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D.G.D.H. Abegunawardana, D.M.U.H. Dissanayake and J. Jeewakumar

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The Impact of Market Return Skewness on Individual Stock and Government Bonds: Evidence from Sri Lanka

Abegunawardana D.G.D.H.^a, Dissanayake D.M.U.H.^b and Jeewakumar J.^c

^{a,b} Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka.

^c Department of Finance, Faculty of Management and Finance, University of Colombo, Sri Lanka.

ABSTRACT

Purpose: This study investigates whether individual stocks provide higher market returns than government bonds in Sri Lanka by examining the role of return skewness and long-run dynamics.

Design/ Methodology/ Approach: The study accompanies monthly data from January 2008 to March 2024. Skewness and Autoregressive Distributed Lag model was incorporated to analyse the data using the STATA software.

Findings: The study reveals substantial differences between annual stock returns and bond yields align with the anticipated risk-return dynamics. Stock returns exhibit significantly higher positive skewness compared to bond yields signifying pronounced directional movements over time. The positive correlation between annual stock returns and skewness contrasts with the relatively minor impact of skewness on bond yields. Further, significant long-run and short-run linkages between skewness and asset returns of both markets, suggest that the distributional asymmetry of returns is economically relevant for asset performance and portfolio choice in Sri Lanka. Higher average stock returns in Sri Lanka are accompanied by pronounced skewness. Hence, skewness should be considered when assessing risk-return trade-offs and diversification strategies.

Originality: This study provides novel frontier-market evidence from Sri Lanka showing that individual stocks return significantly outperform government bonds returns and that positive return skewness is a key driver of the equity premium. By combining pooled regressions and ARDL analysis, it highlights the importance of higher-moment risk in explaining stock-bond return differentials.

KEYWORDS

Auto Regressive
Distributed Lag model,
Government bond Return,
Individual Stock return,
Skewness

JEL CLASSIFICATION

G 11, G12, D81

I. Introduction

Stocks and government bonds represent the two dominant asset classes in most investment portfolios and understanding their relative risk–return characteristics is fundamental to asset allocation, portfolio diversification, and financial stability (Ma, Li, & Feng, 2020). Stocks provide investors with capital gains and dividends but are subject to substantial market, firm-specific, and macroeconomic risks (Hayes, 2023). Government bonds, in contrast, offer relatively stable and predictable income

streams, yet remain exposed to interest rates, inflation, and sovereign risks (Ma, Li, & Feng, 2020). Consequently, investors continuously rebalance between these assets in response to changing economic conditions, making the interaction between stock and bond returns a central issue in finance.

A large body of empirical literature shows that stock–bond return relationships are time-varying and economically meaningful. In developed markets, Campbell and Ammer (1993) and Connolly, Stivers, and Sun

CONTACT **a** D.G.D.H. Abegunawardana dilmi.hansamani@gmail.com, Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. ORCID: 0009-0006-2821-1274 | **b** D.M.U.H. Dissanayake uththarad@kln.ac.lk, Department of Finance, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. ORCID: 0000-0003-3905-333X | **c** J. Jeewakumar jethusanjeevakumar@gmail.com, Department of Finance, Faculty of Management and Finance, University of Colombo, Sri Lanka. ORCID: 0009-0006-5263-4445



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(2005) demonstrate that macroeconomic shocks and market uncertainty drive co-movements between stocks and bonds, often giving rise to “flight-to-quality” behavior during periods of stress. Baker and Wurgler (2012) further explain that government bonds tend to co-move more strongly with “bond-like” stocks—large, low-volatility, dividend-paying firms highlighting the importance of cross-asset linkages for portfolio choice. Evidence from emerging markets similarly suggests that inflation expectations, monetary conditions, and market integration shape stock–bond dynamics (Andersson, Krylova, & Vähämaa, 2007; Selmi, Gupta, Kollias, & Papadamou, 2021). Together, these studies establish that the stock–bond nexus plays a crucial role in risk management and diversification benefits.

Beyond mean returns and volatility, recent research emphasizes the importance of higher moments of return distributions, particularly skewness, in explaining asset performance. In the U.S. market, only a small fraction of individual stocks generates extremely high returns, leading to pronounced positive skewness in stock return distributions (Daugherty & Jithendranathan, 2015). Similar findings were drawn in China, stating that positive skewness is a key reason why equity markets can outperform safer assets despite many individual stocks underperforming (Ma, Li, & Feng, 2020). These findings suggest that skewness captures asymmetrical distributions in return that is economically relevant for investors who care about extreme outcomes, not merely average performance.

