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Pecking Order Theory Test of Firms Listed at East Africa Securities Exchanges

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Abstract
For a long time, there has been debate on whether firms have a preferred hierarchy of financing structure. Indeed, pecking order theory argues in favour of a preferred hierarchy of financing decisions with the highest preference being to use internal financing or retained earnings first, then debt and lastly external equity or shares. While some scholars have supported the existence of that rigid structure, others have argued to the contrary. Empirical works have yielded mixed results on the same. This study therefore analysed the relationship between financial structures and financial performance of listed firms at the East Africa Securities Exchanges in an attempt to validate the pecking order theory. The study employed explanatory research design with secondary panel data from the financial statements of 61 firms retrieved from the securities exchanges hand books for the period December 2006-2014. Descriptive statistics, Feasible Generalized Least Squares method, random effect for models without moderator and fixed effect for models with moderator, based on Hausman specification test were used. The study found out there is no preferred hierarchy and that various markets had their own preferred choices. As to the relationship between financial structure and return on assets or return on equity amongst securities exchanges, the study revealed that such relationships are different. It is therefore recommended that firms should use shareholders' funds as much as practical before they result to borrowing. Firms should also look at and evaluate the political, economic, social and technological environment within their markets together with their internal environment ranging from opportunities available, management potential and industry threats among others, before making decision on the mode of raising finance.
Keywords: Financial performance, financial structure, pecking order

1. Introduction

Firms can choose among many alternative financial structures to maximize their shareholders wealth but the key question becomes whether all firms converge to a certain structure to support pecking order theory hypothesis. For instance, Frank and Goyal (2007) support the pecking order hypothesis in larger firms since are least risky and most likely to issue public bonds than small firms while Castro, Tascón and Tapia (2011) also contend that this hierarchy is necessary in order to minimize adverse selection costs of security issuance as a result of the existence of asymmetric information. However, Zurigat (2009) and Fama and French (2005) show preference of external equity to debt to denounce the theory's dictate. In Kenya, Simiyu (2012) and Mbugua (2010) also show support for the theory while Bundala (2012) show no support for the theory in Tanzania.

In summary, studies on the pecking order theory test across securities exchanges have yielded mixed results. In East Africa (EA), no attempt known to the researcher has been made to test the validity of the theory for all the markets combined or even to compare individual markets results. It is for this reasons that this study was therefore conducted. The general objective was to test the pecking order theory hypothesis of firms listed at East Africa Securities Exchanges (EASE) with the following specific objectives.

1. To probe the differences in the relationship between financial structure and financial performance among EASE.
2. To establish the preferred hierarchy of financial structure by firms listed at EASE.

The research hypothesis were

$H0_1$: There is no statistically significant difference in the relationship between financial structure and financial performance among EASE.

$H0_2$: There is no preferred hierarchy of financial structure by firms listed at EASE.

2. Literature Review

According to Kishore (2009), pecking order theory was first suggested by Donaldson in 1961 and further developed by Myers and Majluf (1984). It argues that firms have a preferred hierarchy for financing decisions with the highest preference being to use internal financing before resorting to any form of external funds. This is because internal funds incur no flotation costs and require no additional disclosure of financial information that may lead to a possible loss of competitive advantage in the market (Kishore, 2009). Castro, Tascón and Tapia (2011) also contend that this hierarchy is necessary in order to minimize adverse selection costs of security issuance as a result of the existence of asymmetric information.

In Myers and Majluf model (1984), investors rationally discount the firm's stock price when managers issue equity instead of riskless debt since to them, it shows the firm's stock is overvalued. To avoid this discounting resulting to low price, managers avoid equity whenever possible. The model therefore predicts that managers use internal funds first, then use debt and finally resort to equity. In the absence of investment opportunities, firms retain profits and build up financial slack to avoid having to raise external finance in the future (Kishore, 2009). In one of their works, Frank and Goyal (2007) confirmed that the greatest support for the pecking order is found among larger firms since are least risky and most likely to issue public bonds than small firms.

