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Internal Equity Annual Changes and Security Returns of Companies Listed in The Nairobi Securities Exchange.

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ABSTRACT

This study examined the effect of annual changes in internal equity on ordinary equity security returns in Kenyan public limited firms. Internal equity is the portion of a company's equity generated through retained earnings and the issuance of new shares to existing shareholders. The study was guided by the research philosophy of positivism, given that it relied on quantitative data and espoused the scientific approach to research. It adopted a causal or explanatory research design to check how the annual changes in public firms' internal equity impacted a firm's stock market value. A census study of 67 public companies was employed, of which 49 met data requirements. The study used secondary data from the company's financial statements for eleven years, from January 2012 to December 2022. The data collected was analyzed using descriptive and inferential statistics. The hypothesis that annual changes in internal debts had no significant effect on security returns was tested at a 95% confidence interval using the t-statistic and p-value. The study adopted panel data to carry out the research analysis. Panel regression analysis using the random effects model was undertaken after appropriate normality, model specification, homoscedasticity, linearity and autocorrelation diagnostic tests. Findings reveal significant variability in internal equity changes across sectors. Correlation analysis establishes a positive and significant association between internal equity changes and security returns. Panel regression analysis further confirms a strong and positive relationship, indicating that an increase in internal equity corresponds to higher returns on equity securities. The results emphasize the importance of internal equity in signalling a company's financial health and stability, impacting investor confidence and potentially leading to higher equity security returns. Investors are urged to conduct sector-specific analyses, considering variability in financial structures. The study contributes valuable insights to understanding internal equity's role in influencing financial well-being and security returns in the Kenyan business landscape.

Keywords: Internal Equity, Financial Structure, Public Company

I.0 INTRODUCTION

1.1 Background of the Study

Internal equity, a critical facet of corporate finance, pertains to the fair distribution of resources and rewards within an organization (Kamara & Young, 2018). It is a form of funding where companies maintain and reinvest their profits. They include reserves for companies and retained earnings. Both reserves and retained earnings are parts of income a company might set aside to improve its financial position. They provide the number of net profits left over for the company after paying dividends to shareholders (Nguyen & Rugman, 2015). In the context of publicly traded firms in Kenya, understanding the dynamics of internal equity is essential, as it can significantly influence the overall financial health of these entities.

Nguyen & Rugman (2015) base their foundation on the fundamental distinction between debt and equity. In the trade-off principle, businesses have three funds: debt, internal equity, and external equity. Internal equity is measured in terms of retained earnings. For tax purposes, internal equity is

less expensive than external equity and cheaper than debt (Jonathan & Katharina, 2006). It follows that optimum leverage is a function of internal cash flows. Without knowledge problems or change costs, debt ratios will wander around without a clear goal. The cost of a business's capital will depend on its combination of internal and external finance, not just its mix of debt and equity. In general, the changes in retained earnings and internal equity depend on the tax base of investors' shares compared to the current price (Lewellen & Lewellen, 2006).

Kenya's economic landscape has grown substantially, and its capital market is pivotal in the region. The country's financial markets have become increasingly integrated into the global economy, attracting domestic and international investors. The Nairobi Securities Exchange (NSE) is a hub for trading various financial instruments, making it a crucial arena for examining the effects of internal equity annual changes on security returns. As the Kenyan corporate sector evolves, understanding the interplay between internal equity dynamics and security returns becomes imperative for investors seeking to foster sustainable financial markets.

The findings of this study are expected to provide an understanding of how annual changes in internal equity influence the security returns of public firms in Kenya. Such insights can be invaluable for investors seeking to make informed decisions, regulators aiming to enhance market transparency, and firms striving to optimize their capital structures. By contributing to the existing body of knowledge on financial markets in Kenya, this research has the potential to stimulate further academic inquiry and guide practical applications, fostering a more robust and resilient financial ecosystem in the region.

1.2 Statement of the Problem and Research Objective

The study seeks to address a critical gap in the existing literature on corporate finance in Kenya by examining the intricate relationship between annual changes in internal equity and security returns of public companies. Despite the economic strides and policy reforms witnessed in Kenya over the past years, there remains a scarcity of comprehensive research delving into the specific implications of changes in the internal equity proportion of the financial structure on the security returns of public firms in Kenya. This knowledge gap is particularly concerning given the dynamic nature of the Kenyan business environment, where companies continually adapt their internal equity arrangements in response to various internal and external factors. The lack of extensive understanding of how these changes impact security returns hinders the ability of investors and policymakers to make informed decisions, thereby posing a substantial challenge to the sustainable growth and development of the Kenyan capital market.

