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# THE IMPACT OF FOREIGN INVESTOR TRADING ACTIVITY ON THE COLOMBO STOCK MARKET

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## ABSTRACT

The main aim of this paper is to investigate the impact of foreign investor trading activity on the Colombo Stock Market by utilising the monthly time series data for the share price index (ASPI) and data for the foreign trading activity of the Colombo Stock Exchange (CSE) over thirty years. The ARCH model was used to run the regression. The descriptive statistics reveal that the Sri Lankan stock market is not interested in foreign investors diversifying their portfolio choices. Market volatility induces foreign investors to sell more shares than they purchase in the share market, suggesting positive trading feedback from foreign investors. Secondly, the ARCH model results show that all share price indices (ASPI) and foreign net purchases are influenced by the magnitude of past errors in predicting returns or foreign trading activity. The findings of this study provide relevant insight into the market participants and government regulators.

Key Words: All Share Price Index (ASPI), Foreign Net Purchases, Volatility, Foreign Investors

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## 1. Introduction

Foreign investors are gradually shifting their investment portfolio to growing capital markets as a main reason to diversify the share investment risks internationally (Vo, 2017). Understanding how equity flows behave in emerging markets has become increasingly crucial for both investors and policymakers. Some experts suggest that the trading activities of foreign speculative investors may contribute to volatility in these markets (Samarakoon, 2009). Hence, when investors have free cash flows, they can set a better investment environment to earn high returns (Nguyen et al., 2017). Many emerging countries opened their stock markets to foreign portfolio investors during 1985-1995 (Syamala & Wadhwa, 2019). The Sri Lankan stock market first opened for foreign trade in 1990 by removing the tax barrier for foreign investors to participate in the Sri Lankan share market. This activity resulted in a notable rise in the return volatility within the Colombo stock exchange during the liberalized period; both the conditional and unconditional volatility measures were at their peak. Remarkably, negative return shocks resulted in lower volatility, suggesting the absence of the leverage effect, due to the lower level of leverage employed by the listed companies (Samarakoon, 2009). Moreover, Previous studies from emerging economies confirm that foreign investors' involvement in trading activity brings many spillover effects to the domestic economy. For instance, they tend to trade large volumes and the herding behaviour of the investor affects stock prices because they have previous experience with advanced capital market knowledge (Vo, 2017). Most foreign Investors are attracted to emerging markets for several reasons. The declining interest rate in developed countries and potentially high return rates in

developing countries create return differentials that make investing in emerging markets appealing. This allows investors from developed countries to seek higher investment yields and benefit from international diversification (Koepke, 2019). A study by Umutlu et al. (2010) reveals that a higher level of financial liberalization negatively impacts aggregated stock return volatility even after accounting for specific factors such as market size, liquidity, country-specific effects, and crisis period.

After three decades of war, the Sri Lankan Stock market recorded significant growth in 2011, showing a 7.2 per cent growth rate, driven by the stable business environment, increased investor confidence, and favorable macroeconomic conditions (Central Bank, 2012). However, subsequent unexpected shocks, including the Easter Attack, the COVID-19 Pandemic, the lockdown, and political and economic crises, led to the underperformance of the stock market; previous literature on Foreign Investor Trading Activity on the Colombo Stock Market considered a short period of data. The current study builds upon previous research, considering the long-term foreign trading activity in the Colombo Stock Market. Hence, it is crucial to investigate the long-term impact of foreign trading activity on the overall performance of the volatile stock market.

The remainder of this paper is organized as follows. Section 2 presents the literature review; Section 3 presents the research design of this study; Section 4 presents the empirical results, and the study concludes with Section 5.

