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Omollo, Harold and Olweny, Tobias and Oluoch, Oluoch and Wamatanda, Joshua

Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

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By

1. Harold Omondi 2. Tobias Olweny

1. Jomo Kenyatta University of Agriculture and Technology P.O.Box 62000 Nairobi

2. Jomo Kenyatta University of Agriculture and Technology P.O.Box 62000 Nairobi

Email: homolo@ kuat.ac.ke Email:tolweny@yahoo.com

Abstract

Theories are guided principles defining facts while using the outcome to predict the future. To some extent, hypotheses have also been used in support of several ideologies leading to theoretical evidence for scientists and the general public. In this perspective, financial theories are adopted to address debt and equity ethical dilemmas more so within pension fund portfolios according to financial pundits. Over time, pension fund managers in Kenya have been reaching out for known theories for possible adoption underpinning principals and theoretical framework when juggling with debts and equity decisions. This paper therefore addresses specific concerns raised by several proponents regarding financial theory practices interventions while considering relevant variables for the study. The conclusion of the matter is that the study illustrates how theories can be put into practice more so during decision making processes on specific portfolios.

Key words: Capital structure theories, Pension fund portfolios, financial theories and practices, Debts and equity investments, Optimal Levels, Exploratory Variable s. Debt equity ratios

1. Introduction

An ideal asset allocation criterion in regards to appropriate debt and equity mix has been subject of discussion over time by the Kenyan custodians of pension funds. On the other hand, different entities have also addressed some of the raised issues through resolutions from the management without seeking the opinion of shareholders. This has worked well with some pension fund organizations while at the same time backfiring on others. Consequently, organizations have negated the core value of collective responsibilities by investing inappropriately without considering the ideal debt to equity ratios within their pension fund portfolios due to information asymmetry within the financial arena. None the less, absence of known financial theories within the financial structures and lack of theoretical adoption mechanisms have affected asset tangibility, opportunities for growth which admittedly influenced the profitability of pension fund organizations according to Brendea (20I4).

2. Statement of the Problem

According to Kenya Retirement Benefits Authority Report (20I8), there is no theoretical interpretation and adoption of financial theories within the Kenyan pension fund. None the less, misunderstanding and misinterpretation of the theories has created irrelevance and inaccurate interpretation while establishing ideal debt/equity rations. The current propositions are whether to invest 100% from equity, or I00% debt or a combination of both based on specific concession or ideal ratios and the effect of tax. Conversely, the discussions have ratcheted down the leverage ratio (debt-to-equity ratio) and so financial custodians in Kenya are yet to get appropriate analyses and predictive interpretation of financial theories which can guide the financial decision making process based on robust and far-fetched acceptable theories. On the contrary, the study addresses the specific felt needs of fund managers' quest to identify and adopt ideal financial theories with promising results instead of making irrational decisions based on individual or unprofessional views at the expense of retirees and pensioners in Kenya.

3. Literature review

Financial theories have stemmed with various inconsistencies due to assumptions on the certainty of markets and interest rates of which theories like Modigliani and Miller criticisms focuses mainly on indebtedness while risk cost factors must always be incurred in any business. According to the trade-off theory, indebtedness of proportional increase of costs in financial difficulties is counter balanced by tax benefits. Admittedly, bankruptcy has led to miss management of suppliers and customers and loss of confidence within several financial entities. In addition, financial theories in view address optimal ratios which becloud ideal ratios while considering the uniqueness of each entity. In fact, optimality is a variable within the theories.

According to Myers (I984),theories are founded on the premise "that investors know the possibility of confronting information asymmetry it's uses and when risky security are overvalued because any limitations could lead to inability to finance certain profitable investments" in Kenya, some of the pension fund organizations invest in areas which are already oversaturated leading to poor return on

investment. This has created indifference between static decision making process as per the policies and the dynamic procedures based on market forces while justifying the fact that there is no optimal capital structure. This blanket statement is contestable even though companies should operate in ideal optimal levels and leverages.

4. Pensions and Financial theories

Pension is "a predetermined sum paid by an individual as an amount he will be entitled upon retirement". Part of it is paid by the employee and the rest by employer. The fund management organization represents accompany to the pension plan members. While pension liabilities are economic liabilities because company must make good investment options according to financial times, (2019).In Kenya, the payment percentage is already stipulated by the constitution as part of deferred payments. It's an asset to an individual providing income at retirement. Such pension liabilities are also referred to as defined benefits (DB) with different funding and regulatory systems in place. Even so, Investment banks have published numerous articles which recognize pensions as debt -like and credit rating agencies which are treating unfunded pensions as debt in their analysis thereby correlating it with financial portfolios. Nevertheless, adoption of any relevant theory will guide the possible investment options and the predetermined future benefits foreseeable.

5. Financial theory applicability.

From the table below, we are able to analyze performance of a company over the years through financial ratios like debt to equity ratios. This can as well show us the leverage taken by the

firm.Hence high ratio is minimal use of debts to finance a company while low ratio shows the use of more debts to fund the assets. Going by this trend, we can deduce the performance of a company based on the variables from financial theories.

