018 and found that market reaction varies across sectors and the inflation regime. Thus, the empirical literature has been inconclusive.

3. DATA AND METHODOLOGY

3.1 Data and Sample Period

We collected monthly stock prices and consumer price index data from International Financial Statistics. The sample period for the study is 2000:02 to 2018:06. The choice of the sample period is dictated by two factors. First, the availability of high-frequency monthly data. Second, we focus on the period before the COVID-19 crisis, as this enables our analysis to better ascertain the relationship between inflation and stock return, without being distorted by factors (such as oil and food volatility, closure of international borders, Russia-Ukraine Crisis, and supply-side disruptions) which have become quite influential in past few years.

We compute the inflation rate and stock returns as follows:

$$Inf_{t} = \left(log \frac{CPI_{t}}{CPI_{t-1}}\right) *100 \qquad RET_{t} = \left(log \frac{SP_{t}}{SP_{t-1}}\right) *100$$

3.2 Methodology

To investigate the impact of inflation on stock market returns, we employ the GARCH model popular in financial econometrics literature (Bollerslev, 1986). Since this study is dealing with high-frequency monthly data, using the GARCH model allows for more parsimonious specification and tends to be more useful (Bollerslev, 1986; Engle, 2011; Sabiruzzaman, Huq, Beg, & Anwar, 2010). We adopt a GARCH modelling approach as this approach provides more efficient results than the ordinary least squares and can deal with conditionally heteroscedastic disturbances

(Al-Khazali, 2003). Furthermore, the GARCH (1,1) model is usually sufficient and much more parsimonious compared to the ARCH model with a significant number of lags (Ayinuola, 2023). We can also note that since stock return and inflation are stationary and exhibit considerable volatility (see Figure 1), it will not be appropriate to employ standard cointegration tests to study the long-run relationship between the series. Thus, to study the impact of inflation on stock returns, we include the monthly inflation rate variable in the conditional mean equation.

Conditional Mean equation:

$$RET_t = \varphi + \theta Inf_t + \pi RET_{t-1} + \varepsilon_t \tag{1}$$

GARCH Conditional Variance equation:

$$\sigma_t^2 = w + \alpha \varepsilon_{t-1}^2 + \beta \sigma_{t-1}^2 + v_t \tag{2}$$

The coefficient of the inflation variable (θ) tells us the impact of the inflation rate on stock market returns. However, the GARCH model might violate non-negativity conditions, cannot account for leverage effects, and does not allow for feedback effect between the conditional mean and the conditional variance (Brooks, 2008; Sabiruzzaman et al., 2010). Thus, we also examine the effect of inflation on stock returns by estimating the exponential GARCH (EGARCH) model suggested by Nelson (1991). This approach does not require one to impose non-negativity constraints on the estimated coefficients and allows us to examine the asymmetric effect.

EGARCH conditional variance equation

$$\log(\sigma_t^2) = w + \beta \log(\sigma_{t-1}^2) + \alpha \left| \frac{\epsilon_{t-1}}{\sigma_{t-1}} \right| + \gamma \frac{\epsilon_{t-1}}{\sigma_{t-1}}$$
(3)

We also estimate the GJR or Threshold GARCH (TGARCH) model of Glosten, Jaganathan, and Runkle (1993) to study the asymmetric effect and estimate the following TGARCH conditional variance equation

$$\sigma_t^2 = \omega + \beta \mu_{t-1}^2 + \alpha \sigma_{t-1}^2 + \gamma \mu_{t-1}^2 I_{t-1}$$
(4)

In equation (4), $I_{t-1} = 1$ if $\mu_{t-1} < 0$; and 0 otherwise. If $\gamma > 0$, this gives us evidence of the leverage effect (Brooks, 2008). The threshold GARCH (TGARCH) model enables the effects of bad and good news to have different impact on volatility (Glosten et al., 1993; Zakoian, 1994).

4. RESULTS AND DISCUSSION

4.1 Basic descriptive statistics and unit root results

Table 1 presents some basic descriptive statistics. First, the mean stock market returns during the sample period were 0.54, while the mean inflation rate was about 0.3. Standard deviation suggests that stock market returns were relatively more variable compared to the monthly inflation rate. The

Jarque-Bera test finds evidence of non-normality in the distribution of both series. We also plot the two series over time to examine their behavior over the sample period. There appears to be close movement between the two series, except for extreme movements in returns around 2005 and 2014. We examined the order of integration of variables by using Augmented Dickey-Fuller (ADF) (Dickey & Fuller, 1979, 1981) and Phillips-Perron (PP) (Phillips & Perron, 1988) unit root tests.