Despite extensive evidence from developed and emerging markets, limited attention has been paid to frontier markets, where financial systems are less mature, market depth is limited, and investors face higher informational frictions (Biondi, Guedes, Wan, & Desneux, 2018; Baker & Wurgler, 2012). Sri Lanka represents a typical Asian frontier market, with a relatively small

equity market and a government bond market that plays a dominant role in financing fiscal needs. Existing Sri Lankan studies mainly focus on macroeconomic determinants of stock prices or market efficiency, while systematic evidence comparing individual stock returns with government bond yields remains scarce (Rathnayaka & Dilrukshi, 2017). More importantly, there are limited studies that examine how return skewness shapes the relative performance of individual stocks and government bonds in Sri Lanka (Sophastienphong, Mu, & Saporito, 2008). This lack of evidence constrains investors and policymakers who require context-specific insights for portfolio construction and financial market development. Hence, this study seeks to fill this gap by achieving the objective by investigating whether individual stocks provide higher returns than government bonds return in Sri Lanka and to examine the impact of skewness on these returns.

This study contributes to literature in three important ways. First, it provides the first comprehensive comparison of individual stock returns and government bond yields for Sri Lanka, a frontier market that has received limited empirical attention. Second, it extends stock–bond research by incorporating return skewness as a key explanatory factor, moving beyond conventional mean-variance analysis. Third, by applying an advanced framework, it offers evidence on the dynamic interactions between skewness and asset returns, which is relevant for both investors and policymakers concerned with financial stability and market development.

The empirical results show that individual stocks in Sri Lanka deliver significantly higher average returns than government bonds, consistent with the conventional risk–return trade-off. Stock returns also exhibit pronounced positive skewness, indicating that extreme positive outcomes play a dominant role in driving equity performance. In contrast, government bond

yields display much lower skewness and more stable return patterns. Furthermore, skewness is found to be positively associated with stock returns but negatively related to bond yields in the long run, suggesting that distributional asymmetry is economically relevant for asset pricing and portfolio choice in the Sri Lankan market.

Overall, this study underscores the importance of considering higher-moment risks and cross-asset dynamics when evaluating investment opportunities in frontier markets. The findings provide practical insights for investors seeking diversification benefits and for policymakers aiming to strengthen financial market resilience in Sri Lanka.

II. Literature Review and Hypotheses Development

Stock–Bond Return Relationship

The relationship between stock returns and government bond yields has long been a central issue in finance, given its importance for portfolio diversification, asset allocation, and risk management. Early studies in developed markets show that macroeconomic fundamentals and discount rate variations drive co-movements between stock and bond returns (Campbell & Ammer, 1993). Further stock market uncertainty plays a key role in shaping the stock–bond return relationship, giving rise to flight-to-quality behavior whereby investors reallocate from equities to safer bonds during periods of heightened volatility (Connolly, Stivers, & Sun, 2005).

Subsequent studies emphasize that the stock–bond correlation is time-varying and sensitive to economic regimes. Hence, inflation expectations influence whether stock and bond returns move together or in opposite directions (Andersson, Krylova, & Vähämaa, 2007). Baker and Wurgler (2012) argue that government bonds co-move more closely with “bond-like” stocks; large, stable, dividend-paying firms, highlighting

cross-asset similarities in risk characteristics. These findings suggest that understanding stock–bond dynamics is crucial for explaining return behavior and diversification benefits.

Evidence from emerging markets also supports the economic relevance of the stock–bond nexus. Therefore, correlations between stocks and bonds intensify during market turmoil, reducing diversification benefits (Selmi, Gupta, Kollias, & Papadamou, 2021). Further, significant spillover effects between stock and bond markets across countries, indicating that shocks in one market can transmit to the other (McMillan, 2020). Together, these studies underline that stock-bond linkages are fundamental for both investors and policymakers.