## 2. Literature review

The existing literature on emerging economies presents mixed findings regarding the relationship between foreign investor activities and stock returns. Samarakoon (2009) observed using daily data, both domestic and foreign investors' buying and selling actions had a positive impact on past returns, but during the crisis period, this turned negative. Similarly, Berko and Clark (1996); Bohn and Tesar (1996) identified a direct relationship between equity flows and stock returns using monthly data analysis. Meanwhile, Choe et al. (1999); Choe et al. (2005) examined the impact of foreign investors on stock returns using daily data. Before Korea's crisis, Choe found strong evidence supporting positive outcomes in foreign investors' trading and herding behaviors. However, during the crisis, these findings reversed, indicating disappointing results from foreign investors' trading activities. On the other hand, some studies found opposite results, such as the study by Kawakatsu and Morey (1999) found that there were no noticeable changes that occurred before and after the liberalization. Studies by Bae et al. (2004); Henry (2000) suggest that foreign investment flow can reduce the cost of capital, and increase real investment but not increase volatility.

The study of Bae et al. (2004) analyzed how emerging market return volatility changes in response to the liberalization of the stock market. The findings show that there is a positive relationship between the return volatility and the individual stock investments. Moreover, the study finds that more interested investors' portfolios in the emerging market have a global market risk exposure threat.

The study of Dania and Malhotra (2014) examines the transmission of U.S. stock market volatility to equity markets of emerging countries, the study found that all BRIC nations' return volatility is negatively associated with the U.S. stock market. Hence, the study evidenced that U.S. stock market volatility spills over to the market return of BRIC nations.

Laopodis (2004) examines the liberalization effect on equity market efficiency in Greece. The study results reveal that the Athens stock market (ASE) experienced a week from inefficiency and the stock market functioned as a random walk even before the liberalisation. Furthermore, the study found that because of political uncertainty, the stock market experienced no any increase in return in the 1990s. The results show that the local and foreign investors did not guide well, therefore, they could not efficiently engage with the profitable operation.

The study of Ndako (2012) analyzed how financial liberalization affected the South African equity Markets, especially focusing on the changes in market volatility using daily data. The EGARCH model was used to test the model to check the market volatility. the study found that negative relationships have a significant impact

on the equity market. By contrast, the study of Kawakatsu and Morey (1999) data to check the effect of financial liberalization on the efficiency of the market, the study found that there were no changes observed before and after the liberalization in the stock market performance.

The study of Mukherjee et al. (2002) reveals that the Indian equity market performance does not significantly influence foreign institutional investor purchase behavior. This suggests that foreign institutional investors do not intend to rely on the Indian equity market performance to diversify their investments.

## 3. Data and Variables

***Data***

The data for the study was collected from the Colombo Stock Exchange, which consists of figures of the foreign investors' transactions (buying & selling) and the All Share Price Index (ASPI). The study period considers monthly data from January 1993 to September 2023.

***Dependent Variable***

ASPI will be considered as a dependent variable that measures the overall performance of the Sri Lankan stock market.

***Independent Variable***

Trading Activity of the foreign sector is proxied by the net purchase, measured by purchased volume- Selling volume.

***Methodology***

The study used the quantitative methodology, and secondary data obtained from the Colombo Stock Exchange. Pool Ordinary Least Square regression (OLS) was used to find the relationship between foreign Investors' transactions and Sri Lankan Stock market performance.

Model: $ASPIt = \alpha 0 + \alpha 1NET + et$

ASPIt = All share price Index at time t

$\alpha_0$ (Intercept): The constant term in the regression. It represents the baseline level of ASPI when there is no net foreign investor purchase activity.

α1NET = It represents the difference between foreign investor buy and sell volumes. A higher value indicates more buying than selling by foreign investors.

et = Error term.

## 4. Data Analysis and Empirical Results

**Table 1: Descriptive Statistics**

| | Number of Observations | Mean | Standard Deviation | Min | Max |
|---|---|---|---|---|---|
| ASPI | 368 | 3685.999 | 3004.58 | 403 | 13009.50 |
| Net Purchase | 368 | -56292403 | 2.84E+09 | -1.11E+10 | 1.79E+10 |

Table 1 illustrates the All Share Price Index (ASPI) fluctuation over three decades, from 1993 to 2023, showcasing a broad range of movement from 403 to 13009.50. The standard deviation of 3004.568 indicates the dispersion of ASPI values around the mean, underscoring the market's volatility and variability.