Table 1: Basic Descriptive Statistics				
	RET _t	Inf _t		
Mean	0.54	0.285		
Maximum	16.444	5.376		
Minimum	-11.714	-2.083		
Std. Dev.	3.365	0.816		
Skewness	0.767	1.4181		
Kurtosis	7.477	10.101		
Jarque-Bera	206.264	538.432		
(Probability)	(0.000)	(0.000)		
Observations	221	221		

The unit root results are reported in Table 2. The computed test statistics for both ADF and PP tests are statistically significant at the 1 percent significance level, suggesting a rejection of the unit root hypothesis. Thus, we can conclude that stock returns and inflation rates are both stationary series. We next proceed to discuss the GARCH and EGARCH model results.



Figure 1: Plot of Stock Returns and Monthly Inflation Rate

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Table 2: ADF and PP unit root results				
	ADF		РР	
Constant	$ \begin{array}{c} RET_t \\ -13.528^{***} \\ (0.000) \end{array} $	$ Inf_t \\ -14.808^{***} \\ (0.000) $	<i>RET_t</i> -13.777*** (0.000)	$Inf_t -15.442^{***} (0.000)$
Constant & Trend	-13.793*** (0.000)	-14.773*** (0.000)	-13.942*** (0.000)	-15.395*** (0.000)

Table 2: ADF and PP unit root results

Notes: Reported values are t-statistic. Figures in brackets are *p*-values. *** denotes statistical significance at the 1 % level.

4.2 Estimates of GARCH and EGARCH models

Table 3 summarizes the estimated conditional mean equation and conditional variance equation results. The coefficient of inflation variable in the conditional mean equation in both GARCH (1,1) and AR (1) – GARCH (1,1) is -0.46 and -0.38, respectively. In both cases, we find consistent evidence that an increase in the inflation rate will have a negative impact on monthly stock returns in Fiji. Therefore, we can say that there is a negative statistically significant relationship between inflation and stock market returns in Fiji. The estimated effect of the inflation rate on monthly stock returns is statistically significant at the 1 percent level.

Table 3: Main Estimates				
	GARCH	AR(1) – GARCH(1,1)		
Mean Equation				
heta	-0.461***	-0.379***		
	(0.000)	(0.000)		
π		0.141***		
		(0.000)		
Variance Equation				
α	0.261	0.194		
	(0.274)	(0.372)		
β	0.688**	0.722**		
	(0.011)	(0.014)		
AIC	4.908	4.864		
SIC	4.500	4.972		
Log Likelihood	-536.297	-528.04		

Notes: The estimations were done with Generalized error distribution (GED) using Newton-Raphson optimization method. *** and ** denote statistical significance at 1% and 5% levels, respectively. Figures in brackets are *p*-values.

For the sake of robustness, we re-estimate the effect of inflation on stock return by using the EGARCH and TGARCH frameworks. The estimates reported under the conditional mean equation in Table 4, confirm the statistically significant and negative effect of inflation on investor returns at the 1 percent significance level. Using AIC criteria, we can select AR(1) - EGARCH(1,1). The estimated persistence parameter is about 0.75 and close to one. This gives us evidence that volatility is persistent and shocks to stock return volatility have a permanent impact on volatility.

4.3 Model Diagnostic tests

The residual diagnostics tests for serial correlation and ARCH effect are applied to AR(1)-EGARCH (1,1). The *Q*-statistics and probability values from the Ljung-Box test are 28.581 and 0.806, respectively. This indicates that the mean equation is correctly specified. We also test for any ARCH effect in the standardized residuals and obtain an *F*-statistic of 0.047 and a probability value of 0.829. This indicates that there is no ARCH left in standardized residuals and the variance equation is correctly specified. Nevertheless, the four estimations provide consistent evidence that inflation adversely affects stock returns. Our finding of a negative correlation is consistent with results obtained by Rushdi et al. (2012) for Australia – a neighbouring country with strong trade links to Fiji's economy. Our finding is also consistent with the short-run results of Al-Khazali and Pyun (2004) for Pacific Basin Countries. They document evidence of a negative relationship between inflation and stock returns in the short run. However, we do not find evidence of a positive relationship between inflation and stock returns in the long run.