Table 1

Years	Short term debt	Lonf term Debt	Total Assets	Other Fixed Payments	Shareholders equity	working Capital	Funds flow	D/E
1	2000	5000	7000	8900	1900	-1900	15900	8.36842
2	3000	8000	11000	6000	-5000	5000	17000	-3.4
3	4000	9000	13000	7300	-5700	5700	20300	-3.5614
4	2000	7000	9000	8400	-600	600	17400	-29
5	5000	10000	15000	7000	-8000	8000	22000	-2.75
6	8000	9000	17000	20000	3000	-3000	37000	12.3333
7	6000	7000	13000	8000	-5000	5000	21000	-4.2
8	11000	13000	24000	30000	6000	-6000	54000	9
9	9000	11000	20000	13000	-7000	7000	33000	-4.7143
10	7000	13000	20000	27000	7000	-7000	47000	6.71429

Source: Field Data 2020

6. Research Hypotheses

$H0_1$: Short term debt structure has no significant effect on growth of pension funds in Kenya

$H0_2$: Long term debt structure has no significant effect on growth of pension funds in Kenya

$H0_3$: External debt structure has no significant effect on growth of pension funds in Kenya

$H0_4$: Internal debt structure has no significant effect on growth of pension funds in Kenya.

$H0_5$: The size of pension fund has no significant moderating effect on the effect of financial structure on growth of pension funds in Kenya.

7. Data and Methodology

The research study adopted quantitative research design to analyse the financial structure theories on growth of pension funds in Kenya. Using a probability sampling techniques, sample combination and

equal representation was chosen, sample size of 49 schemes based on Krejesie and Morgan 1970 population sample criterion table was established of which the target population was between 50 and 75.The study used secondary data of pension fund organizations from published financial statements for a period of 10 years covering year 2009- 2018. Financial statements provided quantitative data that was used in the analysis of dependent and independent variables under the study. Data was collected from published financial statements to specifically outline key variables of the study. A time-series asset-pricing tests based on individual pension funds financial structure returns was run. Regression model on growth was used which comprised of both independent and dependent variables based on analysis with moderating variables and without moderating variables.

8. Model Specification

Growth Model

1. Without moderating Variable

$$\mathbf{LnG} = \beta_0 + \beta_1 LnSD/R_{it} + \beta_2 LnLD/R_{it} + \beta_3 LnIE/R_{it} + \beta_4 LnEE/R_{it} + e$$

2. With moderating Variable

$$\mathbf{LnG} = \beta_0 + Z(\beta_1 LnSD/R_{it} + \beta_2 LnLD/R_{it} + \beta_3 LnIE/R_{it} + \beta_4 LnEE/R_{it} + e)$$

LnG =Growth in fund (Long term growth)
Ln = Growth
β_0 = Beta sign (β_0,β_1,β_2,β_3,β_4)
SD/R_{it} is short-term debt divided by total finance for firm i in time t
LD/R_{it} is long-term debt divided by total finance for firm i in time t
IE/R_{it} is Internal equity divided by total finance for firm i in time t
EE/R_{it} is external equity divided by total finance for firm i in time t
e_i is the error term

9. Statistical Analysis

9.1 Descriptive Statistics of the variables

Table 4.2 is a summary of descriptive statistics for the log of External equity, firm size, growth and dependent variable, internal equity, short term debt, total finance and long term debt. Total finance

has the highest mean while short term debt has the lowest mean followed by growth as dependent variable.

Table 2: Descriptive Statistics of the variables

Statistic	Ln_EE	Ln_FS	Ln_GR	Ln_IE	Ln_STD	Ln_TF	Ln_LTD
Mean	1.74241	3.24132	1.23500	3.26732	0.68113	14.3112	1.9648
Median	2.21996	3.68087	1.12339	3.32551	0.79743	15.1395	1.1002
Maximum	4.48595	4.48189	4.45758	4.54812	3.22516	18.0879	4.58
Minimum	-1.45128	-0.44952	-1.65172	2.12634	-3.21888	8.54394	-2.80
Std. Dev.	1.63086	1.15706	1.75187	0.66160	1.79131	2.24817	1.690
Skewness	-0.765	-1.73507	-0.08849	0.04292	-0.15289	-1.0164	-0.662
Kurtosis	2.86618	5.31926	2.26063	2.05694	2.20832	3.20937	-0.080
Jarque-Bera	4.22622	31.2122	1.03556	1.60664	1.29044	7.48225	4.22232
Probability	0.12086	0.00000	0.59584	0.44783	0.52454	0.02372	0.5632
Sum Sq	85.0174	146.641	53.1051	140.494	29.2889	615.383	96.28
Dev.	111.708	56.2298	128.901	18.3843	134.770	212.279	130.22