Despite this extensive literature, frontier markets have received comparatively little attention. Frontier markets offer diversification opportunities due to their lower integration with global markets, yet their asset return dynamics remain underexplored (Graham, Emid, & Feather, 2013). In the Sri Lankan context, studies largely focus on macroeconomic determinants of stock prices (Wickremasinghe, 2011) while systematic comparisons between individual stock returns and government bond yields are scarce. This gap motivates the present study.

Portfolio Diversification and Relative Performance of Stocks and Bonds

Stocks and government bonds together form the backbone of most investment portfolios. A positive long-run association is identified between stock returns and bond yields driven by discount rate effects, while correlations tend to turn negative during stock market crashes, enhancing the role of bonds as hedging instruments (Les, 2002). These dynamics imply that the relative performance of stocks and bonds varies over time and across market conditions.

The U.S. market less than half of individual stocks outperform Treasury bills over long

horizons, yet overall equity markets outperform due to a small number of extreme winners (Bessembinder, 2018). This highlights the importance of examining individual stock returns, rather than only market indices, when comparing equities with safer assets. Similar patterns are observed in emerging markets, where market inefficiencies and firm heterogeneity can amplify return dispersion (Compton, Kunkel, & Kuhlemeyer, 2013).

In frontier markets, where bond markets often dominate financial systems, understanding whether equities truly compensate investors for higher risk is particularly important. However, empirical evidence on the comparative performance of individual stocks and government bonds in such markets remains limited, reinforcing the need for country-specific studies such as the present research on Sri Lanka.

Skewness of Returns as a Predictor of Asset Performance

While traditional finance focuses on mean and variance, recent studies emphasize higher moments, especially skewness as key determinants of asset returns (Grullon, Larkin, & Michaely, 2019). Deviations from normality in stock return distributions, and subsequent studies show that individual stock returns are often positively skewed due to rare but extreme positive outcomes (Fama & French, 2004; Fama E., 1965).

A positive skewness in individual stock returns explains why equity markets can outperform risk-free assets despite many stocks underperforming (Bessembinder, 2018). Further, the Chinese market, shows that skewness is positively associated with equity returns and plays a crucial role in explaining the equity premium (Ma, Li, & Feng, 2020). Subsequently, skewness predicts the cross-section of future stock returns, underscoring its economic relevance (Amaya, Christoffersen, Jacobs, & Vasquez, 2015).

Compared to stocks, government bond yields tend to exhibit lower skewness and

more stable distributions, reflecting their safer nature. However, changes in skewness may still capture shifts in interest rate dynamics and risk perceptions that affect bond returns. Therefore, incorporating skewness allows for a richer understanding of how asymmetric risks influence the relative performance of risky and safe assets.

Skewness and Dynamic Relationships: Justification for the ARDL Framework

To examine how skewness influences stock and bond return over time, it is important to model both short-run adjustments and long-run equilibrium relationships. The Autoregressive Distributed Lag (ARDL) approach (Pesaran & Pesaran, 1997) is particularly suitable, as it accommodates variables integrated of different orders and allows estimation of long-run coefficients within a dynamic framework.

Recent financial studies employ ARDL models to capture dynamic interactions between macroeconomic variables and asset returns (Majid & Yusof, 2012; Bhattacharjee & Das, 2023). In the context of this study, skewness is incorporated as an explanatory variable in the ARDL model to assess whether distributional asymmetry has persistent effects on stock returns and bond yields. This approach directly aligns with the study's purpose of examining how skewness shapes the relative performance of individual stocks and government bonds in Sri Lanka.

Drawing on the above literature, stocks and government bonds exhibit distinct risk–return profiles, and higher-moment risks such as skewness appear to be economically relevant in explaining asset performance. Moreover, the limited evidence from frontier markets suggests the need to empirically test whether equities indeed compensate investors for higher risk relative to government bonds. Accordingly, this study formulates the following hypothesis.

H₁: There is a statistically significant difference between the returns of stocks and government bonds in the Sri Lankan market.

III. Methodology

This study adopts a quantitative research design to examine whether individual stocks provide higher returns than government bonds return in the Sri Lankan market and to assess the role of return skewness in explaining this difference. Hence, the independent variable of the study is the Skewness of returns (SKEW) and individual stock returns (ASR) and government/treasury bond yield (ABY) are the dependent variables of the study. Monthly data are employed for the period January 2008 to March 2024, yielding 195 observations, which allows the analysis of both short-run and long-run dynamics using ARDL approach.