The negative correlation between inflation and stock returns possibly reflects that investors at the South Pacific Stock Exchange are subject to the inflation illusion. In other words, during high inflationary periods, investors tend to use relatively high interest rates to discount expected future earnings and dividends, thereby resulting undervaluation of stock prices (Lee, 2010; Modigliani & Cohn, 1979). The evidence of negative correlation is also coherent with the market phenomenon that higher inflation raises volatility or risks and tends to lower stock returns. This rise in market volatility induces fear amongst risk-averse investors, triggering a sell-off and thereby lowering stock returns (Chiang, 2023).

Table 4: EGARCH and TGARCH Estimates			
	AR(1) – EGARCH (1,1)	AR(1) – TGARCH (1,1)	
Mean Equation			
θ	-0.418***	-0.445***	
	(0.000)	(0.000)	
π	0.121***	0.139***	
	(0.000)	(0.000)	
Variance Equation			
ω	0.266	1.605	
	(0.732)	(0.609)	
β	0.529**	0.112	
	(0.022)	(0.369)	
α	-0.126	0.216	
	(0.326)	(0.588)	
γ	0.747**	0.686*	
	(0.039)	(0.055)	
AIC	4.862	4.868	
SIC	4.985	4.991	
Log Likelihood	-526.793	-527.475	

Notes: The estimations were done with Generalized error distribution (GED) using the Newton-Raphson optimization method. *** and ** denote statistical significance at 1 and 5 percent levels. Figures in brackets are p-values.

Another possible reason for the negative correlation between stock return and inflation arises from the Reserve Bank's countercyclical policy reaction. A rise in the inflation rate will cause the Reserve Bank to increase the policy rate, which will impact other interest rates in the market. Higher interest rates in turn tend to reduce the net present value of stocks (since stock price is equal to the current value of all future cash flows). Higher interest rates also tend to raise borrowing costs for forms and render alternative assets such as bonds and deposits relatively more attractive, reduce liquidity in the stock market and lead to a decrease in stock returns (Zhang, 2021).

5. CONCLUDING REMARKS

The relationship between macroeconomic performance and the stock market has been a critical area of research in financial economics. While Fiji's stock market has grown rapidly over the years in terms of volume and market capitalisation, its relationship with macroeconomic performance has been less studied. With the recent surge in inflation in the post-COVID-19 period and tax increases in the 2023-2024 national budget in Fiji, there have been renewed concerns regarding the consequences of higher inflation on both economic recovery and financial markets. Hence, the main aim of this paper was to investigate the effects of inflation on stock returns using monthly data from 2000:02 to 2018:06 (pre-COVID-19).

Our analysis indicates that an increase in inflation reduces stock returns in Fiji's stock market. This implies that rising inflation has adverse effects on stock returns and has four important implications for investors and policymakers. First, stock market investment during a high inflation period will not help investors hedge against inflation and as such our finding reveals that investors should consider investing in alternative markets. Second, our finding underscores the critical importance of potential and existing investors monitoring inflation conditions regularly, as higher inflation does matter for stock returns. Considering the lagged effect of tax increases announced in the 2023-2024 budget on future inflation, it is likely that higher inflation will hurt investor returns and this might adversely affect incentives to investors to re-examine their portfolio of assets and diversify accordingly.

Third, there is a need to strengthen transparency in the conduct of monetary policy and ensure efficient communication to help ease market expectations, improve the credibility of financial policies and safeguard investor welfare. Fourth, inflation is a useful macroeconomic variable when assessing the stock market risks and returns and making investment decisions. Hence, inflation must be kept under control to provide the financial system with greater stability and encourage stock market development. One limitation of this study is that it does not examine how different underlying causes of inflation impact stock returns. Further research is also necessary to understand how monetary policy interacts with fiscal policy announcements and influences stock returns in small developing economies.