Understanding the factors that drive annual internal equity changes is crucial for academic and practical reasons. Scholars have laid theoretical foundations, such as Modigliani and Miller's propositions, regarding the impact of internal equity on firm value. However, applying these theories to the Kenyan context requires a focused examination of the drivers and consequences of annual changes in internal equity. Kenya's evolving economic landscape and regulatory environment necessitate a tailored investigation into the motivations behind these changes and their subsequent effects on security returns. Without such insights, investors may find it challenging to navigate the market, and companies may struggle to formulate effective internal equity strategies that align with regulatory requirements and shareholder expectations.

The urgency to bridge this gap in knowledge becomes apparent when considering the potential ramifications of uninformed decision-making. Failing to clarify how annual changes in internal

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equity affect security returns, investors risk making suboptimal investment choices, and public companies may struggle to attract and retain capital. This lack of understanding also impedes the ability of regulatory bodies to tailor policies that foster a conducive corporate environment. Consequently, the study's main objective is to contribute to the academic discourse on corporate finance in Kenya and provide actionable insights that can guide investors and policymakers in navigating the complexities of annual changes in internal equity and their impact on security returns.

2.0 LITERATURE REVIEW

The study examines existing theoretical as well as empirical literature. Two theories are instrumental in this study. Firstly, is the capital structure irrelevance theory. Franco Modigliani and Merton Miller proposed the Capital Structure Irrelevance Theory in seminal papers (Modigliani & Miller, 1958). The theory emerged when there was a growing interest in understanding the relationship between a firm's capital structure and market value. Modigliani and Miller's groundbreaking contributions challenged conventional wisdom by suggesting that, under certain conditions, a firm's capital structure has no impact on its overall value.

The theory is based on the assumption of perfect capital markets, where there are no taxes, bankruptcy costs, or information asymmetry. In such an idealized scenario, they argued that the value of a firm is determined solely by its underlying assets and the expected future cash flows. Whether financed by debt or equity, the capital structure is irrelevant to the firm's overall value. The theory also contends that investors can create their desired mix of debt and equity independently, and the weighted average cost of capital (WACC) remains constant regardless of the capital structure. This groundbreaking perspective challenged traditional views on the optimal capital structure and provided a theoretical foundation for understanding how changes in internal equity might or might not influence the value of a firm.

The Capital Structure Irrelevance Theory is relevant to studying the effect of annual changes in internal equity on the security returns of public companies in Kenya. By considering Modigliani and Miller's insights, the study investigates whether annual changes in the internal equity structure of Kenyan public firms, in the absence of factors like taxes and bankruptcy costs, have a discernible impact on the market value and, subsequently, on security returns. If the theory holds in the Kenyan context, it suggests that the market efficiently incorporates these changes into stock prices, potentially affecting the study's findings on the relationship between internal equity changes and security returns.

Secondly, the study adopted the Agency theory. Agency Theory, developed by Jensen and Meckling (1976), focuses on the relationship between principals (shareholders) and agents (management) within a firm. In the Kenyan context, investigating annual changes in internal equity through the lens of Agency Theory can offer valuable insights into the agency conflicts that may arise. Understanding how these changes impact the alignment of incentives and, consequently, security returns can be explored within the framework of Agency Theory. This theory provides a basis for examining the potential conflicts of interest and their implications for shareholders in Kenyan public companies undergoing annual changes in internal equity.

The Agency Theory is highly relevant to the study on the effect of annual changes in internal equity on the security returns of public companies in Kenya. Changes in internal equity structures, such as stock-based compensation or modifications to executive incentive plans, may be motivated by a

desire to better align the interests of managers with those of shareholders. The study can investigate whether these changes are successful in reducing agency conflicts and whether, as a result, security returns are positively influenced. Understanding the role of agency dynamics in shaping internal equity decisions is crucial for investors and policymakers as it provides insights into the mechanisms that foster or hinder value creation within Kenyan public companies.

From an empirical perspective, Pontoh and Budiarso (2018) studied how companies adjust their internal corporate equity structure in trade-off and pecking order theory. In the 2010 to 2015 period observed, the study analyzes logistic regression with 138 Indonesian public companies as a sample regarding hypothesis testing. This study examines the sample by median by size and age to distinguish the results. The study reports changes in internal equity preferences compared to other corporate funding forms based on capital cost, internal conflict, and corporate maturity that indicate Changes in its internal capital structure. Based on Indonesian firms, a single or combination of a trade-off model and a pecking order model and the market's timing can illustrate internal equity changes in financial structure in developing countries.

To understand the quantitative and qualitative development of financial systems for central and eastern European firms, Haas and Peeters (2006) examine the capital structure dynamics, emphasizing the changes in internal equity structure. The dynamic model employed indigenizes both the internal equity structure and the speed of its adjustment. It was applied to microeconomic data in 10 countries. The study revealed that companies generally strengthened their internal equity financial structure during the transition process, reducing the gap between actual and objective leverage. Profitability and age were the most robust determinants of internal equity changes in financial structure. While the development of the banking system had allowed companies to move closer to their leverage targets, there were still relatively large asymmetries of information between companies and banks. Consequently, companies favor internal equity over bank debt and only slowly adjust leverage.