Source: Field Data 2020

Where;-
Ln_EE = External Equity log
Ln_FS = Firm Size log
Ln_GR = Growth log
Ln_IE = Internal Equity log
Ln_STD = Short Term Debt log
Ln_TF =Total Finance log
Ln_LTD = Long Term Debt log

Table 4.2 shows increase in mean value of total finance to 14.3112 within the last 10 years. But on individual scale, internal equity with a mean of 3.26732 tops the list while short term debt with 0.068113 is the least variable. This is a manifestation of preference of internal equity as immediate funding option while considering pecking order theory. Under maximum, internal equity has the highest maximum while short term debt has the least maximum. Consequently the lowest minimum is short term debt. This is an indication of both negative and positive association between growth and short term debt. On degree of standard deviation, short term debt has the highest margin of 1.79131 with internal equity showing the least at 0.66160.Only internal equity has is skewed positively. The rest of the variables are negatively skewed. Coefficient for skewness is always 0 while that of

kurtosis =3 but in between, we have the Jack Bera (JB). Consequently,JB test of normality was done where growth and short term debt where closer to zero with 1.03556 and 1.29044 respectively which means we cannot reject the normalcy assumption. The computation of JB helps us to establish the P value of Jack Bera.Internal equity has the strongest skewness with 0.04292.while the least kurtosis is 2.05694.

9.2 Correlation

The assumption for linearity was to explore the relationship between the predictors and the outcome variable. For this assumption to hold, the relationship should be linear. As indicated in Table 4.3, the relationship is linear between the growth of the firms and the various predictors examined. There was a positive relationship between external equity and growth in pension fund, a negative relationship was exhibited between firm size and growth in pension funds, internal equity had a positive relationship with growth in pension, short term debt exhibited a positive relationship with growth in pension funds; total finance had a positive relationship with growth in pension funds.

9.3 Correlation Matrix

Table 3 Correlation Matrix

	LN_STD	*LN_LTD*	*LN_EQ*	*LN_IE*	*LN_GROWTH*	*LN_FS*	*LN_TF*
LN_STD	1						
LN_LTD	0.639383	1					
LN_EQ	0.040237	0.165939	1				
LN_IE	0.085929	0.117069	-0.12354	1			
LN_GROWTH	-0.3324	-0.45989	0.072351	0.109484	1		
LN_FS	0.020659	-0.09984	-0.08038	-0.5452	-0.17248	1	
LN_TF	-0.48399	-0.28672	0.069942	0.121331	0.389236	-0.3419	1

Source: Field Data 2020

9.4 Regression

As depicted in Table below, the R squared coefficient is 0.110 implying that 11.0% of the growth of pension funds is explained by short term debt.

Table 4 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.332[a]	.110	.084	1.61153

In Table 4.8, the ANOVA was used to show the overall model significance. Since the p-value is less than 005, then short term debt had a significant effect on the growth of the pension funds in Kenya (F = 4.223 and p-value = 0.048) F-test is done to test the effect of independent variables on the dependent variable simultaneously. The F-statistic test basically shows whether all the independent variables included in the model jointly influence on the dependent variable. Based on the study results of the ANOVA Test or F-test in Table 4.5, obtained F-calculated was 4.223 greater the F critical (2.61) with significance of 0.000.Since the significance level of 0.001<0.05 we conclude that the set of independent variables affect the performance of pension funds (Y-dependent variable) and this shows that the overall model was significant.

Table 5 ANOVA for short term debt and growth of pension funds

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	10.968	1	10.968	4.223	.048[b]
	Residual	88.299	34	2.597		
	Total	99.266	35			

NB: F-critical Value = 2.61;

From Table 4.6, the regression equation can be written as:

$Y = 1.563-.483X_1$

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Table 6 ANOVA for short term debt and growth of pension funds

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	Total	99.266	35			

NB: F-critical Value = 2.61;

From Table 4.6, the regression equation can be written as:

$Y = 1.563-.483X_1$

10. Conclusion

I therefore recommend that internal equity and short term debts should always be prioritized while identifying any financial theory for adoption specifically through pecking order theory. Both positive and negative associations between Independent and dependent variables should prudently be ascertained in pursuit of any meaningful financial decisions. Ideal relationships between independent

and dependent variables can validate the financial theories by establishing their relevance in any debt equity analyses. It can be concluded that adoption of appropriate financial ideologies such as pecking order theory, contract theory, signaling theory or information signaling theory may predict improved asset allocation, value alteration on debt to equity among other feasible options. Consequently, propositions and desired ratios are also not directly related to the value of the firm or the firm size. Given above, the impact of tax should be considered while interrogation of information asymmetry from information signaling should form part of future prospect. As described, all stakeholders involved in investment options should actively participate in investment choices which forms part of contract theory. Investment priorities both in the short and long run should always be adhered. Information asymmetry which always creates misunderstanding between shareholders, investors and management of financial intermediaries should always be addressed on time. Capital asset pricing model which entails tax and dividend inclusion typically should always be addressed as per the guiding financial theories and principals.

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