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AN ASSESSMENT OF THE FACTORS THAT AFFECT THE FINANCIAL PERFORMANCE OF THE CROSS-LISTED COMPANIES IN THE RWANDA STOCK EXCHANGE

Doreen Muheirwe, Dr Florence Memba and Dr Kule Julius Warren
Jomo Kenyatta University of Agriculture & Technology, Kigali Rwanda

ABSTRACT: *This research study entitled An Assessment of the Factors that Affect the Financial Performance of the Cross-Listed Companies in the Rwanda Stock Exchange aimed at assessing the factors that affect the financial performance of the cross listed companies on the RSE. As a guidance, the research examined the relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE, assessed how the regulation framework affect the financial performance of the cross-listed companies on the RSE feature, and finally determined how technology affects the performance of cross-listed companies. The companies under consideration were the primary stakeholder of the RSE totalling to 14 firms which included Capital Market Authority, Rwanda Stock Exchange, the 9 brokerage firms and the 3 cross listed firms in the RSE employing 97 workers. Through a descriptive survey design, a sample size of 67 participants were selected from the 97 workers and 100 other informants identified purposively and their responses to various data collection tools particularly questionnaires and interview guides captured for analysis. The data were analysed through Hermeneutics, Thematic analysis, and Multiple Regression techniques to answer the questions that the research ventured out to investigate. The result of the analysis showed that there was a negative correlation between awareness and financial performance of the firms, regulation framework was positive and significant with r (67) = .684, P = .037, while technology correlated with r = .506, p = .094. Market capitalization of the domestic companies was larger than that of cross-listed, and return on equity of the domestic firms was better than for the cross-listed companies. Generally the cross-listed companies did not perform any better than the domestic firms though overall the public awareness, technology and regulation framework positively correlated with financial performance of the cross-listed firms. The recommendation is that more awareness strategy needed to be devised so as to increase public awareness of investors and cross-listing companies need to be motivated by other factors other than making profits when choosing.*

KEYWORDS: Financial Performance, Stock Exchange, Market Capitalization, Profit, Capital Market, Rwanda.

INTRODUCTION

Compared to the past, the number of crossed listings from emerging markets has grown significantly and Geranio(2012) observes that more firms have increasingly listed their shares for trading on at least two stock exchanges located in different countries. Gagnon and Karolyi (2010) report that about 3,000 firms had two or more listings in 2008 and highlight that managers' appetite for international cross-listings does not fade, despite increasing market integration. A company is said to cross list its share when its equity shares on one or more foreign stock exchange in addition to its domestic exchange.

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Cross listing is driven by the desire to raise capital, the globalization revolution and the opening up of financial markets of most countries. The celebrated benefits of this trend as enumerated by Karolyi (2006)and King and King & Mittoo (2007)are increased liquidity, reduction in the cost of capital, broadening stakeholder base, and bonding of firms to stronger legal frameworks. These factors have popularised cross listing that State (2014) forwarded an observation in which he described the high affinity of nations around the globe including developing countries for it as a financial strategy to boost their markets.

China has shown an active role in overseas listing activities and according to Ritter (2013), there were142 Chinese firms cross listed in the US. Similarly European companies have listed on the New York Stock Exchange (NYSE), and companies from emerging market countries such as Israel and India have listed not only on the NYSE, but on various other American and European exchanges such as the NASDAQ and the London Stock Exchange (LSE). In addition to public companies seeking "dual listings," some firms are choosing to go public for the first time on an overseas exchange (Chemmanur *et al,* 2008).

Cross-listing has gained significance over the past few years since the signing of the East Africa Community treaty in 1999. According to Mwanza (2006), Kenyan companies such as Nation Media Group, Kenya Airways, Kenya Commercial Bank, Jubilee Holdings, Equity Bank and East African Breweries have listed in Uganda, Tanzania and Rwanda with the aim of increasing their visibility and distinguishing themselves from others in the region (Onyuma *et al,* 2012). The cross-listing of companies within East African Community in the Rwandan Security Exchange is a great development for the Rwandan Capital market that only had domestic companies and characterized as poorly developed (Bank, 2009).