Fischer et al. (2018) developed a formal strategy for calculating current retained earnings (RE) accounts on equity investment, and its adjustment is analyzed during the financial crisis. RE is the part of companies' profits reinvested and not distributed as dividends to shareholders. RE can, therefore, be the most effective form of internal equity. International statistical standards treat RE differently on foreign direct investment and RE on portfolio investment: the latter do not enter the current and the financial accounts. The study shows that this difference in treatment significantly impacts the current accounts of many advanced economies with high equity (portfolio) investments, often called financial centers. The differential treatment of RE changes the interpretation of current account adjustment in the face of the global financial crisis.

Thirumalaisamy (2013) believed that retained earnings substantially financed companies' growth in India. He alludes to no transaction and bankruptcy costs associated with retained earnings that make retained earnings a significant company internal equity source. The study concludes that potential growth opportunities would increase the demand for domestically produced funds. The study analyzed possible variables that could influence income conservation. Changes in the retention behavior of companies that differ in growth levels have been driving the significance of corporate income retention in increasing business growth. The sample size includes 149 profitable Indian businesses in seven branches. Correlation and multiple regression data collected from 1996-2010 were examined. The results show that cash flow and dividends are the variables most influential for retained earnings across sample companies' classifications. Companies with low growth and expansion investment opportunities prefer financing their operations through retained

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earnings. The study assumes that in the future, these companies will have potential investment opportunities far away. Profit is retained and unused in the long term or used in short-term investment opportunities, resulting in low investment returns. Such firms prefer paying out income and raising capital whenever necessary. The retained earnings are, therefore, greatly influenced by the company's growth rate.

Ahmed and Hla (2019) studied the effects of non-financial companies' different financial structure measures on changes in stock return on a model dynamic panel. For non-financial sector data from the Pakistan Stock Exchange from 2001–2014, a widespread two-stroke system method of a moment dynamic panel estimator is applied. The results suggest that changes in stock returns negatively affect the book leverage and internal equity financial structure ratios. However, an increase in total market leverage and financial structural internal equity ratios is caused by inventory changes. Furthermore, corporate book leverage and the long-term leverage on the market decreased in different classifications due to increased stock return changes. In contrast, changes in the stock return have a significant positive effect on companies' overall market leverage ratios. Decisions concerning the capital structure are more sensitive to the changes in stock revenues as deficiency risk increases. Firms significantly reduce their debt financing based on the great changes in stock return and avoiding possible default consequences. The results are strong in the context of alternative measures like the changes in cash flow and revenues.

Khan et al. (2020) studied the effect of commercial bank's internal equity financial structure in the Saudi Arabia Kingdom. The study used annual data from 11 Saudi national banks listed on the Saudi Börse. In creating an equilibrated panel, this study examined the relationship between internal equity financial structure adjustment as a dependent variable and bank-specific explicative variables, including profitability, tangibility, growth opportunities, and bank size, while monitoring the macroeconomic size and fixed effects and random effects. This study shows that Saudi banks are highly leveraged and support that they differ from non-banking companies. Internal equity changes in financial structure, growth, and bank size earnings show positive and significant book leverage relationships. The benefits and tangibility of the book leverage are negatively linked. Empirically, explanatory variables such as profitability, changes in earnings, tangibility, growth, and size of banks significantly impact Saudi commercial banks' internal equity financial structure decisions.

Nguyen and Rugman (2015) examine the multinational subsidiary's internal equity financing, which retains and reinvests its earnings. Internal equity financing is a firm-specific advantage (FSA) and other traditional FSAs in innovation, research and development, brands, and management skills. It also reflects subsidiary-level financial management decision-making. Here we test the contributions of internal equity financing and subsidiary-level financial management decision-making to subsidiary performance, using original survey data from British multinational subsidiaries in six emerging South East Asian countries. Our first finding is that internal equity financing acts as an FSA to improve subsidiary performance. Our second finding is that over 90% of financing sources (including capital investment by the parent firms) in the British subsidiaries come from internal funding. Our third finding is that subsidiary-level financial management decision-making has a statistically significant positive impact on subsidiary performance. Our findings advance the theoretical, empirical, and managerial analysis of subsidiary performance in emerging economies.

The foregoing theoretical and empirical literature review culminates in a conceptual framework that is depicted in figure 1.