In support of the theory too, Simiyu (2010) conducted a research on SMEs in Kenya and concluded that SMEs practice pecking order theory with preference for internal equity and donations, then friends' contribution before opting for debts. The study involved data collected from 54 SMEs using questionnaires in 2012. The SMEs were drawn from manufacturing, Service, Commerce and trade and other industries. High interest rates offered by financial institutions and recovery procedures on default employed by the same institutions were cited as the main reasons for low uptake of debt. The study however may not be generalized to other sectors and the validity of data was questionable given that many SMEs are not listed and therefore not by statute required to issue audited results.

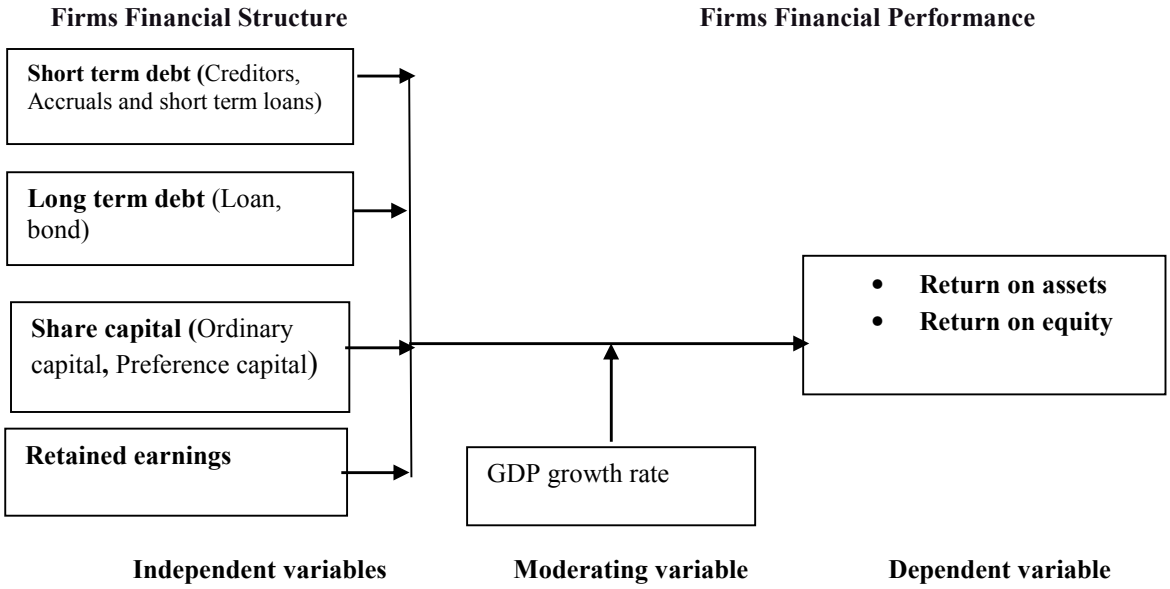
To test whether Tanzania firms follow pecking order theory with secondary data from eight of non-financial companies listed in Dar Es Salaam Stock Exchange (DSE) from 2006-2012, Bundala (2012) concluded little support for the theory. Descriptive statistics and multiple regressions model used to test the relationships between the financial leverage and characteristics of the company. While the study was informative, the sample size was however too small to make serious conclusions casting aspersions on its validity.

The theory however assumes that firm's managers know more about the company's current earnings and future growth opportunities than outside investors and they will act in the best interests of the company's existing shareholders (Sheikh& Wang, 2011). There is a strong desire to keep such information proprietary as the use of internal funds precludes managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them (Liesz, 2001). In safeguarding the interest of the existing shareholders, managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new shareholders (Myers & Majluf, 1984). It is also assumed that there is asymmetry of information about the true firm value between existing and potential shareholders (Upneja & Dalbor, 2001). This may not necessarily be true in practice.

It also ignores the problems that can arise when a firm's managers accumulate so much financial slack that they become immune to market discipline (Kishore, 2009). In their work, Upneja and Dalbor (2001) posit that only profitable firms can generate the necessary funds to use internal funds hence failure of theory holding in practice. Empirically too, using data from 114 non-financial Jordanian firms, Zurigat (2009) concluded that equity is not the last resort for financing as the pecking order theory suggests. According to (Viviani, 2008), firms leverage reflects both the past profitability as well as the investment opportunities of the firm, implying that if a firm have no available opportunities, it may prefer equity than debt contrary to the pecking order dictate.

