

## **What Influences Short Run Performance of Initial Public Offerings in Kenya?**

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**Abstract:** *Share relevant information access in a capital market influence the performance of an initial public offering. Information access depends on the degree the of efficient market hypothesis. The purpose of this paper was to establish the factors that impact the performance of initial public offering in the short run. The population for the study comprised of all the firms listed between 2000 and 2014 in Nairobi securities Exchange. Causal design was applied through regressing the raw total return against the determinants. Both descriptive and inferential statistics were used. The study finds that offer price, offer size, subscription rate, turnover, net assets, age ,market return and market volatility were not statistically significant in explaining the performance of initial public offering in Kenya. The study question the aces of the prospectus by the investors. Furthermore, the prospectus is a technical document understandable by the professionals. Finally the study propose that investment civic education be rolled out to the public by capital Markets authority, the regulator of capital markets in Kenya.*

**Keywords:** *Determinants, Initial public offerings, raw total return, short run.*

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### **I. Introduction**

Hofstede (2001) observed that Africa was rated low while United States of America (USA) was rated moderate in terms of long term and short-term orientation. He alluded that cultures whose members prefer early gratification of their returns are short term. An Initial Public Offering investor who flip their shares on the first days of trading desires to receive returns early. The size of return, in the short run, is a compensation for risks. Reilly and Brown (2009) state that an investment return is a compensation for time value of money, expected inflation and risk involved. A flipping investor is compensated for risk only because time value of money and expected inflation are ruled out because of short time horizon. In USA, Aggarwal(2003) found that initial public offerings flipping account for 19% of the trading volume and 15% of the shares offered. In addition, the study established that flipping of initial public offerings is more frequently on hot markets than cold markets. Based on the short term/long term orientation, African IPO investors, in general and specifically Kenya may flip more.

An initial public offering is the first sale of shares to the public by a private company. Saravanan and Chandran (2014) state that an IPO is the issuing of new ordinary shares for the first time to the public. Therefore, an IPO is a means of raising permanent capital by a company. Companies may raise permanent capital either internally or externally. Internally, a company may use its retained earnings while, externally right issues, initial public offerings and initial private placing may be applied. The use of retained earnings is more of capital allocation. Right issues refer to offer of extra shares to existing shareholders. The initial private offering is raising permanent capital through earmarked investors, instead of offering the shares to the public. Shefrin and Statman(1985) conclude that investors portray desire to sell winners and ride on losers. This finding supports prospect theory by Tversky and Kahneman (1974). The rationale for this belief was mental accounting, anchoring and regret aversion by investors. Odean (1998) analysed 10,000 accounts of large brokerage firms and affirms that an investor preference for realizing winners instead of losers hold. What factors influence the performance IPOs in Kenya in the short run? This paper undertakes an empirical review of IPOs in Kenya to establish the determinants of IPO performance in the short run. The rest of the paper address literature review, methodology, results and findings, discussions and recommendations and references.

### **II. Literature Review**

Baker and Uzaki (2012) analyzed 476 IPO firms listed between 2000 and 2011 in Malaysian Stock Exchange. The finding was Malaysian IPOs were underpriced by 35.87 %. The study, further inform that offer price, offer size company age and type of industry determine the degree of underpricing. Furthermore, in India, Bhullar and Bhatnager (2014) examined 265 IPO firms listed between 2007 and 2012. The study reveals that oversubscription, time delay, size of IPO offer impacted the level of underpricing, although the study did not specify the magnitude of underpricing.