The population consists of all ordinary shares listed on the Colombo Stock Exchange (CSE) and government Treasury securities issued by the Central Bank of Sri Lanka (CBSL). At the beginning of the sample period, price data were available for 284 listed firms. After excluding firms with missing or discontinuous observations, the final sample comprises 185 companies with continuous data. Hence, the dataset forms a balanced panel of approximately 36,075 firm-month observations (185 firms $\times$ 195 months). For government bonds, monthly yields of two representative maturities are used: the 3-month Treasury bill yield as a short-term benchmark and the 10-year Treasury bond yield as a long-term benchmark. The study includes data of all firms with complete data to ensure representativeness of the Sri Lankan market.

Data is obtained from secondary sources. Hence, monthly stock prices are collected from the Colombo Stock Exchange and Investing.com databases, while government bond yields are from Central Bank of Sri Lanka. Stock returns are computed as log returns using closing prices, and bond returns are proxied by the corresponding Treasury yields. The data

are screened for missing values and outliers, and firms with substantial data gaps are excluded to maintain consistency.

The conceptual framework identifies individual stock return (ASR) and annual government bond yield (ABY) as dependent variables, and skewness of returns (SKEW) as the independent variable. Skewness is measured using the traditional third standardized moment using the formula (1) below.

$$\text{Skew}(X) = \frac{E[(X-\mu)^3]}{\sigma^3}, \quad (1)$$

where μ and σ denote the mean and standard deviation of returns, respectively.

The analysis proceeds in several stages. First, descriptive statistics are computed to summarize the distributional properties of stock returns and bond yields. Second, a mean difference test is employed to examine whether stock returns significantly differ from bond yields using the formula (2) below.

$$H_0: \mu_{ASR} = \mu_{ABY}, H_1: \mu_{ASR} \neq \mu_{ABY}. \quad (2)$$

Third, the effect of skewness on returns is examined using a pooled regression model using formula (3) below.

$$R_t = \alpha + \beta \text{SKEW}_t + \varepsilon_t, \quad (3)$$

where R_t represents ASR or ABY. Finally, to measure both short-run and long-run dynamics, an Autoregressive Distributed Lag (ARDL) model is estimated using the formula (4) below.

$$\Delta Y_t = \alpha + \sum_{i=1}^p \phi_i \Delta Y_{t-i} + \sum_{j=0}^q \theta_j \Delta X_{t-j} + \lambda(Y_{t-1} - \beta X_{t-1}) + \varepsilon_t, \quad (4)$$

where Y_t denotes returns and X_t denotes skewness. The coefficient λ measures the speed of adjustment towards long-run equilibrium.

The ARDL model, pooled regression and descriptive analyses are tested using STATA software. Diagnostic tests for stationarity, heteroskedasticity, serial correlation, and multicollinearity are performed to ensure model validity and reliability.

IV. Findings and Discussion

Descriptive Statistics

Table 1 summarizes the descriptive statistics for annualized stock returns (ASR) and government bond (ABY) yields.

Table 1. Descriptive statistics of variables

Variable	Mean	Std. Dev.	Maximum	Minimum	Skewness
Stock Return (ASR)	0.270 4193	0.757 4883	3.593 423	-0.652 2794	0.594 8514
Government Bond Return (ABY)	0.069 8618	0.047 9605	0.231 3942	0.012 0505	0.030 117

Note: This table represents the descriptive statistics for stock returns and government bond yields. The sample represents 195 annual observations. The descriptive statistics are given for mean, minimum, maximum, standard deviation and skewness.

The results show that the mean annual stock return (ASR) is 27.04%, substantially higher than the mean Treasury bond yield (ABY) of 6.98%, consistent with the traditional risk-return trade-off which posits that investors demand higher expected returns to bear higher risk. Stock returns further exhibit markedly higher volatility (Std. Dev. 75.75%) and positive skewness (0.5949), indicating that a small subset of stocks generates exceptionally large gains. In contrast, bond yields display near-symmetry and low dispersion (Std. Dev 4.80%). These findings confirm that long-horizon equity performance is driven by a small number of extreme positive outcomes, and they provide initial evidence of rejecting the null hypothesis of equal mean returns between stocks and bonds in Sri Lanka (Bessembinder, 2018). From a portfolio perspective, these results imply that while most stocks may not outperform bonds, the presence of highly skewed payoffs can raise the average return of the stock market above that of fixed-income securities. This motivates the subsequent analysis of whether skewness systematically explains stock-bond return differentials in Sri Lanka.