Preference for equity over debt contrary to this theory has also been supported by Fama and French (2005). They argue that firms can avoid the information costs or the adverse selection by issuing the equities which are less subject to asymmetric information such as equity issues to employees in their compensation plan or to existing stock holders through rights issue. According to them, that kind of issue does not change the ownership structure and involve low costs of asymmetric information such that the grip of the information asymmetries approach is broken hence the need for issuing debt to finance new investment projects is reduced at the expense of equity.

Below is the resulting conceptual framework from the literature.



3. Methodology

The study employed explanatory research design with secondary panel data from the financial statements of 61 non-financial firms from a target population of 63 firms, retrieved from the securities exchanges hand books for the period December 2006-2014. Data was analysed using correlations, descriptive statistics and multiple regression with the aid of Statistical Package for Social Sciences (SPSS) 18 and STATA 12. The exclusion of financial institutions is to remove anomalies associated with regulation like liquidity levels, core capital and bad debt provision (Santos, 2001).

The regression models used for the analysis are.

1. $Rit= \beta_0 + \beta_1 SDit+ \beta_2 LDit + \beta_3 RE_{it}+ \beta_4 Eit + e_j$
2. $Rit= \beta_0 + \beta_1 SDit+ \beta_2 LDit + \beta_3 RE_{it}+ \beta_4 Eit+ \beta_5 GDPR + GDPR (\beta_6 SDit+ \beta_7 LDit + \beta_8 RE_{it}+ \beta_9 Eit) + e_j$ [Baron & Kenny, 1986].
3. $Rit = \alpha_0 + \alpha_1 SDit + e_3$
4. $Rit = \lambda 0 + \lambda_1 LDit + e_4$
5. $Rit = a_0 + a_1 RE_{it} + e_5$
6. $Rit = b_0 + b_1 E_{it} + e_6$

Where Rit is ROA and ROE for each firm i and year t;
ROA is net profit after tax/total assets
ROE is net profit after tax/total equity
SD is current liabilities/total assets
LD is non-current liabilities/total assets.
RE is the retained earnings/total assets
E is reserves, preference and ordinary capital/total assets
GDPR is gross domestic product growth rate
β_i, α_i, λi, a_i and b_i ($i=0,1\ldots,5$) are the associated regression coefficients.
E_j is the error term ($j=1,2\ldots,6$)

4. Findings and Discussion

4.1 Diagnostic tests

Multicollinearity

All the correlation coefficients between variables (in absolute form) were less than 0.8 indicating that there was no multicollinearity Gujarati (2003). This is an assurance that the regression coefficients were stable hence valid significance tests as put by Cooper and Schindler (2006).

Serial (Auto Correlation) Correlation

The F statistics for models with and without moderation of GDP rate were 12.063 and 63.232 with ROA as the response variable and 12.016 and 127.57 with ROE as the response variable respectively. The p value for both ROA and ROE models without moderation was 0.0000 and 0.001 for both with moderation. The test statistics were therefore significant in all cases at 5% level of significance to indicate presence of first order serial correlation in the data. To remedy this problem, feasible generalized least squares (FGLS) method was therefore used. This

method also guarantee the efficiency and consistency of the estimators for valid significance tests.

Heteroscedasticity

The null hypothesis was no heteroscedasticity for all models with or without moderator. For a regression model with ROA as the response variable, the test yielded a chi-square value of 342.45 with a p-value of 0.000 with moderation and a chi-square value of 54.27 with a p-value of 0.000 without moderation. The chi-square values were in both cases statistically significant at 5% significance level and hence the null hypotheses were rejected to signify the existence of heteroscedasticity. To overcome the problem so as to make the standard errors unbiased leading to valid test statistics and hence significance tests as advocated by Wooldridge (2002), FGLS method was used.