Dell'Acqua, Etro, Teti, and Murri (2014) examined 129 IPO firms listed between 2001 and 2012 in Italy. The study found average underpricing by 6.75 %. The study, further shows that firm size, aftermarket risk,

market demand, financial crisis and share retention by existing shareholders influence the degree of underpricing. In South Africa, Heerden and Alagidede(2012) researched on 138 IPO firms listed between 2006 and 2010. The study shows that the market adjusted abnormal return (MAAR) was 48.919 %. The study fail to present the raw total return, which is based on the closing price on the first day of trading and the offer price. Moreover, in the same country, Smit ( 2015)analyzed 390 IPO firms listed between 1997 to 1999 and 2006 to 2007 and using market adjusted abnormal return confirm existence of underpricing. Similarly, this study failed to use raw total return as a measure of underpricing. In Kenya, Kipngetch, Guyo, and Kipkoskey (2011) analyzed 13 IPO firms listed between 1994 and 2008 in Kenya. The analysis focused on investor sentiment, post IPO ownership retention, firm size, board prestige and age. The study found average underpricing of 49.44 % and the coefficient of determination was 24.56 %. The P-values were greater than 0.05 level of significance. Therefore, the study concludes that these factors explained 24.56 % of underpricing. The p-values reveal that the influence of the stated determinants was not statistically significance. The study did not include all the determinants incorporated in the prospectus. This study will include more issue and firm specific determinants in order to establish whether they influence the underpricing of IPOs in Kenya.

### III. Methodology

Esumanba, Kpanie and Benard( 2015) analyzed 35 IPO firms listed between 1990 and 2009 in Ghanaian Stock Exchange. The study reveal that IPOs were underpriced by 8.43 %, while age; cost of debt, hot market, leverage and industry were the key determinants of IPO underpricing. The study regressed market adjusted initial return (MAIR) against the perceived determinants. Unlike this study, this study w regressed the market adjusted abnormal return (MAAR) against the selected determinants. Kaaria & Moronge( 2013) analyzed 56 listed firms in Nairobi Securities Exchange. The study found that offer price, efficient capital markets and subsequent market performance influenced a firm to go public. The study recommends that firms going public consider timing, governance issues, offer price and cost. The study failed to regress the independent variables against a specified dependent variable. This researcher used raw total return and regressed against selected determinants.

The raw total return was computed as follows:

$$RTR = (P_C - P_O) / P_O * 100$$

The determinants were measured as follows:

Offer price: LN offer price

Offer size: LN offer size

Age of firm: LN of (age at the time of listing +1)

Subscription rate: LN of (subscription rate\* 100)

Net assets: LN net assets

Market volatility: LN of market volatility based on standard deviation

Market return: LN of Index1/indexto-1

### IV. Results And Findings

**Table 1:** Descriptive Statistics for the Determinants of Raw Total Return

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
		Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Offer size	18	5850000	1000000000	20417491 68.5	2880161630 .3	1.681	.536	2.238	1.038
Sub Rate	18	60	833	306.97	282.447	0.967	.536	-.598	1.038
Turnover	18	2248700	28649801000	45458905 00.0	6820521266 .532	2.908	.536	9.637	1.038
Age	18	4	61	29.17	17.694	0.117	.536	-1.242	1.038
Net assets	18	6700000	69000000000	62947821 33.3	1591205537 5.5	4.015	.536	16.619	1.038
Market Return	18	-0.37	0.39	-0.0117	0.28849	0.153	.536	-1.534	1.038
Market Volatility	18	0.04	0.44	0.2561	0.14435	-0.377	.536	-1.339	1.038

Source: Researcher, 2017

Table 1 shows the means, the standard deviation and skewness of the determinants; namely the offer size, subscription rate, turnover, age, net assets, market returns and market volatility. The market returns were computed from the NSE (20) index. The formula applied was the holding period return approach = (NSE (20)

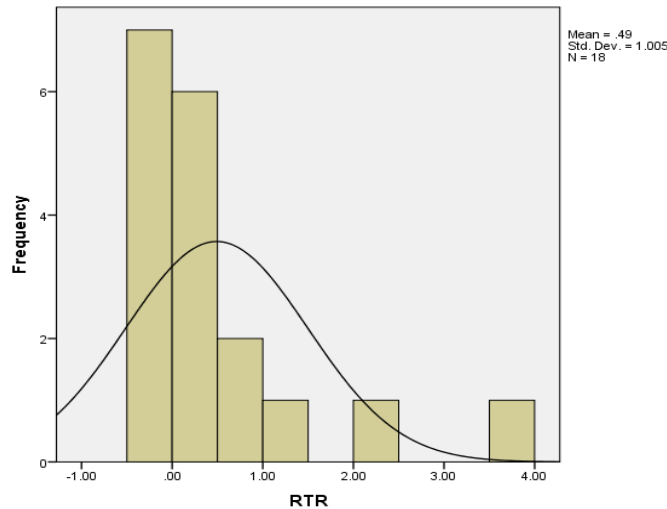
$t_1/NSE(20) - t_0 - 1$ . Where  $t_1$  and  $t_0$  are the periods and time  $t_0$  precedes  $t_1$ . Market volatility was obtained as the standard deviation of the indices. The average age of companies listed during the research period was 29 years. The normality assumption was assessed as follows:

