

Determinants of Leverage of Savings and Credit Co-Operatives in Kenya: An Empirical Approach

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Abstract

This aim of this paper is to empirically investigate the determinants of leverage of Savings and Credit Co-operative Societies (Saccos). The study sample included 40 Sacco) registered by Sacco Society Regulatory Authority (SASRA) extended from the period 2010 to 2012. For the data analysis, regression model was employed; the explanatory variables comprised of firm size, growth rate, liquidity profitability and tangibility, whereas the explained variable was the leverage ratio. The results show that for Saccos; there were statistical significant relationships. The results from the study revealed that firm size has significant relationship with leverage at 99% confidence level, whereas liquidity and tangibility have significant relationship with leverage at 95% confidence level.

Keywords: *Leverage, Capital Structure, Savings and Credit Co-operative Societies, Sacco Society Regulatory Authority*

1. Introduction

This paper empirically investigates the determinants of leverage as part of capital structure in the period 2010 to 2012 of Saccos registered by Sasra through explaining factors influencing leverage. Alkhatib (2012) the theory of capital structure is one of the most important financial themes in corporate finance and various studies use capital structure theory to highlight the significance of debt financing. The Capital structure of a firm is defined by its leverage; that is a mix of debt and equity financing which is subject to different financial difficulties (Pandey (1984).

Leverage is viewed as a result of events that determines companies' source of financing to run the

business. Modigliani and Miller (1958) were the pioneers of the theory assumed that a business's value is distinct from its debt and equity mix of financing but ignoring issues that play a positive role in determining the best capital structure such as corporate taxes. Consequently, Modigliani and Miller (1963) reaffirmed that corporate taxes are significant characteristic in of capital structure. Copeland and Weston (1983) stated that this depends on the contention that the weighted average cost of capital stays constant as leverage changes. Companies that possess high level of leverage in their capital structure are able to decrease their free cash flow. Companies through utilizing the additional leverage; the free cash flow as an alternative of being inadequately employed by the management given instantly to the debtors and is withdrawn from the company as interest expenses. Company's capital structure that includes a large amount of debt/equity tends to increase the risk of bankruptcy; that is when company's total debts equal to total assets (Khan, A. *et al.*, 2012). Free cash flow denotes the cash that a company is capable of generating after putting aside the cash required to preserve their assets. Free cash flow also permits a company to track investment prospects as they arise to improve shareholder wealth.

The right financing decision normally relies on the margin of financing that Saccos expect in the future; certain Saccos either have outflow (fund payments) or inflow of funds (raising funds) in which case it would be in debt and or equity structure. The theory also elucidates that Saccos commonly use mix of debt and equity financing

The pecking order theory is when Saccos favor internal to external funding and if external funding is perused; if external funding is used then debt funding is used rather than equity Myers (1984). The theory also demonstrates that financing can be obtained from three different sources. Firstly, is internal funding which is the least expensive, secondly is debt which is more expensive and finally is external equity sources which is the most expensive of all. Saccos rather have their source of funds raised internally as their first choice; the second choice would be through raising debts from external sources.

2. Overview of Saccos in Kenya

Sacco Societies form a significant part of the larger Cooperative sector in Kenya. The Ministry of Co-operative Development and Marketing (MoCD&M) is responsible for the development of the Cooperative sector through policy and legal framework to facilitate attainment of the national social-economic goals in Kenya. Saccos comprise over 50% of all cooperatives in Kenya and as financial institutions they play a critical role of financial intermediation in Kenya's financial landscape focusing mostly on personal development, small and micro enterprise sector of the economy. According to the Supervision Report (2010) the sub sector comprises of large Saccos, some of which have a total asset base of over Kshs. 15 billion and the very small Saccos having asset base of under Kshs. 10 million and are well spread across the country from the large cities to the rural Kenya. Unlike other commercial establishments, co-operatives are guided by the cooperative philosophy which is based on seven Co-operative Principles formulated by International Co-operative Alliance).

The Sacco Societies Regulatory Authority (SASRA) is a creation of the Sacco Societies Act, 2008. The Authority's establishment falls within the broad Government of Kenya's reform process in the financial sector which has the dual objectives of protecting the interests of Sacco members and ensuring public confidence towards the Sacco subsector. This ultimately will spur economic growth through mobilization of domestic savings, deepening financial access and affordable credit to Sacco members (Ademba, 2010)

3. Literature Review

3.0 Determinants of leverage and variables

Leverage refers to the extent to which Saccos make use of their money borrowings (debts financing) to increase profitability and is measured by total liabilities to equity. This study examines the influence of the following five variables that were selected from previous literature on leverage; they include size, liquidity, profitability, growth rate, and tangibility.