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REFERENCES

- Alagidede, P. (2009). Relationship between stock returns and inflation. *Applied Economics Letters*, 16(14), 1403-1408. doi:10.1080/13504850701537682
- Al-Khazali, O. M. (2003). Stock prices, inflation, and output: Evidence from the emerging markets. *Journal of Emerging Market Finance*, 2(3), 287-314. doi:10.1177/097265270300200302
- Al-Khazali, O. M. (2004). The generalized Fisher hypothesis in the Asian markets. Journal of Economic Studies, 31(2), 144-157. doi:10.1108/01443580410527123
- Al-Khazali, O. M., & Pyun, C. S. (2004). Stock prices and inflation: New evidence from the Pacific-Basin countries. *Review of Quantitative Finance and Accounting*, 22(2), 123-140. doi:10.1023/B:REQU.0000015853.16564.e3
- Al-Nassar, N. S., & Bhatti, R. H. (2019). Are common stocks a hedge against inflation in emerging markets? *Journal of Economics and Finance*, 43(3), 421-455. doi:10.1007/s12197-018-9447-9
- Alqaralleh, H. (2020). Stock return-inflation nexus; revisited evidence based on nonlinear ARDL. *Journal of Applied Economics*, 23(1), 66-74. doi:10.1080/15140326.2019.1706828
- Asian Development Bank [ADB] (2023). Asian Development Outlook (ADO) April 2023. ADB Office, Manila : ADB.
- Austin, A., & Dutt, S. (2016). Do stock returns hedge inflation at long horizons? Applied Economics Letters, 23(13), 936-939. doi:10.1080/13504851.2015.1122725
- Ayinuola, T. (2023). Investigating the impact of inflation and other macroeconomic variables on stock returns in Nigeria. *Asian Journal of Economics, Business and Accounting*, 23(14), 8-26.
- Bhandari, A., & Bandi, K. (2018). On the dynamics of inflation-stock returns in India. *Journal of Quantitative Economics*, 16(1), 89-99. doi:10.1007/s40953-017-0075-6
- Bhanja, N., & Dar, A. B. (2019). Stock returns and inflation: A tale of two periods in India. Economic Change and Restructuring, 52(4), 413-438. doi:10.1007/s10644-018-9231-z
- Boamah, M. I. (2017). Common stocks and inflation: An empirical analysis of G7 and BRICS. *Atlantic Economic Journal*, 45(2), 213-224.
- Bollerslev, T. (1986). Generalized autoregressive conditional heteroskedasticity. *Journal of Econometrics*, 31(3), 307-327. doi:https://doi.org/10.1016/0304-4076(86)90063-1
- Brooks, C. (2008). *Introductory Econometrics for Finance* (2 ed.). Cambridge: Cambridge University Press.
- Chang, H. F. (2013). Are 'stock returns' a hedge against inflation in Japan? Determination using ADL bounds testing. *Applied Economics Letters*, 20(14), 1305-1309.
- Chiang, T. C., & Chen, P. Y. (2023). Inflation risk and stock returns: Evidence from US aggregate and sectoral markets. *North American Journal of Economics and Finance*, 68, 101986.

- Chiang, T. C. (2023). Real stock market returns and inflation: Evidence from uncertainty hypotheses. *Finance Research Letters*, 53, 103606. doi:https://doi.org/10.1016/j.frl.2022.103606
- Cieslak, A., & Pflueger, C. (2023). Inflation and asset returns. Annual Review of Financial Economics, 15, 433-448.
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366), 427-431. doi:10.2307/2286348
- Dickey, D. A., & Fuller, W. A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica*, 49(4), 1057-1072. doi:10.2307/1912517
- Engle, R. F. (2011). The Use of ARCH/GARCH Models in Applied Econometrics. Journal of Economic Perspectives, 15(4), 157-186.
- Erb, C. B., Harvey, C. R., & Viskanta, T. E. (1995). Inflation and world equity selection. *Financial Analysts Journal*, 51(6), 28-42.
- Gavriilidis, K., & Kgari, L. M. (2016). Stock Returns and Inflation: The Case of Botswana. In P. Andrikopoulos, G. N. Gregoriou, & V. Kallinterakis (Eds.), *Handbook of Frontier Markets* (pp. 27-38). Academic Press.
- Glosten, L. R., Jaganathan, R., & Runkle, D. E. (1993). On the relation between the expected value and the volatility of the nominal excess return on stocks. *Journal of Finance*, 48(5), 1779-1801.
- Gultekin, N. B. (1983). Stock market returns and inflation: Evidence from other countries. *The Journal of Finance*, *38*(1), 49-65. doi:10.1111/j.1540-6261.1983.tb03625.x
- Ha, J., Kose, M. A., & Ohnsorge, F. (2023). One-stop source: A global database of inflation. *Journal of International Money and Finance*, 137, 102896.
- Ha, J., Kose, M. A., Ohnsorge, F., & Yilmazkuday, H. (2023). Understanding the global drivers of inflation: How important are oil prices? *Energy Economics*, *127*, 107096.
- Islands Business. (2023). *Tourism continues to buoy Fiji's economy, but inflation still 5.2%* [Press release]. Retrieved from https://islandsbusiness.com/news-break/fiji-economy/
- Jamaani, F., & Alawadhi, A. M. (2023). Inflation and stock market growth: The case of IPO withdrawal. *International Journal of Emerging Markets*. Vol. ahead-of-print No. aheadof-print. https://doi.org/10.1108/IJOEM-03-2023-0452
- Jelilov, G., Iorember, P. T., Usman, O., & Yua, P. M. (2020). Testing the nexus between stock market returns and inflation in Nigeria: Does the effect of COVID-19 pandemic matter? *Journal of Public Affairs*, 20(4), e2289.
- Kumar, R. R., & Stauvermann, P. J. (2022). Portfolios under different methods and scenarios: A case of Fiji's South Pacific stock exchange. *Journal of Risk and Financial Management*, 15(12), 549.
- Kumar, R. R., Stauvermann, P. J., & Samitas, A. (2022). An application of portfolio mean-variance and semi-variance optimization techniques: A case of Fiji. *Journal of Risk and Financial Management*, 15(5), 190.
- Lee, B. S. (2010). Stock returns and inflation revisited: An evaluation of the inflation illusion hypothesis. *Journal of Banking & Finance*, *34*(6), 1257-1273.
- Lee, K. Y. (2008). Causal relationships between stock returns and inflation. *Applied Economics Letters*, 15(2), 125-129. doi:10.1080/13504850600705992
- Li, L. F., Narayan, P. K., & Zheng, X. W. (2010). An analysis of inflation and stock returns for the UK. Journal of International Financial Markets, Institutions and Money, 20(5), 519-532.