**Table 2:** Normality Test for the dependent variable (RTR)

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	Df	Sig.
RTR	.240	18	.007

Source: Researcher, 2017

Table 2 shows normality test for RTR using Kolmogorov-Smirnov. RTR was statistically significant and therefore normality assumption was violated since the P-value for Kolmogorov-Smirnov. These values exceeded 0.05 level of significance, as seen in Figure 1. To correct for the violation of the normality assumption, RTR variables were converted using the log log transformation.



**Figure 1:** Histogram and Normality plot for RTR

Source: researcher, 2017

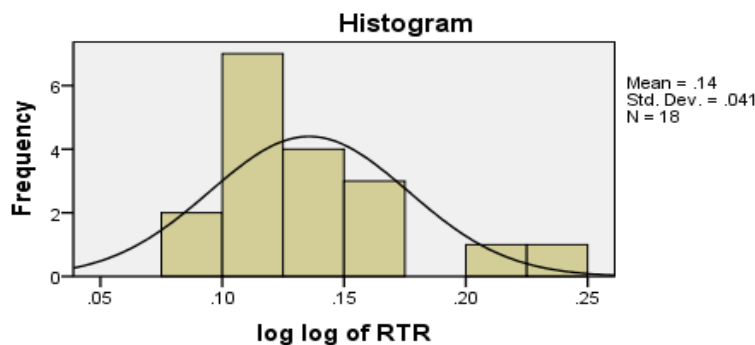
Figure 1 shows that RTR was not normally distributed. Thus, normality test fails. However after transformation, the test shows that the distribution of RTR was normally distributed.

**Table 3:** Normality Test for transformed RTR using Kolmogorov-Smirnov Test Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	Sig.
log log of RTR	.200	18	.056
<b>Lilliefors Significance Correction</b>			

Source: Researcher, 2017

Table 3 shows Kolmogorov-Smirnov Test depicting P-value of 0.056, which was greater than 0.05 level of significance. Therefore, the normality assumption was not violated. See Figure 2



**Figure 2;** histogram and normality plot for RTR

Figure 2 shows the histogram and normality plot on the transformed RTR. The figure display normal distribution and thus normality assumption holds.

**Table 4: Pearson Correlation Analysis for RTR**

		Raw total return	Offer Size	Subscription rate	companies age	companies net asset	companies turnover	market volatility	market return
Raw total return	Pearson Correlation	1	-.119	.189	-.115	.425	.066	.193	-.065
	Sig. (2-tailed)		.639	.453	.649	.079	.794	.444	.798
	N	18	18	18	18	18	18	18	18
Offer Size	Pearson Correlation	-.119	1	-.050	-.210	-.131	.541*	.396	-.319
	Sig. (2-tailed)	.639		.845	.403	.605	.020	.104	.197
	N	18	18	18	18	18	18	18	18
Subscription rate	Pearson Correlation	.189	-.050	1	.351	.458	.201	-.041	.476*
	Sig. (2-tailed)	.453	.845		.154	.056	.424	.871	.046
	N	18	18	18	18	18	18	18	18
companies age	Pearson Correlation	-.115	-.210	.351	1	.112	-.220	-.050	.393
	Sig. (2-tailed)	.649	.403	.154		.660	.381	.845	.106
	N	18	18	18	18	18	18	18	18
companies net asset	Pearson Correlation	.425	-.131	.458	.112	1	.203	.109	.296
	Sig. (2-tailed)	.079	.605	.056	.660		.420	.666	.234
	N	18	18	18	18	18	18	18	18
companies turnover	Pearson Correlation	.066	.541*	.201	-.220	.203	1	.462	-.299
	Sig. (2-tailed)	.794	.020	.424	.381	.420		.053	.228
	N	18	18	18	18	18	18	18	18
market volatility	Pearson Correlation	.193	.396	-.041	-.050	.109	.462	1	-.395
	Sig. (2-tailed)	.444	.104	.871	.845	.666	.053		.104
	N	18	18	18	18	18	18	18	18
market return	Pearson Correlation	-.065	-.319	.476*	.393	.296	-.299	-.395	1
	Sig. (2-tailed)	.798	.197	.046	.106	.234	.228	.104	
	N	18	18	18	18	18	18	18	18