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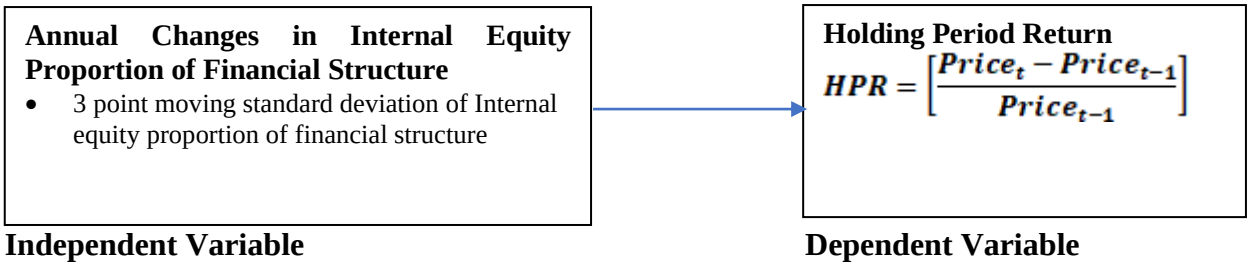

Figure 1: Conceptual Framework

3.0 RESEARCH METHODOLOGY

The study was guided by the Philosophy of Positivism, given that it adopted the scientific approach and relied on panel data on annual changes in internal equity and holding period returns over an eleven-year study period. The study adopted a causal or explanatory research design. A census study of the 67 public companies was conducted and 49 firms met the data requirements. The study involved secondary data collected from the company's financial statements for eleven years, from January 2012 to December 2022. This formed 539 firm-year observations. The data collected was analyzed using descriptive and inferential statistics. The model specification of this study was to examine the effect of annual changes in internal equity on ordinary equity security returns of public limited firms in Kenya.

Internal equity funding sources include a company's retained earnings, start-up and additional tranches of investor funding, stock and fixed assets, and its collection of debt or money owed to the company. Continuous time-series data was collected from public firms in the Nairobi Securities Exchange for eleven years. To total finance, an internal equity ratio was established, including reserves and retained earnings. A 3-point moving standard deviation was established to test the changes in internal equity as follows.

$$\delta X_{i,t} = \sqrt{\frac{1}{n}\sum_{t=1}^{3}(X_i - \ddot{X})^2} \quad ----------(1)$$

A panel regression was then employed to test the effect of changes in internal equity on ordinary equity security returns as represented in Equation 2 below.

$$Y_{i,t} = \beta_0 + \beta_1 X_{i,t} + e_{i,t} \quad ----------(2)$$

Where: $Y_{i,t}$ = Security Returns
β_0 = The intercept of the model
β_1 = Parameter estimated
X_{1it} = Internal Equity
i = Individual firm
t = Period of Study = 11 years in this case
ε_{it} = Stochastic term

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The study tested the hypothesis formulated to establish the effect of changes in internal equity on equity security returns of public firms in Kenya using the P-value approach at a 95% confidence level. The decision rule encompassed rejecting the null hypothesis if the calculated p-value is less than 0.05. The null hypothesis was affirmed if the calculated P-value was greater than 0.05.

4.0 FINDINGS AND DISCUSSIONS

Internal equity financing was viewed as a situation where Kenyan public limited firms retained and reinvested their earnings. The metrics used included Reserves, ordinary share premiums, Proposed Dividends and retained earnings. The study examined the effect of changes in internal equity on ordinary equity security returns in Kenya. Descriptive statistics were conducted, as shown in Table 1

Table 1: Changes in Internal Equity Descriptive Statistics

Sectors	Mean	Median	Std. Dev.	C.V.	Skew	Ex. kurto	5% Perc.	95% Perc.	IQ range
Agricultural	0.27	0.42	0.88	3.27	-0.43	-0.27	-1.24	1.60	1.08
Automobiles & Acc	0.35	0.17	0.75	2.14	0.41	-1.11	0.00	0.00	1.16
Banking	0.28	0.29	0.65	2.37	0.04	-0.02	-0.90	1.29	0.90
Commercial & Services	0.28	0.22	0.73	2.59	0.43	0.20	-0.86	1.81	0.82
Construction Allied	0.26	0.21	0.75	2.95	0.16	-0.11	-1.04	1.93	0.97
Energy& Petroleum	0.40	0.39	0.57	1.40	0.08	-0.31	-0.55	1.35	0.93
Insurance	0.37	0.35	0.68	1.83	0.36	0.04	-0.69	1.83	0.96
Investment	0.10	0.18	0.64	6.26	-0.44	-0.46	-1.12	0.95	0.95
Manufacturing	0.20	0.09	0.72	3.51	0.27	-0.32	-1.01	1.55	1.06
Telecommunication	0.26	0.33	0.72	2.81	-0.13	0.47	0.00	0.00	0.89

The detailed examination of the descriptive statistics table (Table 1) sheds light on the annual changes in internal equity within various sectors in Kenya, offering valuable insights into potential implications for equity security returns of public companies. Beginning with the agricultural sector, the mean internal equity changes of 0.27 reveal a notable average shift. However, the substantial coefficient of variation (C.V.) of 3.27 reflects a considerable degree of dispersion among companies in the sector. This wide variability, as indicated by the interquartile range (IQ Range) of 1.08, suggests a diverse range of financial structures within the agricultural sector. Investors should tread cautiously due to the elevated volatility, recognizing the potential for significant fluctuations in equity returns.