Behaviour of Returns and Skewness

The study measures skewness by running a regression formula. To run this formula, ASR and ABY were used. Table 2 represents the summarized results.

Table 2. Behavior of dependent variables

Variable	Drift		Trend	
	Beta	Probability	Beta	Probability
Stock Return (ASR)	0.4702	0.0000***	-0.0264	0.0000***
Government Bond Return (ABY)	0.064539	0.0000***	0.000760	0.5566

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels.

Both ASR and ABY exhibit significant drift components. However, only ASR shows a significant negative trend (-0.0264). This implies a random walk with drift and trend. ABY exhibits a significant drift (0.064539) but an insignificant trend, indicating weaker directional movement. This suggests that equity returns in Sri Lanka are more sensitive to long-term dynamics and trend-sensitive than bond yields. Further, bond yields remain comparatively stable, and policy driven.

The below Table 3 presents the behavior of skewness for stocks and bonds. Skewness in stock returns shows a significant drift (0.578094) but no trend, implying persistence in asymmetry over time. In contrast, bond yields displays neither significant drift nor trend, highlighting that bond returns are more symmetrically distributed and less prone to extreme outcomes. This asymmetry between asset classes is central to understanding why equities may command higher expected returns.

Table 3. Behavior of independent variables

Variable	Drift		Trend	
	Beta	Probability	Beta	Probability
Skewness (ASR)	0.578094	0.0000***	0.902037	0.1656
Skewness (ABY)	-0.317128	0.2254	0.049606	0.1200

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels.

Stationarity and Validity of the Model

Before estimating dynamic relationships, unit root tests were conducted to assess stationarity. The Phillips-Perron results reported in Table IV show that stock returns and both skewness measures are stationary at levels, while bond yields become stationary after first differencing. These findings justify the use of the ARDL framework, which accommodates a mixture of I (0) and I (1) variables and is suitable for relatively small samples typical of frontier markets.

Table 4. Results from the unit root test

Phillips-Perron Unit Root Test Variable	I (0)	I (1)
ASR	1234.75 (0.0000)***	-
ABY	17.9921 (0.0551)	40.6910 (0.0000)***
Skewness (ASR)	1544.54 (0.0000)***	
Skewness (ABY)	56.6568 (0.0000)***	

Note: This table represents the results of Unit Root test in I(0) and I(1) for the variables, ASR, ABY and Skewness of ASR and ABY. ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels, respectively. The parentheses are the corresponding probability values.

Table 5. Effect of skewness on Stock Return and Bond Yield

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Skewness (ASR)	0.222966	0.0183	12.175	0.0000*
Skewness (ABY)	-0.001868	0.0035	-0.5227	0.6029

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels, respectively.

The coefficient on skewness in the stock return equation is positive and highly significant ($\beta = 0.223$) indicating that higher skewness is associated with higher equity returns. Economically, this suggests that investors in Sri Lanka are rewarded for holding assets with lottery-like payoffs, where the probability of extreme gains, rather than average performance alone, drives expected returns.

In contrast, the pooled estimate for bond yields is negative and statistically insignificant (-0.001868), implying that skewness does not play a meaningful role in explaining bond returns within this framework. Given this weak result, a seemingly unrelated regression (SUR) model (Table 6) below is used to estimate for differenced bond yields.

Table 6. SUR model to measure the coefficient for skewness (DABY)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Skewness	-0.00116	0.00053	-2.2021	0.0311

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels, respectively.

The SUR results reveal a significant negative effect of skewness on bond yield changes ($\beta = -0.00116$). This indicates that periods characterized by greater asymmetry in bond returns are associated with declining yields, possibly reflecting heightened risk aversion to the government securities. Hence, skewness enhances stock returns but is either irrelevant or negatively related to bond performance. This contrast highlights the distinct risk-return mechanisms operating across asset classes in Sri Lanka.

Autoregressive Distributed Lag model (ARDL) Results

To explore both short-run adjustments and long-run equilibrium relationships, ARDL models are estimated for stock returns (Table 7) and bond yields (Table 8).