3.1 Firm Size

Size is measured by the natural logarithm of total assets. As stated in the trade-off theory; Saccos decide how much debt/equity financing it requires by weighing the costs and benefits of such decision. Large sized Saccos normally have more business diversification than small Saccos in terms of credit ratings, constant cash flow, and lower risk of being dissolved. According to Qureshi et al, 2012 large firms are capable of decreasing transaction costs of issuing long-term debt at a favorable low interest and also it is easier for large sized firms to raise funds from creditors, a positive sign is expected between firm size and leverage

3.2 Growth

Growth is defined as the annual percentage growth in the Saccos' total assets between two successive years divided by the preceding year. An increase in growth rate is regarded as an indication of a firm's financial strength. Saccos with large volume of growth rate need to raise additional financial support to back up their capital expenditure strategies. Gaud et al. 2005 described Growth as intangible assets that are rather difficult collateralize. There were mixed results in terms of statistical relationship, past studies carried out showed a positive relationship between firm growth and leverage (Baskin, 1989; Harriss and Raviv, 1991; Allen, 1993; Lewellen W.G and Roden D.M., 1995; while studies by Smith and watts in 1992, Barclay & Smith, 2005 and Sheikh and Wang, 2011 showed negative relationship.

3.3 Profitability

Profitability is computed as the return on company's total assets. The pecking-order theory suggest that highly profitable companies tend to reduce their external funding; which at the end signals to creditors that they have low bankruptcy risk. (Sheikh and Wang, 2011). In other cases, profitable firms can issue debt at low rates of interest since they are seen as less risky by the creditors; furthermore, profitable Saccos are able to generate large earnings use a lesser amount of debt capital than Saccos that make little profit (Wessels and Titman , 1988; Mazur, 2007; Rajan & Zingales, 1995; Abor, 2005). In addition, profitable firms are inclined to decrease information asymmetry to creditor, investors and interested users through the use of profitability (Myers, 1984; Liaqat. A., 2011; Qureshi et al, 2012). Therefore, there is a relationship between leverage and profitability (John and Williams, 1985; Liaqat. A., 2011; (Tong and Green, 2005; Taylor and Al-Najjar, 2008; Mazur, 2007)

3.4 Liquidity

Liquidity is computed by dividing current assets by current liability. Liquidity represents the capital amount that is available for use as expenditure or in investment. It also shows the ability of a firm to meet their current liabilities as and when they fall due (Ross, 1977). Excessive amounts of current assets owned by a firm would perhaps increase the chances of internal funding resulting in a relation between leverage and liquidity (Myers, 1977, 1984; Amalendu Bhunia, 2012; Qureshi et al 2012).Sufficient liquidity has the impact on the financial strength of a firm (Bei Z, Wijewardana W.P, 2012). Several studies found a statistical relationship between liquidity and leverage (Harris and Raviv; 1990; Al-Najjar; 2011; Al-Najjar and Taylor, 2008; Eriotis et al., 2007; Zingales & Rajan, 1995.

3.5 Tangibility

Tangibility is a fundamental element of determining the firm's leverage. It is computed by dividing fixed assets by total assets of a firm. Organizations with little tangible assets generally have low leverage ratio and therefore would be difficult to collateralize such assets to raise additional funds accompanied with the risk of bankruptcy. On the other hand firms with large volume tangible assets are more likely to collateralize their assets to raise additional funds with little risk due to the investments diversifications which at the end reduces the risk of bankruptcy (Jensen, 1976; Qureshi et al 2012; Zingales & Rajan (1995). Therefore, a positive sign is expected between leverage and tangibility of assets (Wessels and Titman , 1988; Zingales & Rajan, 1995; Supanvanij, 2006;Wald, 1999; Chen, 2003;;

4. Methodology, data Analysis and Discussions

The sample data were extracted from 40 Savings and Credit Co-operative Societies (Saccos) registered by Sacco Society Regulatory Authority (SASRA) extended from the period 2010 to 2012. Then, the following multiple regression model was performed:

Leverage = $a + \beta_1$ Size + β_2 Growth + β_3 Profitability + β_4 Liquidity + β_5 Tangibility

Table 3 displays the regression analysis results for the 40 Savings and Credit Co-operative Societies which reveal statistical significant relationship between leverage and the explanatory variables (Firm size, Liquidity and Tangibility) used in the study, this finding is consistent with the results of previous studies such as (Zingales & Rajan, 1995; Akhtar & Oliver, 2009; Wald, 1999; Supanvanij, 2006; Liaqat. A., 2011; Wessels and Titman , 1988; Alkhatib 2012).