- Liu, J., & Serletis, A. (2022). The complex relationship between inflation and equity returns. *Journal of Economic Studies*, 49(1), 159-184.
- Mala, R., & Reddy, M. (2007). Measuring stock market volatility in an emerging economy. International Research Journal of Finance and Economics, 8(5), 53-71.
- Mala, R., & White, M. (2009). The South Pacific stock exchange: Is it a market or status symbol? *Australian Accounting Review*, 19(1), 54-63. doi:10.1111/j.1835-2561.2009.00040.x
- Maulida, A., & Yulianto, E. (2023). The Effect of Exchange Rate, BI Rate, and Inflation on Stock Return during Pandemic Covid-19 in Indonesia. Paper presented at the Proceedings of the International Conference on Technology, Education, and Science.
- Modigliani, F., & Cohn, R. A. (1979). Inflation, rational valuation and the market. *Financial Analysts Journal*, 35(2), 24-44.
- Narayan , P. K., & Smyth, R. (2013). Has political instability contributed to price clustering on Fiji's stock market? *Journal of Asian Economics*, 28, 125-130.
- Nelson, D. B. (1991). Conditional heteroskedasticity in asset returns: A new approach. *Econometrica: Journal of the Econometric Society*, 347-370.
- Omer, F., & Ahmed, O. (2020). The effect of inflation rates on stock market returns in Sudan: The linear autoregressive distributed lag model. *Asian Economic and Financial Review*, 10(7), 808-815.
- Osmani, F., Cheshomi, A., Salehnia, N., & Ahmadi Shadmehri, M. T. (2023). The reaction of stock returns of Iranian different industries to inflation and interest rates with the Panel-ARDL approach. *Planning and Budgeting*, 28(1), 53-75.
- Otieno, D. A., Ngugi, R. W., & Muriu, P. W. (2019). The impact of inflation rate on stock market returns: Evidence from Kenya. *Journal of Economics and Finance*, 43(1), 73-90.
- Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, 75(2), 335-346.
- Phiri, A. (2017). Long-run equilibrium adjustment between inflation and stock market returns in South Africa: A nonlinear perspective. *International Journal of Sustainable Economy*, 9(1), 19-33. doi:10.1504/IJSE.2017.080866
- Pimentel, R. C., & Choudhry, T. (2014). Stock returns under high inflation and interest rates: Evidence from the Brazilian market. *Emerging Markets Finance & Trade*, 50(1), 71-92.
- Puah, C.-H., & Jayaraman, T. (2007). Macroeconomic activities and stock prices in a South Pacific Island economy. *International Journal of Economics and Management*, 1(2), 229-244.
- Reserve Bank of Fiji. (2019). Inflation in Fiji. https://www.rbf.gov.fj/wpcontent/uploads/2019/06/Newspaper-Article-No-3-Inflation_270216.pdf(Accessed 30 December 2023).
- Reserve Bank of Fiji. (2023a). Economic and Financial Statistics. https://www.rbf.gov.fj/statistics/economic-and-financial-statistics/#1595821819948-9e993ac2-6598 (Accessed 30 December 2023).
- Reserve Bank of Fiji. (2023b). *Quarterly Review*. Reserve Bank of Fiji : September 2023. Suva, Fiji.
- Reserve Bank of Fiji. (2023c). *Economic Review*. Reserve Bank of Fiji : December 2023. Suva, Fiji.
- Rushdi, M., Kim, J. H., & Silvapulle, P. (2012). ARDL bounds tests and robust inference for the long run relationship between real stock returns and inflation in Australia. *Economic Modelling*, 29(3), 535-543. https://doi.org/10.1016/j.econmod.2011.12.017