Table 7. ARDL Results for Stock Return (ASR)

Variable	Coefficient	Std. Error	t-Statistic	Probability
Long Run Equation				
SKEWNESS	0.33364	0.00246	137.63	0.0000**
Short Run Equation				
COINTEQ0	-	-	-	-
1	1.30747	0.10443	12.519	0.0000**
D(ASR(-1))	0.43072	0.0930	4.6270	0.0000**
D(ASR(-2))	0.13759	0.0710	1.9360	0.0531
D(ASR(-3))	0.06572	0.0601	1.0919	0.2751
D(SKEWNE SS)	0.14136	0.0683	2.0690	0.0388**
D(SKEWNE SS(-1))	0.13740	0.0714	1.9241	0.0546

D(SKEWNE SS(-2))	0.10829	0.0515	2.1006	0.0359**
D(SKEWNE SS(-3))	0.09288	0.0416	2.2276	0.0261**
C	0.06076	0.0329	1.8442	0.0654

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels, respectively.

The above ARDL results for stock returns (Table VII) show a strong and positive long-run relationship between skewness and ASR ($\beta = 0.334$, $p < 0.01$). This implies that, in equilibrium, a one-unit increase in skewness raises annual stock returns by about 0.33 units. The error correction term is negative and significant (-1.307), confirming rapid adjustment toward long-run equilibrium following short-term shocks. In the short run, lagged stock returns and changes in skewness also exert significant effects, indicating persistence and dynamic feedback in equity performance.

Table 8. ARDL Results for Bond Yield (ABY)

Variable	Coefficient	Std. Error	t-Statistic	Probability
Long Run Equation				
SKEWNESS	0.00511	5.82E-10	87808.97	0.0000**
Short Run Equation				
COINTEQ0	-	-	-	-
1	11.1334	5.4498	2.0428	0.0522
D(DABY(-1))	7.01163	3.3294	2.1059	0.0459
D(DABY(-2))	4.46686	2.2042	2.0264	0.0540
D(DABY(-3))	3.02299	1.9352	1.5620	0.1314
D(SKEWNE SS)	0.02291	0.0082	2.7870	0.0102
D(SKEWNE SS(-1))	0.03866	0.0218	1.7705	0.0893
D(SKEWNE SS(-2))	0.02292	0.0174	1.3136	0.2014
D(SKEWNE SS(-3))	0.02208	0.0284	0.7774	0.4445
C	0.02149	0.0161	1.3317	0.1954

Note: ***, ** denotes the rejection of null hypothesis 1% and 5% significant levels, respectively.

For bond yields, the ARDL estimates reported in Table VIII reveals a significant negative long-run effect of skewness ($\beta = -0.00511$, $p < 0.01$). Thus, unlike equities, greater asymmetry in bond return distributions is associated with lower yields in the long run. The error correction term is again negative and marginally significant, suggesting convergence to equilibrium. Short-run dynamics indicate that past changes in yields and skewness influence current adjustments, but the dominant effect remains the long-run negative association. Therefore, skewness is a key positive driver of equity returns but a negative factor for bond yields. This divergence underscores the importance of distributional characteristics beyond mean and variance, in shaping asset pricing in frontier markets. The descriptive statistics show a larger mean gap in favor of stocks. Skewness of the regression results significantly and positively explains stock returns, while its effect on bonds is weak or negative. Further, ARDL results indicate a Strong positive long-run link between skewness and stock returns, but negative for bond returns. These findings confirm international evidence (Ma, Li, & Feng, 2020; Bessembinder, 2018) that equity markets deliver higher average returns driven by positive skewness. However, the Sri Lankan context as an Asian frontier market adds novel evidence, showing that even in less mature markets, equity premia persist. The negative association between skewness and bond yields suggests that when bond returns become more asymmetric (due to macroeconomic uncertainty or policy shifts) yields tend to decline.

Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted implying that equities provide higher returns than government bonds in the Sri Lankan market over the sample period.

Discussion

The findings align with international evidence that equity returns are positively related to skewness and that market performance is driven by a small number of highly successful stocks (Bessembinder, 2018; Ma, Li, & Feng, 2020). In the context of emerging and frontier markets, where market inefficiencies and information asymmetries are more pronounced, such skewness effects may be even stronger.