In the Automobile and accessories sector, the positive skewness of 0.41 signifies a rightward tail in the distribution, emphasizing that certain companies experienced pronounced increases in internal equity. The wide interquartile range of 1.16 further accentuates the variability, prompting investors to delve into the underlying factors contributing to these changes. A thorough analysis is imperative to understand the specific dynamics and their potential repercussions on equity returns. The Banking sector, while displaying a relatively stable mean and median, reveals moderate variability with a coefficient of variation (C.V.) of 2.37 and an interquartile range (IQ Range) of 0.90. This suggests a degree of fluctuation in internal equity within the sector, demanding a vigilant approach from investors. Understanding the drivers behind these changes becomes crucial for assessing the associated risks and potential impacts on equity security returns.

Similarly, the Commercial & Services sector presents a close mean and median, yet the elevated coefficient of variation (C.V.) of 2.59 and the wide interquartile range (IQ Range) of 0.82 points to

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significant variability. Investors should exercise caution, recognizing the potential for diverse financial structures and their impact on equity returns. Like the agricultural sector, the construction allied sector exhibits high variability with a coefficient of variation (C.V.) of 2.95 and an interquartile range (IQ Range) of 0.97. Investors are advised to closely scrutinize the factors influencing these changes, considering the potential implications for equity security returns.

In contrast, the Energy & Petroleum sector demonstrated lower variability, as reflected by the modest coefficient of variation (C.V.) of 1.40 and an interquartile range (IQ Range) of 0.93. This suggested a more stable pattern in internal equity changes within the sector, potentially lowering the level of risk for investors. In the Insurance sector, the moderate variability was evident with a mean of 0.37, a median of 0.35, a coefficient of variation (C.V.) of 1.83, and an interquartile range (IQ Range) of 0.96. Investors should carefully consider these metrics in their risk assessment, recognizing the balance between stability and variability within the sector.

The Investment sector stood out with an exceptionally high coefficient of variation (C.V.) of 6.26, indicating substantial variability in internal equity changes. This heightened level of fluctuation emphasizes the need for a cautious and well-considered investment approach to mitigate potential risks. Moving to the Manufacturing sector, the high coefficient of variation (C.V.) of 3.51 and an interquartile range (IQ Range) of 1.06 underscore significant variability. Investors are urged to conduct a thorough analysis of the contributing factors, recognizing the potential impact on equity returns within this sector.

Lastly, the Telecommunication sector displays moderate variability with a coefficient of variation (C.V.) of 2.81 and an interquartile range (IQ Range) of 0.89. While not as volatile as some other sectors, investors should be cognizant of potential fluctuations and their implications for equity security returns. In conclusion, elaborating these findings highlights the intricate dynamics within each sector. Investors were encouraged to go beyond the mean values and consider measures of variability, such as the coefficient of variation and interquartile range, thus shedding more understanding of the potential risks and returns associated with equity investments in the diverse landscape of Kenya's financial markets.

Ndirangu & Ochiri (2018), in their study about the effect of financial structure on the performance of listed firms in Kenya, also discovered that investment and commercial firms relied on many sources of internal equity to finance their operations. Because internal equity is less costly, commercial and services firms tend to rely on it to finance their operations (Jonathan & Katharina, 2006). Internally produced funds were found to be less expensive than money raised by issuing common shares because of transaction costs and investor information asymmetry. This implies that when firms use more internal funds than external equity, their costs of equity capital will decrease, and the market's discount rate for these firms' unexpected earnings will decrease (Park & Pincus, 2022).

The spread or variation of the data points around the mean is represented by the standard deviation value for changes in internal equity, which ranged from 0.0056 for the telecommunication industry to the highest, 4.4798 for the commercial and services industry. The commercial and services industry again indicated a wide spread of data for Changes in internal equity around the mean compared to other firms listed in the Nairobi securities. Changes in internal equity also registered a kurtosis ranging from -1.2464 for energy and petroleum to 11.769 for manufacturing and allied industries. The highest skewness for Changes in internal equity was experienced by the commercial and services industry (3.2999), which exhibited data disproportionately skewed towards the right.