For a regression model with ROE as the response variable, the test yielded a chi-square value of 342.02 with a p-value of 0.0000 with moderation and a chi-square value of 71.05 with a p-value of 0.0000 without moderation. The chi-square values were again in both cases statistically significant at 5% significance level and hence the null hypotheses were rejected to signify the existence of heteroscedasticity. Subsequently, FGLS method was employed to overcome the problem.

Stationarity

The null hypotheses that all panels contain unit roots for all variables were rejected at 5% significance level since the p values were less than 5%. This therefore implies that all the variables were stationary (no unit roots) and hence robust regression results even without lags (at level).

Hausman Specification

For ROA and ROE without moderator respectively, the nulls were failed to be rejected since the p values, 0.0933 and 0.2159 respectively were greater than 5% level of significance. This implies that random effects models were preferred. For ROA and ROE with moderator respectively, the nulls were rejected since the p values 0.0109 and 0.011 respectively were less than 5% level of significance implying that fixed effects models were preferred. This in in tandem with Green (2008) recommendations.

Granger Causality

The p-values for all lagged financial structure components in isolation against ROA are greater than 5% level of significance implying that the null hypotheses that financial structure does not granger cause financial performance are not rejected. When all lagged values of financial structure are run against ROA, the p values are zero, which are less than 5% level of significance hence the null hypothesis that financial structure does not granger cause financial performance is rejected. The same results are replicated when financial structure components are run against ROE.

The p-values for all lagged values of ROA and ROE regressed against SD, LD, E, RE and all combined are all greater than 5% level of significance hence the null hypotheses that financial performance does not granger cause financial structure is not rejected. In summary, the tests imply that while a single component of financial structure does not granger cause financial performance, a mixture of the same does. Financial performance does not however granger cause financial structure.

Normality

The Shapiro Wilk results for all regression models (with and without the moderator) were a w=0.861 with a p value of 0.000. This therefore indicated that the null was rejected at 5% level of significance to imply that the residuals were not normally distributed. To overcome this problem that may distort the significance tests, robust standard errors were used instead of the normal standard errors (Gujarati, 2003). Robust standard errors generally improves the efficiency of the estimators (Green, 2008).

4.2 Descriptive Statistics

As shown in table 4.1, at the NSE, the average ROE over the period was 192.08% with a minimum value of -0.65, maximum value of 7.13 and a standard deviation of 1.524. This shows that though on average firms had a huge positive return on equity, the majority of firms ROE are to the right of the distribution just like ROA. The mean ROA was 134.95% with a standard deviation of 1.349 and a minimum and maximum of -6.36 and 5.04 respectively. This shows that firms were generally highly profitable towards their investment in assets. The fluctuation of returns in ROE were however marginally higher than ROA as shown by standard deviations. This results are supported by Mwangi et al. (2014) who concluded that firms at NSE have a higher ROE than ROA with a higher variability in ROE too.

The average short term and long term debts to total assets are 28.54% and 17.88% respectively. This demonstrates that a large portion of firms' assets was financed with short term debt. The maximum borrowings

also reaffirms this position with short term debt to total assets ration being .88 and long term to total assets ratio being 0.82. This could imply that short-term debt financing was less costly compared to the long term debt which is usually associated with high value collateral and at times restrictive covenants to make it unattractive. A positive skewness by all firms at NSE on their short and long term debts show that majority lied on the right tail of the distribution. This findings contradict Mwangi et al. (2014) who concluded that majority of firms at the NSE use long term debt to finance their assets.

The average retained earnings to total asset over the period was 16.03%, minimum of -0.84 and maximum of .65 with a negative skewness of -0.915. This implies that majority of firms were utilizing their retained earnings above average usage and therefore lied on the left tail of the distribution. The mean equity to total assets ratio is 37.56% with a minimum of -0.11, maximum of .99 and a positive skewness of 0.484. This show that though generally firms raised capital through shares, majority were to the right tail. Finally, the average GDP growth rate over the period was 5.094%, minimum of 0.2% and maximum of 8.4% with a negative skewness of -0.779. This shows that the GDP for majority of the periods under study were above the country average.