The positive skewness-return relationship for stocks also supports behavioral explanations, whereby investors exhibit preference for lottery-like payoffs and are willing to accept lower expected returns on negatively skewed assets. In Sri Lanka, this is evident by having strong demand for growth stocks or speculative equities that offer small probabilities of very high payoffs (Wickremasinghe, 2011).

Conversely, the negative association between skewness and bond yields resonates with the notion that government bonds serve as safe-haven assets. During periods of uncertainty, bond returns may become more asymmetrical due to policy interventions or interest rate adjustments, while yields decline as investors seek safety. This behavior is identified in other markets during episodes of financial stress (Choi, 2012). At the same time, this study contributes to literature by providing frontier market insights, where empirical studies remain scarce. Unlike some Asian markets where equities do not always outperform bonds, the results here indicate a clear equity premium, albeit driven by skewness rather than uniform performance across stocks.

V. Conclusion

This study examined whether individual stocks provide higher returns than government bonds in Sri Lanka and assessed the role of return skewness in explaining this difference using monthly data from January

2008 to March 2024. The analysis combined descriptive statistics with inferential techniques, including mean difference tests, pooled and SUR regressions, and ARDL models, to ensure that conclusions are supported by comprehensive empirical evidence.

The results provide strong support for the alternative hypothesis that there is a statistically significant difference between the returns of individual stocks and government bonds in Sri Lanka. The paired mean difference test confirms that annualized stock returns are significantly higher than Treasury bond yields. This finding is further reinforced by regression evidence, where skewness exhibits a significant positive effect on stock returns, and by ARDL estimates that reveal a stable positive long-run relationship between skewness and equity returns. In contrast, the impact of skewness on government bond yields is weak or negative, with both SUR and ARDL results indicating a statistically significant negative long-run association.

Beyond mean differences, the study highlights the importance of higher-moment characteristics of return distributions. Stock returns in Sri Lanka are shown to be markedly positively skewed, and this skewness plays a crucial role in explaining why equities command a higher average return relative to bonds. The results imply that the equity premium in Sri Lanka is not merely compensation for higher volatility but is closely linked to the presence of extreme positive outcomes in equity performance. Government bonds, by contrast, exhibit near-symmetric return distributions and serve as relatively stable, low-risk instruments.

The dynamic ARDL analysis further demonstrates that deviations from long-run equilibrium between skewness and returns are corrected relatively quickly, particularly for stock returns, indicating strong adjustment mechanisms in the equity market. Therefore, the evidence from descriptive, cross-sectional, and time-series

analyses provides a comprehensive and statistically valid basis for concluding that equities outperform government bonds in Sri Lanka over the sample period, driven in part by return skewness.

Based on the empirical findings, several recommendations are proposed for investors, policymakers, and future research. For investors, the results suggest that long-term exposure to equities in Sri Lanka can yield higher average returns than government bonds. However, given that equity returns are highly skewed and driven by a small number of extreme winners, investors should adopt broad diversification strategies across stocks and sectors to increase the probability of capturing positive tail outcomes while mitigating downside risk. A long-term investment horizon and careful risk assessment are essential, as short-term performance may vary widely.

For policymakers and regulators, the evidence underscores the need to strengthen market efficiency and transparency in the equity market. Improving disclosure standards, liquidity, and investor protection can help ensure that equity premium reflects underlying fundamentals rather than speculative dynamics. Further, maintaining a stable and credible government bond market remains crucial, as bonds continue to play a key role in providing a risk-free benchmark and supporting financial stability.

For future research, further studies could extend this analysis by incorporating additional risk factors such as volatility, kurtosis, liquidity, or macroeconomic variables, and by employing higher-frequency data to capture realized skewness. Comparative studies across other emerging and frontier markets would also help determine whether the skewness-return relationship observed in Sri Lanka is a broader regional phenomenon. Moreover, exploring investor behavior and ownership structures could provide deeper insights into whether the observed skewness effects are driven by risk compensation or preference for lottery-like payoffs.

Overall, this study provides robust empirical evidence that individual stocks in Sri Lanka offer higher returns than government bonds and demonstrates that skewness is a key factor shaping this return differential. By integrating cross-sectional and dynamic analyses, the findings contribute to a better understanding of risk-return trade-offs in frontier markets and offer practical insights for investment decision-making and policy formulation.

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