Moreover, the observed data on net purchases by foreign investors reveal significant extremes, with a minimum net purchase value of -1.11E+10 and a maximum of 1.79E+10. This suggests that, on average, foreign investors have been more inclined to sell stocks rather than purchase them, portraying a lack of attractiveness in the Colombo Stock Exchange for foreign investors.

Further, the wide range of ASPI fluctuation and imbalance between stock selling and purchasing by foreign investors explores the volatile market environment that may not be enriching enough for foreign capital inflows, potentially impacting the overall investment sentiment and activity within the Colombo stock exchange. These results confirm the positive trading feedback activity of foreign investors.

**Regression Analysis and Discussion**

**Table 2: Test of Heteroscedasticity and Autocorrelation**

| | |
|---|---|
| Chi-Square | 0.1714 |
| Chi-Square | 0.0000 |

Table 2 The heteroscedasticity test result shows that the chi-square is 0.1714, suggesting there is little evidence to reject the null hypothesis of homoscedasticity, indicating that the error variance in the model is likely constant across the observations. Moreover, the Breusch-Godfrey Serial correlation LM test result reveals a serial correlation among the data set.

**Table 3: Dickey fuller Unit root Test**

| | Test statistic | 1% critical value | 5% critical value | 10% critical value |
|---|---|---|---|---|
| ASPI | -12.7954 | -3.4482 | -2.8693 | -2.5710 |
| Net Purchase | -13.5658 | -3.4480 | -2.8692 | -2.5709 |

The Augmented Dickey-Fuller test examines whether a unit root is present, indicating the presence of a trend in time series data over a period. Table 3 illustrates that ASPI confirms the stationarity effect in the data in 1st difference, while net foreign purchase also confirms the stationarity. Further, the output reveals that the test statistic value is more negative than the critical value (1%, 5%, and 10%), indicating rejection of the null hypothesis and concluding that the time series data is stationary.

Despite this, the Vector Autoregressive model finds the maximum lag order to solve the lagged variable issues. The result represents the lagged variable as three for ASPI. Before fixing the final model, diagnostic tests were carried out to check the autocorrelation and heteroscedasticity issues Arch model was run.

**Table 4: Results of the ARCH regression model**

| Variable | Coefficient | Std. Error | z-Statistics | Prob. |
|---|---|---|---|---|
| C | 570.6021 | 5.202037 | 109.6882 | 0.0000 |
| Net purchase | 2.69E-08 | 1.78E-08 | 1.510876 | 0.1308 |
| Variance Equation | | | | |
| C | 822.1465 | 402.2834 | 2.043700 | 0.0410 |
| RESID^2(-1) | 1.047475 | 0.285235 | 3.672320 | 0.0002 |

The results of the ARCH model on ASPI and net purchases reveal that the constant, C, is significant for ASPI, while it is not significant for net purchases (P>0.05). the variance equation illustrates that the RESID(-1)^2 term shows the significance (P<0.05), which indicates the volatility of return and foreign trading activity is influenced by the past square residuals. Specifically, it indicates that past squared residuals influence the current volatility of the return and foreign trading activity. In simple terms, the ARCH model suggests that the volatility of ASPI and net purchase is influenced by the magnitude of past errors in predicting returns or foreign trading activity.

## 5. Conclusion

The study was carried out to check the impact of foreign trading activity on the Colombo stock market. The ARCH model was used to fix the regression model. The study uses 30 years of monthly data from the Colombo stock exchange. The empirical results of the descriptive statistics reveal that foreign investors are not much interested in investing in a highly volatile stock market, suggesting more selling than purchasing, which indicates that the market is less interesting to foreign investors. Moreover, the increased volatility of the market may be the reason for the information available to the investors and also the trading behavior of the foreign investors (Samarakoon 2009). Results of the ARCH model illustrate that the volatility of return and foreign trading activity is influenced by the past square residuals. Specifically, it indicates that past squared residuals influence the current volatility of the return and foreign trading activity. means the ARCH model suggests the volatility of ASPI and net purchase is influenced by the magnitude of past errors in predicting returns or foreign trading activity.

