Capital Management Risk and Value of the Firm: Perspectives from Private Equity Financial Firms in Kenya

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ABSTRACT

Purpose
This study sought to explore the effect of capital management risk on value of the firm among private equity financial firms in Kenya.

Design/methodology/approach
Anchored on the agency theory and guided by positivism research philosophy, descriptive research design as well as causal research design, the study surveyed 115 savings and credit societies regulated by Sacco Societies Regulatory Authority. A panel regression model detailing the interaction between capital risk management and firm's value was set.

Findings
The study found that capital management risk significantly affects value of SACCOs in Kenya such that a unit change in capital adequacy ratio increases value of SACCO.

Originality/value
The results of the study supported the propositions of agency theory which postulates that goal incongruence and asymmetric information may generate agency problems forcing the owners of the firm to incur agency costs which reduce the cash flows available for investment leading to sub-optimization and thus reducing the value of the firm. We recommend management of SACCOs in Kenya to seek to improve their capital adequacy ratio by increasing their tier one and tier two capital so as to increase their overall core capital.

1. Introduction

The existence of Savings and Credit Cooperative Societies (SACCOS) in the financial sector has over the years brought tremendous improvement in financial deepening and economic growth in the world (Sadgrove, 2016), This is mainly because they offer credit to individuals and small and medium enterprises, who would otherwise have difficulties accessing credit facilities in commercial banks, at competitive interest rates (Christoffersen, 2012). However, they are exposed to a number of risks resulting from their operations such as financial risk, market risk, credit/default risk, interest rate risk and political risk. Since the institutions are in the financial sector, their dominant risk according to Greuning and Bratanovic (2009) is financial risks. Additionally, Hutson and Stevenson, (2010) observed that financial risk is one of the main risks facing SACCOs, and include liquidity risk, interest rate risk, credit risk foreign exchange risk, and capital management risk. Thus, their survival is largely determined by how well they manage their financial risks. SACCOs must therefore, aim at achieving an acceptable equilibrium between risk and return while

minimizing possible unacceptable outcomes on their performance.

In managing their capital risk, (Bessis, 2011) noted that business organisations must start by setting objectives, identifying risk, assessing risk, establishing control activities, monitoring and communicating risk exposures on time to reduce and eliminate the exposures to loss by the institution. Askari, Iqbal and Mirakhor (2011) also noted that a robust capital risk management framework could enhance financial performance of organizations by helping them reduce their exposure to risks. In concurrence, McNeil, Frey and Embrechts (2015) concluded that capital risk management help companies to reduce costs, increase profits, widen their client base and finally, to make the cost structure produce maximum results.

SACCOs in Kenya form an integral part of the financial sector. Ayieko (2016) observed that there are over 16,000 Co-operative societies with more than 14 million members making it the largest Sacco movement in Africa (World Bank, 2016). Additionally, of the total savings mobilised and loans advanced by SACCOS in Africa, the subsector in Kenya contributes nearly 62% of the savings and 65% of the loans thus making it the

most influential Sacco movement in Africa. Currently, over 30 million Kenyans constituting 67% of the entire population, depend on the co-operative related activities, directly or indirectly, for their livelihoods. Furthermore, SACCOs control slightly over 30% of Kenya's GDP and accounts for 80% of the total accumulated savings. In addition, the co-operative movement in Kenya has been regarded as a key pillar in achievement of Vision 2030 through mobilization of savings and developing demand driven financial products, which encourage members to save additional resources (ROK, 2008).

The agency theory developed by Jensen and Meckling (1976) describes agency relationship between the shareholders and the management as a major concern for management and investors. According to the theorist firm owners who are the principal employ managers to act as their agents and perform some functions on their behalf. However, manager's interests sometimes differ from that of their bosses bringing about a conflict of interest (Mustapha & Che Ahmad, 2011). Although SACCOS are not listed in the Nairobi Security Exchange (NSE) members of the SACCO who contribute their capital towards the SACCO have no direct control over the management of their business. This forces the shareholders to incur agency costs such as monitoring costs, contracting costs and residual loss to monitor the activities of the and deter the management from engaging in activities hindering achievement of their wealth maximization goal (Hutson &Stevenson Heracleous, 2010). These costs tend to reduce profitability of the firm which in turn reduces the ability of the firm to maximise wealth and value.

Additionally, since the value of the firm is determined by the market value of equity and market value of the debt, Gill, Biger and Mathur (2010) notes that the debt holders will seek to supervise the implementation of the funds supplied to the firm. When the value of the firm increases the risk exposure of debt holders is reduced as a result of increased equity base. On the contrary, should the management mis-appropriate the finances, Hoffmann (2011) conclude that capital management risk will increase and creditors will be forced to intervene which may adversely affect the performance of the firm.