At the RSE, the average ROE over the period was 38.28% with a minimum value of .16, maximum value of .57 and a standard deviation of .17964. This shows that though on average firms had a relative positive return on equity, the majority of firms ROE are to the left of the distribution just like ROA. The mean ROA was 249% with a standard deviation of .47392 and a minimum and maximum of 1.69 and 2.85 respectively. This shows that firms were generally highly profitable towards their investment in assets. The fluctuation of returns in ROA were however higher than ROE as shown by standard deviations. This results contrasts the NSE findings on the same variables.

The average short term and long term debts to total assets are 56.2% and 3.6% respectively. This demonstrates that a large portion of firms' assets was financed with short term debt. The maximum borrowings also reaffirms this position with short term debt to total assets ration being .59 and long term to total assets ratio being 0.08. This could imply that like at the NSE, short-term debt financing was less costly and perhaps easily available compared to the long term debt. A positive skewness by all firms at RSE on their short and long term debts show that majority lied on the right tail of the distribution.

The average retained earnings to total asset over the period was 35.2%, minimum of .34 and maximum of .37 with a positive skewness of .541. This implies that fewer firms were utilizing their retained earnings above average usage and therefore lied on the right tail of the distribution. The mean equity to total assets ratio is 5.2% with a minimum of .03, maximum of .07 and a negative skewness of -0.052. This show that few firms raised capital through shares perhaps due to the fact that RSE is relatively new and not developed to attract huge capital raisers. Finally, the average GDP growth rate over the period was 7.15%, minimum of 4.6% and maximum of 82% with a negative skewness of -1.899. This shows that the GDP for majority of the periods under study were above the country average. It worth noting that the average GDP was higher at RSE than NSE. This could be due to high donor interest in the Rwanda economy to rebuild it after overcoming the perhaps one of the worst genocide in the region.

At the USE, the average ROE over the period was 1.1926 with a minimum value of 0 maximum value of 3.43 and a standard deviation of .90029 This shows that though on average firms had a high positive return on equity, the majority of firms ROE are to the right of the distribution like ROA. The mean ROA was 1.3016 with a standard deviation of 1.69 and a minimum and maximum of -1.53 and 6.58 respectively. This shows that firms were generally able to generate high returns. The fluctuation of returns in ROA were however higher than ROE as shown by standard deviations.

The average short term and long term debts to total assets are .4158 and .1553 respectively. This demonstrates that a large portion of firms' assets was financed with short term debt. The minimum borrowings also reaffirms this position with short term debt to total assets ration being .01and long term to total assets ratio being 0. This could imply that like at the NSE, RSE and DSE, short-term debt financing was less costly and perhaps easily available compared to the long term debt. Worth noting is that there were firms that operated without long term borrowing too like at DSE. A positive skewness by all firms at DSE on their short and long term debts show that majority lied on the right tail of the distribution.

The average retained earnings to total asset over the period was .2171, minimum of -.19 and maximum of .7 with a positive skewness of .669. This implies that many firms were utilizing their retained earnings below the average usage and therefore lied on the right tail of the distribution. The mean equity to total assets ratio is .2105 with a minimum of 0, maximum of .55 and a positive skewness of .686. This show that firms financed their assets through retained earnings more than shares. The average GDP growth rate over the period was 5.94%, minimum of 3.6% and maximum of 107.4% with a positive skewness of .828. This shows that the GDP for majority of the periods under study were below the country average.

At the DSE, the average ROE over the period was 2.34 with a minimum value of .02 maximum value of 7.23 and a standard deviation of 2.64. This shows that though on average firms had a high positive return on equity, the majority of firms ROE are to the right of the distribution unlike ROA. The mean ROA was 2.137 with a

standard deviation of 2.71 and a minimum and maximum of -5.3 and 5.75 respectively. This shows that firms were generally highly profitable towards their investment in assets. The fluctuation of returns in ROA were however higher than ROE as shown by standard deviations. This results partly agree with those of NSE on average returns but differ on skewness.