## 6. Discussion

This study set out to examine the long-term impact of foreign investor trading activity on the Colombo Stock Market by analysing monthly data on net foreign purchases and the All Share Price Index (ASPI) over 30 years. The descriptive statistics and ARCH model results collectively indicate that, although foreign investors are active participants, their net trading activity does not exert a statistically significant direct effect on the level of the ASPI. Instead, the volatility of both ASPI returns and foreign trading activity appears to be strongly driven by past shocks, as captured by the significant ARCH term in the variance equation.

The descriptive statistics reveal that foreign investors have been, on average, net sellers in the Sri Lankan equity market over the sample period, as indicated by the negative mean of net purchases. This finding suggests that, despite the liberalisation of the Colombo Stock Exchange and the removal of tax barriers to foreign participation in 1990, the local market has not emerged as a consistently attractive destination for foreign portfolio diversification. This is consistent with earlier evidence from emerging markets showing that foreign investors often exhibit positive feedback trading and may withdraw or reduce exposure when market volatility increases (Samarakoon, 2009; Vo, 2017) In the Sri Lankan context, episodes of heightened political and economic uncertainty, such as the post-war adjustment period, the Easter attacks, the COVID-19

pandemic, and the recent macroeconomic crisis, may have reinforced a cautious stance among foreign investors, leading them to realise gains and limit downside risk rather than accumulate positions.

From a volatility perspective, the ARCH results provide important insights. The insignificance of the net purchase coefficient in the mean equation indicates that contemporaneous foreign trading does not systematically move the ASPI level; however, the significant $RESID^2(-1)$ term in the variance equation shows that current volatility is heavily influenced by past shocks. In other words, large, unexpected movements in returns or foreign trading activity tend to generate persistent volatility in subsequent periods. This behaviour is consistent with the volatility clustering observed in many liberalised emerging markets (Bae et al., 2004; Ndako, 2012), where new information, sudden capital flows, or macro shocks are not fully absorbed immediately, leading to prolonged periods of heightened uncertainty. The finding aligns with the notion that, while foreign investors may not always destabilise prices in the short run, their trading in conjunction with domestic responses can contribute to a volatility structure that is sensitive to past disturbances.

These results also contribute to the debate on whether financial liberalisation and foreign participation stabilise or destabilise emerging stock markets. Some studies report that liberalisation leads to lower aggregate volatility and reduced cost of capital (Henry, 2000; Umutlu et al., 2010), whereas others find that foreign flows are positively associated with volatility, particularly during periods of stress (Dania & Malhotra, 2014; Samarakoon, 2009). The present study's long-horizon evidence suggests a more nuanced picture for Sri Lanka: foreign investors are not the primary drivers of price levels in the ASPI, but their trading behaviour occurs in an environment where volatility is path-dependent and shaped by past shocks. This implies that the liberalisation of the Colombo Stock Exchange did not, by itself, eliminate volatility; instead, volatility appears to be an inherent characteristic of a small, thinly traded emerging market that is exposed to both domestic and global shocks.

Finally, this study is subject to several limitations that open avenues for future research. The analysis is based on aggregate net foreign purchases and the ASPI, which may mask heterogeneous effects across sectors, firm sizes, or different types of foreign investors (e.g., institutional vs. retail). Future work could employ higher-frequency data (daily or weekly) and disaggregated flow measures to identify whether certain investor categories or sectors are more strongly associated with volatility episodes. Moreover, extensions that incorporate global risk factors, exchange rate movements, and macroeconomic variables would help disentangle external from domestic drivers of volatility. Methodologically, comparing ARCH results with alternative volatility models such as GARCH, EGARCH, or multivariate frameworks could provide a richer understanding of how shocks are transmitted across returns and foreign flows.