Existing financial discourse has mainly revolved around what contributes to the value of the firm (Fama & French, 2002; Christoffersen, 2012). Hutson and

Stevenson (2010) found that there are practical problems experienced in determining the value of the firm associated with uncertainty and the instability of factors that influence equity holders' income, a factor highly attributed to the value of the firm. Saunders and Allen (2010), also noted that firm value is influenced by a number of complex and differentiated factors including firm levered level, operational efficiency, liquidity level and growth capacity (Fama & French, 2002; Minnis, 2011). Literature also shows a non-linear relationship between gearing and the value of the firm. Chen, Chung, Hsu and Wu (2010) concluded that the value of the firm is influenced by leverage and that the tax shield from debt represents a significant proportion of total value for many companies, projects, and transactions. The study thus explored the effect of capital management risk on value of the firm among SACCOs in Kenya. To achieve this objective the study tested the hypothesis that:

HO: Capital risk has no significant effect on value of the firm among SACCOs in Kenya

2.Research Methodology

The study was guided by positivism epistemological research philosophy which is characterized by the belief that knowledge should be based on facts and no abstractions (Neuman, 2010). In line with philosophical foundations in the study, both descriptive research design and causal research design were used. Descriptive research design was used because the study sought to describe characteristics of the SACCOS and the variables being studied. Causal research design was employed to determine the extent and nature of cause-and-effect relationship existing between capital management risk and value of SACCOs in Kenya. The target population for this study consisted of all the 164 Savings and Credit Co-operative Societies licensed by Sacco Societies Regulatory Authority (SASRA) to operate in Kenya as at 31st January 2017. The population was stratified into eight clusters as categorised by SASRA. A sample size of 115 respondents was randomly selected from the target population of 164. The sample size was calculated using the Cochran (1977) formula.

Table1: The Sampling Matrix

ADMINISTRATIVE REGIONS	TOTAL NO.	Ratio	Sample Size
Central Region	24	0.70	17
Coast Region	10	0.70	7
Eastern Region	29	0.70	20
Nairobi Region	41	0.70	29
North Eastern Region	1	0.70	1
Nyanza Region	11	0.70	8
Rift Valley Region	36	0.70	25
Western Region	11	0.70	8
Total	**164**		**115**

Source: Author (2019)

Data was analysed using descriptive statistics and inferential data analysis via Pearson correlation coefficient and panel regression model involving cross-sectional data collected from selected SACCOs for a period of eight years. In testing the fitness of the model, the coefficient of determination R^2 was used to measure

the extent to which the variation in firm value is explained by the variations in capital management risk. F-statistic was also computed at 5% significance level to test whether there is any significant relationship between capital risk management and value of SACCOs in Kenya. This analysis was done using STATA software and the findings presented in form of a research report. In testing the hypothesis, the student's (t) test and the corresponding p-value at 0.05 significance level were used. The adopted regression model was as follows:

$$Fv_{it} = \beta_o + \beta_1 Cmr_{it} + \epsilon_{it}$$

The study also sought to determine the controlling effect of firm size on the value of the firm. To test the control effect of firm size, the study used the same regression model as specified above. Agnew (2017) argued that a control variable is a factor that is assumed to remain constant or unchanged throughout the course of analysis. In this study the firm size as measured through total assets was evaluated as a control variable. Firm size was introduced in the model and value of the firm regressed on capital management risk as specified in the following model;

$$Fv_{it} = \beta_o + \beta_1 Cmr_{it} + \beta_2 Fs_{it} + \epsilon_{it}$$

Where: - Fv = Firm Value, β_o, β_1, = Constants, Fs_{it} = Firm Size and ϵ = Error Term

3. Results and Discussions

The study relied on descriptive statistics as well as inferential statistics to make the conclusions. Table 2 shows the analysis of variable characteristics.

Table 2: Variable Characteristics

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
Capital Management Risk	410	7.617226	25.52715	.000759	281.6402	0.600	2.877
Value of the Firm	410	1.517546	3.517641	-11.6478	33.85699	0.768	3.1059

Source; Research data (2018)