Source: Researcher, 2017

Table 4 shows the Pearson’s correlation among the independent variables as well as between the independent variables and RTR. It was observed that offer size, company age and market return had a negative correlation with RTR, but the relationship was not statistically significant. However, subscription rate, company net assets, company turnover and market volatility had positive relationship with RTR, though not statistically significant. The correlation between Subscription rate and market return was statistically significant because P-values was 0.046 while company turnover and offer size had P-values = 0.020 which was statistically significant. Other determinants had relationships that were not statistically significant. Therefore, multicollinearity assumptions were not violated.

**Table 5: Summary of Determinants, Betas Coefficients, P-values.**

Variable	B <sub>0</sub>	B <sub>1</sub>	P-Value	t
Log log Market Return	0.145	-0.031	0.850	-0.192
Log log Market Volatility	0.128	0.079	0.695	0.399
Log log Offer Size	0.179	-0.005	0.715	-0.372
Log log Sub. Rate	0.063	0.032	0.191	1.365
Log log Turnover	0.058	0.008	0.573	0.575
Log log Age	0.139	-0.003	0.926	-0.094
Log log Net Assets	0.083	0.006	0.533	0.637

Source: Researcher, 2017

Table 5 shows the magnitude and direction of the beta coefficients (β<sub>1</sub>) and P-values of simple linear regression equations. The P-values > 0.05 level of significance, demonstrating that beta coefficients were not statistically significant in projecting Log of Log RTR. Therefore, the determinants had no explanatory power on RTR.

**Table 6** Model Coefficients on Log log RTR

Model	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std Error	Beta	t	Sig.
(Constant)	-.017	.692		-.024	.981
log log offer size	-.254	.395	-.234	-.643	.541
log log subscription rate	-.046	.401	-.089	-.115	.912
log log turn over	.387	.670	.323	.577	.582
log log net assets	.090	.329	.121	.275	.791
log log age	-.184	.290	-.310	-.635	.546
log log Market Return	.032	1.045	.017	.030	.977
log log Market Volatility	-.389	1.272	-.196	-.306	.769

Dependent Variable: Log of log RTR

Source: Researcher, 2017

Figure 6 shows that none of the determinant explained changes in RTR, because their p-values were greater than 0.05 level of significance. The resultant multiple linear regression model was as follows:

$$\text{Log log RTR} = -0.017 - 0.254 \log \log \text{offersize} - 0.046 \log \log \text{sub.rate} + 0.387 \log \log \text{Turnover} + 0.09 \log \log \text{Net Assets} - 0.184 \log \log \text{Age} + 0.032 \log \log \text{Mrket return} - 0.389 \log \log \text{Market volatility}$$

## V. Discussion

Table 6 shows that none of the perceived determinants impacted RTR, because the p-values were greater than 0.05 level of significant. These results were similar to the findings by Esumanba, Kpanie and Benard (2015). The findings of this research contradict the findings Kaaria and Morong (2013). This study speculate that the determinanats are not understood by the propostective IPO investors, even though the information is contained in the prospectus. This study avers that the presence of an IPO prospectus does not arranteavailability,reachability,findability and comprehensibility. The study recommends that the prospectus be simplified,widely distributed,and explained during the road shows.

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