- Sabiruzzaman, M., Huq, M. M., Beg, R. A., & Anwar, S. (2010). Modeling and forecasting trading volume index: GARCH versus TGARCH approach. *The Quarterly Review of Economics* and Finance, 50(2), 141-145.
- Saliya, C. A. (2022). Stock market development and nexus of market liquidity: The case of Fiji. *International Journal of Finance & Economics*, 27(4), 4364-4382.
- Sami , J. (2021). Random Walk Hypothesis for Stock Prices in Fiji. Asian Journal of Finance & Accounting, 13(2), 79-88.
- Sami, J. (2023). Weather, investor psychology and stock returns: Evidence from Fiji's stock market. *Review of Behavioral Finance*, 15(1), 65-78.
- Shah, S. Z. A., Nasir, Z. M., & Naeem, M. (2012). Can Common Stocks Provide Hedge against Inflation? Evidence from SAARC Countries. *The Pakistan Development Review*, 51(4), 435-447.
- Shahbaz, M., Islam, F., & Rehman, I. U. (2016). Stocks as hedge against inflation in Pakistan: Evidence from ARDL Approach. *Global Business Review*, 17(6), 1280-1295.
- Sharma, P., & Nguyen, D.-T. (2011). Does law matter for stock market development? The Case of Fiji, 1997–2007. *Fijian Studies*, 9(2), 95.
- Sia, P.-C., Leong, C.-M., & Puah, C.-H. (2023). Asymmetric effects of inflation rate changes on the stock market index: The case of Indonesia. *Journal of International Studies*, 16(1), 128-141.
- Singh, G., & Padmakumari, L. (2020). Stock market reaction to inflation announcement in the Indian stock market: A sectoral analysis. *Cogent Economics & Finance*, 8(1), 1723827.
- South Pacific Stock Exchange (SPSE). (2016). Annual Report. Suva, Fiji.
- Spyrou, S. I. (2001). Stock returns and inflation: Evidence from an emerging market. *Applied Economics Letters*, 8(7), 447-450.
- Spyrou, S. I. (2004). Are stocks a good hedge against inflation? Evidence from emerging markets. *Applied Economics*, *36*(1), 41-48. doi:10.1080/0003684042000177189
- Tiwari, A. K., Cunado, J., Gupta, R., & Wohar, M. E. (2019). Are stock returns an inflation hedge for the UK? Evidence from a wavelet analysis using over three centuries of data. *Studies* in Nonlinear Dynamics and Econometrics, 23(3), 1-17. doi:10.1515/snde-2017-0049
- Tiwari, A. K., Dar, A. B., Bhanja, N., Arouri, M., & Teulon, F. (2015). Stock returns and inflation in Pakistan. *Economic Modelling*, 47, 23-31.
- World Bank. (2023). Pacific Economic Update, February 2023. Washington DC. Retrieved from http://hdl.handle.net/10986/39523 License: CC BY-NC 3.0 IGO.
- Zakoian, J.-M. (1994). Threshold heteroskedastic models. *Journal of Economic Dynamics and Control*, 18(5), 931-955.
- Zhang, Z. (2021). Stock returns and inflation redux: an explanation from monetary policy in advanced and emerging markets. International Monetary Fund.
- Zhao, L. (2017). Stock returns under hyperinflation: Evidence from China 1945–48. *China Economic Review*, 45, 155-167. doi:https://doi.org/10.1016/j.chieco.2017.07.003