The average short term and long term debts to total assets are .1415 and .205 respectively. This demonstrates that a large portion of firms' assets was financed with short term debt. The minimum borrowings also reaffirms this position with short term debt to total assets ration being .01and long term to total assets ratio being 0. This could imply that like at the NSE, short-term debt financing was less costly and perhaps easily available compared to the long term debt. Worth noting is that there were firms that operated without long term borrowing. A positive skewness by all firms at DSE on their short and long term debts show that majority lied on the right tail of the distribution.

The average retained earnings to total asset over the period was .3115, minimum of -.83 and maximum of .82 with a negative skewness of -.638. This implies that many firms were utilizing their retained earnings above average usage and therefore lied on the left tail of the distribution. The mean equity to total assets ratio is 34.18% with a minimum of 0, maximum of 1.05 and a positive skewness of .653. This show that firms raised capital through shares more than retained earnings may be since DSE is relatively developed to attract huge capital raisers. The average GDP growth rate over the period was 6.857%, minimum of 6% and maximum of 7.4% with a negative skewness of -1.041. This shows that the GDP for majority of the periods under study were above the country average. It worth noting that the average GDP was higher at DSE than NSE but lower than RSE.

Table 4.1 Descriptive Statistics

		N	Minimum	Maximum	Mean	Std. Deviation	Skewness
NSE	GDP	315	0.2	8.4	5.094	2.3002	-0.779
	SD	315	0	0.88	0.2854	0.18754	0.673
	LD	315	0	0.82	0.1788	0.16462	1.474
	E	315	-0.11	0.99	0.3756	0.21915	0.484
	RE	315	-0.84	0.65	0.1603	0.23151	-0.915
	ROA	315	-6.36	5.04	0.7861	1.34958	-0.686
	ROE	315	-0.65	7.13	1.9208	1.52446	0.884
RSE	GDP	5	4.6	8.2	7.15	1.47394	-1.899
	SD	5	0.54	0.59	0.562	0.01924	0.59
	LD	5	0.02	0.08	0.036	0.02608	1.714
	E	5	0.03	0.07	0.052	0.01789	-0.052
	RE	5	0.34	0.37	0.352	0.01304	0.541
	ROA	5	1.69	2.85	2.49	0.47392	-1.7
	ROE	5	0.16	0.57	0.382	0.17964	-0.364
DSE	GDP	60	6	7.4	6.857	0.3855	-1.041
	SD	60	0.01	0.66	0.205	0.1495	1.128
	LD	60	0	0.66	0.1415	0.14962	2.21
	E	60	0	1.05	0.3418	0.38461	0.653
	RE	60	-0.83	0.82	0.3115	0.3975	-0.638
	ROA	60	-5.3	5.75	2.137	2.719	-0.577
	ROE	60	0.02	7.23	2.3452	2.63629	0.66
USE	GDP	38	3.6	10.4	5.984	2.1295	0.828
	SD	38	0.01	1.11	0.4158	0.34695	0.634
	LD	38	0	0.52	0.1553	0.15074	0.627
	E	38	0	0.55	0.2105	0.15985	0.686
	RE	38	-0.19	0.7	0.2171	0.23371	0.669
	ROA	38	-1.53	6.58	1.3016	1.6946	1.32
	ROE	38	0	3.43	1.1926	0.90029	0.722

4.2 Financial Structure Preferred Hierarchy

The results in table 4.2 show that when ROA was used as response variable, the coefficients of determination for RE, E, LD and SD were 86.54%, 34.35%, 13.19% and 4.06% respectively without GDP growth rate moderation. This show that firms would prefer to utilize retained earnings followed by external equity and then debt based on their contribution to ROA. The same results are replicated even with GDP growth rate moderation except that the interaction effect of GDP growth rate makes SD more preferred to LD with 24.51% and 19.76% respectively.

When ROE was used as response variable, the coefficients of determination for E, RE, SD and LD were 69.71%, 28.46%, 11.93% and 0.09% respectively without GDP growth rate moderation. This show that firms

would prefer to utilize external equity followed by retained earnings and then debt. The same results are replicated even with GDP growth rate moderation but with different coefficients of determination.