Overall, the study's findings suggest that foreign investors in the Colombo Stock Market behave more as tactical traders in a volatile environment than as long-term stabilising participants. While their net activity does not significantly affect market levels in the regression framework, their presence operates within a volatility process that is highly sensitive to past shocks. This reinforces the view that developing robust market microstructures and stable macroeconomic conditions is essential if emerging markets like Sri Lanka are to fully benefit from foreign portfolio participation without suffering from persistent volatility.

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## References


Bae, K.-H., Chan, K., & Ng, A. (2004). Investibility and return volatility. *Journal of Financial Economics*, *71*(2), 239-263.

Berko, E., & Clark, J. (1996). *Foreign investment fluctuations and emerging market stock returns: The case of Mexico*.

Bohn, H., & Tesar, L. L. (1996). US equity investment in foreign markets: portfolio rebalancing or return chasing? *The American Economic Review*, *86*(2), 77-81.

Central Bank. (2012). *Annual report*. https://www.cbsl.gov.lk/en/publications/economic-and-financial-reports/annual-reports/annual-report-2012

Choe, H., Kho, B.-C., & Stulz, R. M. (1999). Do foreign investors destabilize stock markets? The Korean experience in 1997. *Journal of Financial Economics*, *54*(2), 227-264.

Choe, H., Kho, B.-C., & Stulz, R. M. (2005). Do domestic investors have an edge? The trading experience of foreign investors in Korea. *The Review of Financial Studies*, *18*(3), 795-829.

Dania, A., & Malhotra, D. (2014). Transmission of US Stock Market Implied Volatility to Equity Markets of Emerging Countries. *The Journal of Wealth Management*, *17*(2), 45.

Henry, P. B. (2000). Do stock market liberalizations cause investment booms? *Journal of Financial Economics*, *58*(1-2), 301-334.

Kawakatsu, H., & Morey, M. R. (1999). Financial liberalization and stock market efficiency: an empirical examination of nine emerging market countries. *Journal of Multinational Financial Management*, *9*(3-4), 353-371.

Koepke, R. (2019). What drives capital flows to emerging markets? A survey of the empirical literature. *Journal of Economic Surveys*, *33*(2), 516-540.

Laopodis, N. T. (2004). Financial market liberalization and stock market efficiency: Evidence from the Athens Stock Exchange. *Global Finance Journal*, *15*(2), 103-123.

Mukherjee, P., Bose, S., & Coondoo, D. (2002). Foreign institutional investment in the Indian equity market: An analysis of daily flows during January 1999-May 2002. *Money & Finance*, *2*(9-10).

Ndako, U. B. (2012). Financial liberalization, structural breaks and stock market volatility: Evidence from South Africa. *Applied Financial Economics*, *22*(15), 1259-1273.

Nguyen, T., Cai, C. X., & McColgan, P. (2017). How firms manage their cash flows: an examination of diversification's effect. *Review of Quantitative Finance and Accounting*, *48*(3), 701-724.

Samarakoon, L. P. (2009). The relation between trades of domestic and foreign investors and stock returns in Sri Lanka. *Journal of International Financial Markets, Institutions and Money*, *19*(5), 850-861. https://doi.org/https://doi.org/10.1016/j.intfin.2009.07.001

Syamala, S. R., & Wadhwa, K. (2019). Foreign institutional investors' trading and information dissemination in emerging markets: further evidence. *Research in International Business and Finance*, *49*, 301-314.

Umutlu, M., Akdeniz, L., & Altay-Salih, A. (2010). The degree of financial liberalization and aggregated stock-return volatility in emerging markets. *Journal of banking & finance*, *34*(3), 509-521.

Vo, X. V. (2017). Trading of foreign investors and stock returns in an emerging market - Evidence from Vietnam. *International Review of Financial Analysis*, *52*, 88-93. https://doi.org/https://doi.org/10.1016/j.irfa.2017.05.007