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Concerning correlation analysis, Pearson correlation varies from -1.00 to +1.00, with positive values indicating positive relations while negative values suggest negative relations among study variables (Newman, 2002). The findings are summarized in Table 2 below

Table 2: Correlation between Annual Changes in Internal Equity and Security Returns

		Security Returns
Annual Changes in Internal Equity	Pearson Correlation	.492**
	Sig. (2-tailed)	.000
	N	539

On the correlation between changes in internal equity and ordinary equity security returns, the study obtained a Pearson correlation of .492, indicating a positive significant association between the variables. Internal equity was considered the portion of a company's equity generated through retained earnings and the issuance of new shares to existing shareholders. Changes in internal equity by public firms were seen as a signal to the financial health and confidence of the company. A share buyback program might signal that the company believes its shares are undervalued, potentially leading to positive investor sentiment and higher stock returns. A study by Ndei et al. (2019) confirms this finding by indicating that Share repurchases or issuances may be perceived as a signal of management's assessment of market conditions. For instance, if a company repurchases shares when its stock is undervalued, it is seen as a positive signal, positively impacting security returns.Concerning panel regression analysis, the effect of annual changes in internal equity on Equity Security Returns was undertaken using panel regression for the 49 firms over the 11 financial periods that provided 539 firm-year observations. Model diagnostic tests were conducted before undertaking the panel regression analysis.

The study began with test on Bivariate Panel Autocorrelation for internal equity annual changes. Independent of error terms in regression models is one of the most important assumptions commonly considered. Independency of error terms simply implies circumstances where error terms are not correlated; that is, serial correlation does not exist (error terms are independent of each other). This assumption was tested using the Durbin-Watson test. Durbin-Watson tests for serial correlations between error terms is a test that indicates whether the adjacent residuals are correlated. A value of 2 of Durbin Watson indicates that the residuals are uncorrelated, a value more than 2 indicates a negative correlation between adjacent residuals, whereas a value below 2 indicates a positive correlation. However, Durbin-Watson statistical values less than 1 or greater than 3 are cause for concern. The findings from this study are indicated in Table 3.

Table 3: Bivariate Panel Autocorrelation for Internal Equity Annual Changes

Model	D.W value for F.E (No moderator)	D.W value for F.E model With moderator	D.W value for R.E model No moderator	D.W value for R.E model with moderator
$\mathbf{Y=B_0 + B_{1*} X2}$	1.952675	1.996601	1.952875	1.986503

Predictor: *Changes in internal equity proportion of financial structure*

A Durbin-Watson (DW) statistic of 1.952675 in the study on the effect of Internal Equity Changes on equity security returns suggests a moderate level of positive autocorrelation in the residuals of the model. The DW value falling below the critical range of 1.5 to 2.5 implies the potential

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presence of positive serial correlation, indicating that equity security returns may exhibit persistence or trends over time not fully captured by the model. This result underscores the importance of careful interpretation and consideration of the implications for the reliability of the regression estimates indicating the absence of autocorrelation in the model.

This was followed by a bivariate sectoral unit root test on the effect of changes in internal equity on equity security returns. A unit root test is a statistical method used to determine if a time series variable is non-stationary. Non-stationarity implies that the statistical properties of the variable, such as the mean or variance, change over time, making it challenging to analyze the data using traditional statistical methods. The most common test conducted here was the Augmented Dickey-Fuller (ADF) test by Said and Dickey (1984). The ADF test was typically conducted by regressing the differenced time series on its lagged values and possibly additional lagged differenced values. The test statistic was then compared to critical values to decide about the series' stationarity. The findings are summarized in Table 3.

Table 4: Annual Changes in Internal Equity Unit Root

	Based on augmented Dickey-Fuller tests		
	Ho: All panels contain unit roots	*Number of panels = 49*	
	Ha: At least one panel is stationary	*Number of periods = 11*	
	AR parameter: Panel-specific	*Asymptotic: T -> Infinity*	
	Panel means and Time trend Included		
	Drift term: Not included	*ADF regressions: 0 lags*	
Changes in internal equity proportion of financial structure		Statistic	p-value
	Inverse chi-squared (66) P	532.3138	0.0000
	Inverse normal Z	-15.8834	0.0000
	Inverse logit (64) L*	-20.6316	0.0000
	Modified inv. chi-squared Pm	31.0224	0.0000

Findings from Table 4 for the Changes in internal equity proportion of financial structure indicate that very low p-values (0.0000) were established for all four types of Fisher-type unit root statistics, indicating strong evidence against unit roots and confirming stationarity. Changes in the internal equity proportion of financial structure exhibited p-values of 0.0000 for all four Fisher-type unit root statistics types, confirming stationarity.