Table 4.2 Specific Sources Contributory Ranks Based on Coefficient of Determination for EASE

Variable		Model 1		Model 2	
Dependent	Independent	%	Rank	%	% Change
ROA	SD	4.06	4	24.51	20.45
	LD	13.19	3	19.76	6.57
	E	34.35	2	52.95	18.6
	RE	86.54	1	91.92	5.38
ROE	SD	11.93	3	34.65	22.72
	LD	0.09	4	18.42	18.33
	E	69.71	1	90.95	21.24
	RE	28.46	2	72.64	44.18

Model 1 is without moderator; Model 2 is with moderator

As shown in table 4.3, the proportion of assets financed by the various sources were external equity 35.2%, SD 28.89%, RE 18.94% and LD 16.97% in that order. This contradicts the results based on the contributory effects to ROA. Results based on contributory effects to ROA partially agree with the pecking order theory on the use of internal financing as the first source before resorting to any form of external funds but differ on external equity as the last source. The findings of the proportionate usage of finance to fund the assets however show that external equity was mostly used and LD was least used. Indeed, Kishore (2009) concluded that since internal funds incur no flotation costs and require no additional disclosure of financial information that may lead to a possible loss of competitive advantage in the market, firms would prefer it first before other sources. The findings also agree with Zurigat (2009) who concluded that equity is not the last resort for financing as the pecking order theory suggests using data from 114 non-financial Jordanian firms.

With regard to ROE as the dependent variable, the results concur with Shubita and Alsawalhah (2012) findings on preference of equity than debt but contravene Myres and Majluf (1984) pecking order hypothesis on equity as the last preferred choice. In Nigeria, Olokoyo (2013) found out that firms were either majorly financed by equity capital or a mix of equity capital and short-term financing, in total agreement with this study findings.

Table 4.3 Specific Source Asset Financing for EASE firms

Source	Proportion	Rank
SD	.2889	2
LD	.1697	4
E	.3520	1
RE	.1894	3

Table 4.4 show the results of individual market's preference to capital source based on the coefficient of determination. At the NSE, DSE and USE, retained earnings had the highest coefficient of determination when ROA was used as the dependent variable showing that firms would have preferred that hierarchy of financing sources. However, when ROE was used as the dependent variable, all the EASE demonstrate their preference for external equity as E had the highest coefficient of determination in all markets. At RSE, firms seem to prefer debt than equity when ROA was used as the dependent variable since the coefficient of determination of SD was highest at 66.65%, meaning that SD explains to the extent of 66.65% of variation in ROA.

At RSE, DSE and USE, when ROA was used as the response variable, firms seem to least prefer LD since the coefficient of determination for the same was lowest. Even at the NSE, LD ranked at position three with a 20.31% contribution. When ROE was used instead of ROA, LD ranks last at the NSE, DSE and USE and third at RSE close to SD being the last one. This findings therefore show that while different markets show different preferential hierarchy to different sources of finance based on the their contributory effects to returns, all markets seem to generally prefer equity to debt since the contributions of E and RE are generally higher than those of SD and LD to both ROA and ROE. In table 4.5, NSE and DSE firms financed most of their assets using external equity and least using LD, while in RSE and USE firms financed assets mostly through SD. The moderating effect of GDP growth rate seem to be generally higher for equity than debt too as shown in the last column of table of table 4.4.

Generally, the results based on coefficient of determination partially agree with the pecking order theory on the use of internal financing as the first source before resorting to any form of external funds when ROA was used but differ on external equity as the last source, consistent with Zurigat (2009). In addition, the results correlate with Brealey, Leland and Pyle (1977) hypothesis that a firm signals the increase in firm's value by reducing its leverage since it has enough retention to finance its future growth, indicating preference for retained earnings. It is interesting to note that firms at DSE, RSE and USE used LD as a last option. It is only at the NSE where LD was used as a second last source. When ROE was used as the dependent variable, the coefficient of determination

results for all EASE contradict the dictate of pecking order theory since external equity was the preferred choice across board. This was also true for firms at the NSE and DSE since they used E mostly in financing their assets.