The descriptive results in Table 2 above revealed that capital management risk as measured through Capital Adequacy Ratio (CAR) had a mean score of 7.617226 and a standard deviation of 25.52715. These results shows that on average, the SACCOs financial strength to cushion depositors' funds and absorbing a reasonable amount of losses before they become insolvent using their capital and assets were lower than the current minimum ratio of capital to risk-weighted assets of 8% under Basel II and 10.5% under Basel III. The standard deviation was also noted to be very high which shows that there was a high variation among SACCOs in the ability to absorb losses. This is evidenced by the wide range in the observations with a minimum of .0007592 and a maximum of 281.6402. Capital management risk had a skewness value of 0.600 and a Kurtosis value of 2.877. Since the variable had skewness values of less than one and Kurtosis values averaging three the study concluded that the data was normally distributed.
Firm value showed a mean of 1.517546 billion shillings and a standard deviation of 3.517641 billion shillings. On the basis of these results it may be deduced that there was high variation in the value of the SACCOs in Kenya with some reporting negative values and others reporting positive values. This is evidenced by the values ranging from a minimum of -11.64775 billion shillings to a maximum of 33.85699 billion shillings. This variation may be explained by the various elements that influenced the factors of firm value such as interest rate risk, credit risk, capital management risk and liquidity risk. In this study capital expenditure was measured through investment in fixed assets. However, SACCOs are required by regulations 13 (2) of the SACCO societies regulations 2010, to maintain 15% of their savings deposits in liquid assets. Since capital expenditure was an integral part of value of the firm, some SACCOs had negative values for their firm value. Similarly, the study relied on earnings before interest and taxes (EBIT) and non-cash working capital in measuring the value of the firm which significantly affected the value of the firm. The variable had a skewness value of 0.768 and a Kurtosis value of 3.1059. The study thus concluded that the data on the variable was normally distributed.

Table 3: Regressing Capital Management Risk on firm value

Source	SS	Df	MS	Number of obs	= 410
				F (1, 408)	= 1782.36
Model	4118.18897	1	4118.18897	Prob > F	= 0.0008
Residual	942.6948	408	2.31053	R-squared	= 0.8137
				Adj R-squared	= 0.8132
Total	5060.88378	409	12.373799	Root MSE	= 3.5118

value of the firm	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Capital	0.104639	0.006802	15.383	0.000	-0.0029083	0.023836

Management Risk						
_cons	1.43784	0.1810093	7.94	0.000	1.082013	1.793667

Source; Research data (2018)

To test the effect of capital management risk on the value of the firm, the study tested the null hypothesis that capital management risk has no significant effect on value of the firm among SACCOs in Kenya. To achieve this value of the firm was regressed on capital management risk and the results in Table 3 were obtained.

The results are summarised as follows:

$$Fv_{it} = 1.43784 + 0.104\ Cmr_{it}$$

The results in Table 3 revealed that capital management risk had a positive coefficient of 0.104639 meaning that, holding all other factors constant, increasing CAR by one unit would result in a 0.104639 increase in the value of the SACCO. The results also show that the coefficient for the constant was 1.43784 implying that if capital management risk was held constant at zero, value of the SACCO would be equal to 1.43784. The results also showed that the coefficient of capital management risk had a t-statistic value of 15.383. This t-value was found to be less than the t-critical of 2.776. Thus, based on the

t-value, the study rejected the null hypothesis and conclude that capital management risk has a significant effect on value of the firm among SACCOs in Kenya. The study further found that capital management risk coefficient had a P-value of 0.000 P-value of 0.000 which was less than the significance level of 0.05. Based on the P-value, the study also rejected the null hypothesis and concluded that capital management risk has a significant effect on value of the firm among SACCOs in Kenya.

The results shown in Table 2 showed that the adjusted R^2 was 0.8132 meaning that the Model could predict 81.32% of the variations in value of the firm. The results also showed that the F-statistic for the model was 1782.36 which was greater than the F-critical of 3.8644. The study therefore found that the model was fit to predict value of the firm. Based on P-value, the study found that the P-value for the model was 0.0008 which was less than the significance level of 0.05. The study therefore concluded that the model was fit to predict firm value.

When, firm size was introduced in to the model, the results were as shown in Table 4.

Table 4: Regressing Capital Risk Management on Firm Value Controlling for Size

Source	SS	Df	MS	Number of obs	=	410
				F(2, 407)	=	727.709
Model	54.9135619	2	1977.4568	Prob > F	=	0.001
Residual	5005.97022	407	2.7174	R-squared	=	0.7815
				Adj R-squared	=	0.7804
Total	5060.88378	409	12.373799	Root MSE	=	3.5071
Value of the firm	**Coef.**	**Std. Err.**	**t**	**P>t**	**[95% Conf.**	**Interval]**
Capital Management Risk	0.0744	0.0071	10.472	0.000	-.0065284	.214142
Firm size	.4616023	.3191397	1.45	0.009	1.08897	.1657657
_cons	5.674121	2.934426	1.93	0.054	-.0944035	11.44264

Source; Research data (2018)