On the other hand, the study went ahead to perform Heteroscedasticity on change in internal equity on equity security returns. As previously indicated, heteroscedasticity refers to the situation in which the variability of the errors (residuals) in a regression model is not constant across all levels of the independent variable(s). In simpler terms, it means that the spread or dispersion of the residuals is not consistent throughout the range of the predictor variables. In a well-behaved regression model, the assumption of homoscedasticity is met, meaning that the variance of the errors is constant. However, when heteroscedasticity is present, the spread of the residuals may exhibit patterns or trends, leading to unequal variability. This violation of the homoscedasticity assumption can affect the efficiency and reliability of statistical inferences drawn from the regression model. The findings for this model on heteroscedasticity were summarized in Table 5

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Table 5: Internal Equity Changes Test for Heteroscedasticity

Test		**Breusch-Pagan test**	**Breusch-Pagan test (Robust variant)**
Hypothesis		H_0: Heteroscedasticity not present	H_0: Heteroscedasticity not present
Regression for changes in internal equity	Model 2	Test statistic: LM = 28.0134	Test statistic: LM = 37.9348
		with p-value = P(Chi-square (1) > 28.0134) = 0.141853	with p-value = P(Chi-square (1) > 37.9348) = 0.314526

The test statistics for the Breusch-Pagan test are presented in Table 5. The results of the Breusch-Pagan tests for heteroscedasticity in the study on the effect of internal equity changes on equity security returns suggest no strong evidence to reject the null hypothesis of homoscedasticity. The p-values of 0.141853 and 0.314526 for the standard and robust variants, respectively, exceed conventional significance levels, indicating no statistically significant departure from homoscedasticity. This implies that the variability in equity security returns concerning Internal Equity Changes is relatively consistent across the range of the independent variable. Consequently, the assumptions of homoscedasticity in the regression model appear tenable, enhancing the reliability of standard errors and the validity of statistical inferences drawn from the bivariate regression analysis.

A Hausman model specification test was conducted to determine whether to adopt the fixed or random effect. The findings are summarized in Table 6

Table 6: Hausman Model Specification Test between IE Changes and ESR

Variable: Y4 and X2	**(b)**		**(B)**	**(b-B)**	**Sqrt (diag(V_b -V_B))**		
Ho: Random effect model is the most appropriate Model		Fixed Model	Random Model	Difference	S.E.	Chi2 value	P-value
H1: Fixed effect model is the most appropriate Model	IE	0286923	.028929	-.000236	.000725	.110	.7446
	b = consistent under Ho and Ha; obtained from xtreg						
	B = inconsistent under Ha, efficient under Ho; obtained from xtreg						

For the variable IE, the results indicated that the fixed effects model had a coefficient of approximately 0.0286923, while the random effects model yielded a coefficient of approximately 0.028929. The difference between these coefficients (b - B) was approximately -0.000236. This difference represented an estimate of the systematic distinction in the coefficients between the two models. The standard error (S.E.) of this difference was 0.000725. The Chi-squared (Chi2) statistic was computed using the formula (b - B) ^2 / [diag(V_b - V_B)], where diag(V_b - V_B) represents the diagonal elements of the difference in the variance-covariance matrices between the fixed and random effects models. In this case, the Chi2 value was approximately 0.110.

To decide whether the fixed effects model was more appropriate, the p-value associated with the Chi-squared statistic was used. In this instance, the p-value was 0.7446. This p-value indicated the probability of observing a Chi-squared statistic as extreme as the one calculated (0.110) if the null

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hypothesis was accurate, i.e., if the random effects model was the most appropriate. A higher p-value suggested that the null hypothesis should not be rejected in favor of the alternative hypothesis. In these results, the p-value was 0.7446, which was considerably higher than the commonly chosen significance level of 0.05. As a result, it would be concluded that there was insufficient evidence to reject the null hypothesis. Therefore, the random effects model appeared to be the more appropriate choice for modeling the relationship between IE and ESR based on these findings. The coefficients from both models were consistent under the null hypothesis, further supporting the selection of the random effects model.

After the diagnostic tests, a bivariate regression analysis for Changes in the internal equity proportion of the financial structure and the dependent variable equity security returns of public companies in Kenya was conducted, and the results are shown in Table 7.

Table 7: Bivariate Panel Regression for IE Changes & ESR

Random-effects (within) regression			Number of obs	=	539	
Group variable: panels			Number of groups	=	49	
R-sq:			Obs per group:			
within	=	0.1787	Min	=	11	
between	=	0.1690	Avg	=	11.0	
overall	=	0.1775	max	=	11	
			Wald chi2(1)	=	116.05	
Corr(u_i, Xb) = 0(assumed)			Prob > chi2	=	0.000	
	Coef	Std. Err.	z	p-value		
Const	0.465756	0.00503429	92.52	0.0000	.4558889	.4756231
IE	0.0289285	0.00268542	10.77	0.0000	.0236651	.0341918
Sum squared resid		6.209621	S.E. of regression			0.107434
Rho		−0.066911	Durbin-Watson			1.952675

Fitted Panel Model:

$$\boldsymbol{ESR = 0.0289285IE + 0.\ 0.465756}$$

Where ESR = Equity Security Returns

IE = Internal Equity

In the random effects regression analysis between changes in internal equity proportion of the financial structure and equity security returns of public companies in Kenya, the following findings were noted: The within-group R-squared was approximately 0.1787, indicating that the model explained around 17.87% of the variation in equity security returns of public companies in Kenya. The overall R-squared was also 0.1775. The Wald chi-squared test was conducted to assess the significance of the random effects model. The test yielded a statistic of 116.05, and the associated p-value was extremely low (0.000), indicating the high statistical significance of the model. The coefficient estimates for the constant and changes in the internal equity proportion of the financial structure were similar to those in the fixed effects model, with both displaying high statistical significance (p-values of 0.000) and suggesting a strong and positive relationship between changes in internal equity proportion of the financial structure and equity security returns of public companies in Kenya.