Table 4.4 Specific Sources Contributory Ranks Based on Coefficient of Determination for Individual Market

Market	Variable		Model 1		Model 2	
	Dependent	Independent	%	Rank	%	% change
NSE	ROA	SD	0.63	4	6.58	5.95
		LD	20.31	3	25.89	5.58
		E	29.07	2	55.28	26.21
		RE	79.89	1	87.51	7.62
	ROE	SD	12.72	3	47.84	35.12
		LD	1	4	31.66	30.66
		E	55.63	1	89.01	33.38
		RE	23.78	2	73.55	49.77
RSE	ROA	SD	66.65	1	99.52	32.87
		LD	0.01	4	99.7	99.69
		E	6.73	4	99.41	92.68
		RE	37.82	3	100	62.18
	ROE	SD	34.17	4	83.29	49.12
		LD	52.37	3	96.31	43.94
		E	83.99	1	99.99	16
		RE	69.67	2	71.53	1.86
DSE	ROA	SD	9.28	3	11.96	2.68
		LD	5.72	4	4.75	-0.97
		E	66.88	2	86.86	19.98
		RE	99.48	1	99.68	0.2
	ROE	SD	2.95	3	3.78	0.83
		LD	5.2	4	7.81	2.61
		E	99.39	1	99.68	0.29
		RE	66.61	2	85.02	18.41
USE	ROA	SD	44.17	2	61.41	17.24
		LD	0.94	4	5.95	5.01
		E	3.75	3	4.82	1.07
		RE	84.07	1	92.04	7.97
	ROE	SD	43.34	3	49.37	6.03
		LD	0.27	4	5.45	5.18
		E	81.38	1	93.24	11.86
		RE	10.54	3	47.43	36.89

Table 4.5 Specific Source Asset Financing in Individual Markets

Market	Source	Proportion	Rank
NSE	SD	0.2854286	2
	LD	0.1788254	3
	E	0.3755556	1
	RE	0.160254	4
RSE	SD	0.562	1
	LD	0.036	4
	E	0.052	3
	RE	0.352	2
DSE	SD	0.205	3
	LD	0.1415	4
	E	0.3418333	1
	RE	0.3115	2
USE	SD	0.4157895	1
	LD	0.1552632	4
	E	0.2105263	3
	RE	0.2171053	2

5. Summary and Conclusion

Based on the findings of the study, it is worth concluding that relationship between financial structure and ROA or ROE amongst securities exchanges are different. This is expected since different markets have different dynamics as dictated by country's specific political, social, economic and technological factors. This is expected since different markets have different dynamics as dictated by country's specific political, social, economic and technological factors.

On the establishment of the preferred hierarchy of financial structure by firms listed at EASE, this study held that there is no preferred hierarchy. Various markets had their own preferred choices, a demonstration that different markets are responsive to their country's economic or otherwise performance. In addition, the general preference of external equity over retained earnings and debt clearly negates the provision of the pecking order theory implying that it may not be applicable in practice, at least at EASE.

6. Recommendations

From the conclusions, it is recommended that firms should use shareholders' funds as much as practical before they result to borrowing so as to minimize the risks related to debt financing. This risks that include huge interest payments on the debt to erode the returns, restrictive debt covenants, are likely to lead the firms to financial distress and eventual collapse. Firm managers must therefore be encouraged to raise equity by listing at the securities exchanges.

It is also recommended that if firms have to borrow, they should borrow in the short term first before long term since it was concluded that much of firms' assets are financed by short term debts. To this end, the regulators are encouraged to create more short term financial instruments to offer many alternatives that may even help to reduce borrowing cost due to competition. Moving forward however, it is crucial that the governments of EA countries be able to creatively, without compromise to demand and supply forces, regulate the financial market in an attempt to reduce the cost of long term debt to enhance its uptake by firms. If this was to happen, the appetite for long term borrowing would be high since repayments will be spread over time thereby granting businesses enough time to make returns against their borrowings and even to absorb short term financial shocks.

7. Suggestions for Further Research

This study focused on non-financial firms listed at EASE. It is therefore the researcher's view that further research be done on non-listed firms or financial firms and compare their results with those of this study. It is also imperative to undertake similar comparative studies in other global markets like United States of America or Asia and compare their findings with the current findings.

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