The results were summarised as follows:

$$Fv_{it} = 5.674121 + 0.0744Cmr_{it} + 0.4616Fs_{it}$$

It was noted from the table that the capital management risk had a coefficient of 0.0744 meaning that holding firm size constant, a unit increase in CAR which measured capital risk management would lead to a 0.0744 increase in risk. At the same time, firm size had a coefficient of 0.4616 implying that if capital risk management was held constant, a unit increase in total assets would lead to 46.16% increase in the value of the firm. The two variables were significant in predicting firm value since their P-values were less than the 0.05 significance level. The results shown in Table 3 above also indicated that the value of adjusted R squared was 0.7804 implying that both capital management risk and

firm size predicted 78.04 % of all the variations in the value of the firm. The results further indicated that 21.06 of all the variations in the value of the firm were caused by other factors other than capital management risk and firm size. To test the fitness of the model, the study used the F-statistic (2, 407= 727.709) which was found to be greater than F-critical value of 3.0179 at the same time the P-Value for the model was also less than the 0.05 significance level. The study thus concluded that the model was fit in predicting firm value. Based on the results shown in Table 3 and Table 4 the study found that the value of adjusted R squared reduced by 0.0328 from 0.8132 to 0.7804 a difference that may be attributed to the controlling effect of firm size. At the same time the coefficient of firm size was significant indicating that it had a significant controlling effect.

In summary, the study results on the variable showed that capital management risk as measured by capital adequacy ratio as the ratio of core capital to risk weighted assets of the firm showed the SACCOs had financial strength of cushioning depositors' funds and absorbing a reasonable amount of losses before they become insolvent using their capital and assets were lower than the current minimum ratio of capital to risk-weighted assets of 8% percent under Basel II and 10.5% percent under Basel III. Regression results showed that an increase in capital adequacy would lead to an increase in value of the firm. Hypothesis test results showed that capital management risk had a significant effect on value of the firm among SACCOs in Kenya. Similarly, the study established that firm size had a significant controlling effect on firm value.

These results were consistent with the findings of Hoffmann (2011) who showed a negative impact of money on the profitability of the banks implying that when a company has a higher capital ratio, it is likely to suffer lower profitability. Since profitability is directly related to value of the firm it means that these results agree with the current study. In addition, the results agreed with the findings of Karkrah and Ameyaw (2010) who revealed that the equity ratio which is the measure of the capital strength of the banks displayed a positive relation with the banks ROA. This implies that a decrease in equity ratio exposes the firm to capital risk which are the findings of the study. Further, Gill, Biger and Mathur (2010) found a significant relationship between the cash conversion cycle and profitability and firm value which agreed with the current study. Finally, the findings were in congruence with the findings of Mugwang'a (2014) who showed that there was no existence of a significant relationship between capital adequacy and the following and liquidity risk, credit risk, interest rate risk, return on assets ratio, return on equity ratio and revenue power ratio. Further the results were in agreement with the findings of Murkomen (2016) who found that operating efficiency is positively related to capital adequacy. This is because operational efficiency may lead to better performance and increased firm value. However, the results were inconsistent with the findings of Havrylchyk and Jurzyk (2011) who indicated that there is a positive influence of capital management risk on profitability.

4. Conclusions and Recommendations

Following the results obtained, the study concluded that capital management risk significantly affects value of SACCOs in Kenya. The study also concluded that a unit change in capital adequacy ratio increases value of SACCOs in Kenya. Further the study concluded that firm size had a significant controlling effect on firm value. Based on the theoretical foundation, the study found that the findings of this study were consistent with the propositions of agency theory credited to Jensen and Meckling (1976) who postulated that goal incongruence and asymmetry information may give rise for agency problems including adverse selection and moral hazard problems leading to sub optimisation of wealth maximisation as envisaged by the owners of the firm. When this happens, the owners of the firm would incur agency costs to deter the management to engage in activities hindering achievement of their wealth maximization. These costs would reduce the cash flows available for investment and thus reducing the value of the firm.

The findings of this study contribute to the body of knowledge by supporting the provisions of agency theory that misappropriation of capital reduces creditors' confidence which adversely affect firm value. Moreover, the study added to the body of knowledge empirically by showing the relationship that exist between capital management and value of SACCOs in Kenya. The study results showed that there is a significant direct interaction between capital management risk and value of SACCOs in Kenya.

Based on the conclusions reached in this study it is recommended that the management of SACCOs in Kenya should seek to improve their capital adequacy ratio by increasing their tier one capital and tier to capital so as to increase their overall core capital. This may be achieved by recruiting more members in to their SACCOSs so as to increase share capital which form a significant part of the core capital. Further, the study recommends that the management should reduce the proportion of their risky assets so as to improve their capital adequacy ratio.

However, this study was conducted among SACCOs regulated by Sacco Societies Regulatory Authority. This means that the finding of this study was only applicable to such SACCOs in Kenya which are registered by SASRA and other financial institutions with similar characteristics and the findings cannot therefore be inferred on all SACCOs. The results therefore suffer from generalizability since they may not be applicable to other financial institutions such as commercial bank and other public equity firms. Therefore, the study suggests that other studies be conducted among SACCOs not regulated by SASRA to establish if the findings in this study would concur. In addition, since these results were based on SACCOs, the study recommends that another study be conducted among other financial institutions such as Micro Finance Institution and commercial banks in Kenya to determine if similar results would be obtained.

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