The Random effect bivariate regression analysis provides interesting insights into the relationship between changes in internal equity and equity security returns. The positive coefficient of 0.0289285 for internal equity suggests that an increase in internal equity is associated with a corresponding increase in equity security returns. This indicates that the internal financial strength of organizations, as represented by internal equity, may positively influence the performance of equity securities.

The very low p-value of 0.0000 for the coefficient of internal equity emphasizes the statistical significance of the relationship. This remarkably low p-value suggests that the observed correlation between internal equity and equity security returns is unlikely to be the product of chance, indicating high confidence in the outcome. With a p-value of 0.000, the Wald chi-square test provides additional evidence in favour of the regression model's overall significance by suggesting that changes in internal equity mostly explain equity security returns.

One possible interpretation of the positive relationship is that internal equity signals a company's financial health and stability. When a company has strong internal equity, it implies that it has retained earnings and accumulated capital from its operations, which can be used for various purposes, such as funding growth initiatives, paying down debt, or weathering economic downturns. Investors often view a healthy internal equity position as an indicator of the company's ability to withstand challenges and pursue strategic opportunities, which can positively impact the perceived value of equity securities. Companies that can generate and retain profits internally rely less on external financing, reducing financial risk and potentially signaling to investors that the company is well-positioned for long-term success. Strong internal equity may also put businesses in a better position to finance initiatives and investments internally, lessening their need on outside funding. This may result in cheaper financing costs and improved profitability, which will draw in investors and raise the return on equity securities.

The existing literature consistently supports the finding that changes in the internal equity proportion positively affect equity security returns in public companies in Kenya. Almeida and Murillo (2007) examine the relationship between firms' internal financing, cash flow, and debt usage. They find that firms relying more on internal financing tend to use less debt. This aligns with the finding that changes in internal equity positively affect equity security returns, suggesting that a higher proportion of internal equity may lead to lower debt levels and potentially higher returns. On the other hand, Chen et al. (2017) investigated the impact of capital structure on competition through advertising efforts. They found that firms with higher internal equity ratios tend to engage in more aggressive advertising competition. This implies that firms with a substantial proportion of internal equity are more likely to invest in advertising, potentially leading to enhanced visibility and, consequently, higher equity security returns.

Vuong & Nancy (2017) explores the impact of corporate financing decisions on stock returns. They found that firms with higher internal equity ratios are more likely to experience positive stock returns. This supports the finding that changes in internal equity have a positive significant effect on equity security returns. Equally, Chih et al. (2019) investigated how firms' reliance on internal versus external capital markets influences their quarterly earnings forecast disclosure. They found that firms with higher internal equity proportions tend to provide more accurate earnings forecasts. This suggests that firms emphasizing internal equity may have more stable and predictable financial performance, potentially leading to higher equity security returns. Finally, Balakrishnan et al. (2019) examine the role of internal governance mechanisms in bank loan contracting. They found that firms with stronger internal governance structures are more likely to obtain favourable loan

terms. This highlights the importance of internal equity in influencing financial arrangements, which may ultimately impact equity security returns.

5.0 CONCLUSION AND RECOMMENDATIONS

The study highlights the importance of internal equity in a company's financial well-being and stability. The findings show variation across sectors, indicating diverse financial structures and potential impacts on equity returns. The correlation analysis reveals a significant connection between changes in equity and the returns on ordinary equity securities. This supports research emphasizing how internal equity signals a company's strength influencing investor confidence. We further confirm this relationship through panel regression analysis, as the random effects model suggests that an increase in internal equity corresponds to an increase in returns on equity securities. The statistical significance of the coefficients and low p values strengthen the reliability of these findings. Overall, this implies that internal equity indicates a company's well-being, stability and ability to face challenges. Consequently, it has an impact on investor perception. Potentially leads to higher returns on equity securities.

Investors are encouraged to conduct sector-specific analyses due to the substantial variability observed across different sectors. Understanding the unique financial structures within each sector is crucial for making informed investment decisions. Sectors with higher variability, such as commercial and services or manufacturing, may require more thorough scrutiny and risk assessment. Investors should adopt a cautious approach, taking into account not only the mean values but also measures of variability, such as the coefficient of variation and interquartile range. Elevated volatility, as indicated by wide variability, suggests a higher potential for fluctuations in equity returns. This calls for carefully evaluating risk and return dynamics before making investment decisions.

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