Table 2 displays the correlation between the leverage and the explanatory variables. Firm size was found to have statistical significance relationship with leverage at 99% confidence interval. Liquidity was found to have statistical significance relationship with leverage at 95% confidence interval as shown in Table 2; the result is consistent with previous studies (Raviv and Harriss, 1991; Alnajjar, B., 2011; Alkhatib 2012). The result of tangibility was found to have statistical significance relationship with leverage at 95% confidence interval as shown in Table 2; this is consistent with previous studies (Zingales & Rajan 1995; Wessels and Titman , 1988;; Wald, 1999; Supanvanij, 2006; Akhtar & Oliver, 2009; Liaqat. A., 2011, Alkhatib 2012). The finding of liquidity is consistent with previous studies (Raviv and Harriss, 1991; Alnajjar, B., 2011). The rest of the variables (growth and profitability) the results showed that there was no significant relationship with leverage.

5. Conclusion

This study is a replica of one by Alkhatib (2012) on the determinants of leverage of listed companies. In his study he sampled 121 listed companies on the Jordan stock exchange that was between 2007 to 2010. He only dealt with industrial and service sectors. The results from industrial sector indicated that liquidity and tangibility had significant relationship with leverage; on the other hand service sector revealed that growth, tangibility and liquidity had significant relationship with leverage.

This study extends earlier empirical work on leverage determinant. The objective of the study was set out to explore the impact of the explanatory variable used in the study (firm's size, liquidity, profitability, growth and tangibility) on leverage in Saccos registered by Sasra. The study also adds value to a clearer knowledge of the financing conduct of Saccos used in the sample. The results confirm that

firm size, liquidity and tangibility are related and have an impact on leverage. The size of the Saccos is very important factor; it has a favorable position over smaller Saccos in terms of credit ratings. In addition, these results clearly describe the financing approach by Saccos and also assist decision makers to establish their capital structure in order to improve shareholders wealth.

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Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Leverage	40	2.89	664.09	73.1817	141.11733
FirmSize	40	109583398.00	17029390479.00	2363646366.4250	3732190137.44329
Growth	40	-13.15	14.20	4.5250	4.94188
Profitability	40	.49	23.61	12.6223	5.40236
Liquidity	40	.19	8.73	2.0618	2.02223
Tangibility	40	.00	.37	.0643	.08708
Valid N (listwise)	40				

Table 2: Correlations

			Leverage	Firm Size	Growth	Profitability	Liquidity	Tangibility
Spearman's	Leverage	Correlation Coefficient	1.000	.560**	.092	-.193	.334*	.374*
		Sig. (2-tailed)	.	.000	.572	.232	.035	.017
	Firm Size	Correlation Coefficient	.560**	1.000	.111	-.483**	.696**	.588**
		Sig. (2-tailed)	.000	.	.497	.002	.000	.000
	Growth	Correlation Coefficient	.092	.111	1.000	.056	.045	-.198
		Sig. (2-tailed)	.572	.497	.	.729	.784	.220
	Profitability	Correlation Coefficient	-.193	-.483**	.056	1.000	-.634**	-.294
		Sig. (2-tailed)	.232	.002	.729	.	.000	.066
	Liquidity	Correlation Coefficient	.334*	.696**	.045	-.634**	1.000	.363*
		Sig. (2-tailed)	.035	.000	.784	.000	.	.021
	Tangibility	Correlation Coefficient	.374*	.588**	-.198	-.294	.363*	1.000
		Sig. (2-tailed)	.017	.000	.220	.066	.021	.

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

c. List wise N = 40

Table 3: Linear Regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-68.351	.823		-.815	.421
Firm Size	2.046E-008	.000	.541	2.895	.007
Growth	-2.993	.402	-.105	-.680	.501
Profitability	6.524	.683	.250	1.393	.173
Liquidity	6.074	.560	.087	.417	.679
Tangibility	184.437	.492	.114	.767	.448

a. Dependent Variable: Leverage