Rwanda Stock Exchange (RSE) is the principle stock market of Rwanda. It was incorporated in 2011and this organization is regulated by Capital Markets Authority which reports to MINECOFIN. Before it was established in 2011, it used to operate as Rwanda over the Counter Exchange and by then it had two cross-listed companies which are KCB which was cross-listed on the stock on 18th June, 2009 and NMG which was cross-listed on 2nd November, 2011.

The Rwanda Stock Exchange (RSE) has had an influx of foreign firms. All the cross-listed companies on RSE come from within East Africa, mainly from the Nairobi Stock Exchange; these include Kenya Commercial Bank (KCB), Nation Media Group (NMG) and now Uchumi Supermarkets. The integration of East African Stocks has eased and encouraged firms to cross list in the region which were finalized once the appropriate regulatory framework is in place. The markets in the region aim to facilitate the availability of listed securities in the four markets and cross listing is seen as a key activity to achieving this objective (Onyuma *et al,* 2012).

The RSE operates on daily basis with five market players. The market players are locally listed like Bank of Kigali and Bralirwa and the rest are cross listed ones KCB, NMG and Uchumi. The 2013 annual report and financial statements of CMA shows that the crossed companies did not perform well. This is measured from the number of shares traded and equity turnover. As compared to their counter parts that are locally listed on RSE, all the cross-listed companies have sold averagely Rwf7,000 shares that are far less than Rwf 93.15m for the locally listed companies(CMA, 2013). The turnover is still very low within the cross-listed companies. In 2013 the best performing cross-listed company had an equity turnover of Rwf 1,000,000 which was a decline from Rwf 1,100,000 that was the turnover of 2012.

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Statement of the problem

Over the last two decades there has been acceleration towards financial globalization as witnessed by increase in cross-country foreign assets transfer. This has been the consequence of the international liberalization of capital flows as well as of the technological progress (Magembe, 2011).

The benefits accredited to cross listing could help address the low turnover and shares trading at the Rwanda Stock Exchange compounds which since 2013 have been reported to be unattractive for investors as reported by the Capital Market Authority report of 2014 (CMA, 2014). Research has shown that cross border listing improves financial performance of cross-listing firms(Onyuma, Mugo, &Karuiya, 2012)and according to Melvin and Tonone (2003),international cross-listing gives firms a competitive advantage over their rivals.

Rwanda Stock Exchange has listed a number of companies both domestic and foreign in the near past. However the competitive advantages of the foreign firms such as Kenya Commercial Bank (KCB) and Nation Media Group (NMG) that listed in 2009 and 2010 respectively over the domestic Bank of Kigali (BK) and Bralirwa are yet to be seen. In 2014 KCB and NMG both foreign companies from Kenya listed in RSE barely traded any shares while domestic companies like BK and Bralirwa listed on the same traded profitably according to Ben (2015).

Moreover there is a lot of literature that focus on the developed economy capital markets with very little on under developed markets. Like most financial studies, almost 90% of the studies analyzing the relationships similar to this study heavily relay on quantitative designs which fail to analyze local constituencies' understandings, focuses the research on hypothesis testing rather than hypothesis generation an error known as conformation bias, and might produce so abstracted knowledge that finds no local applications by the common people (Madrigal & Bryan, 2012).

The current research aimed at filling in the knowledge gap existing in Rwandan context by examining the financial performance of the cross-listed firms in the underdeveloped Rwanda stock exchange while using a qualitative design methodologies which integrate the common persons' knowledge and expert opinions concerning the subject hence the findings and recommendations generated applicable to all.

General Objectives

The general objective of this study was to assess the factors that affect the financial performance of the cross listed companies on the RSE.

The specific objectives of the study

1. Examine the relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE
2. Establish how the regulation framework affect the financial performance of the cross-listed companies on the RSE
3. Determine the relationship between technology and the performance of cross-listed companies.

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RESEARCH METHODOLOGY

This chapter discussed the methodological approach to be used in the study. It highlighted the methods and techniques used as per the research under coverage. The critical issues examined included: the characteristics of the study population with its sample size, data sources and techniques for their collection and analysis and presentation.

Research Design

Research design is the plan, structure and strategy of investigation proposed for obtaining answers to research questions (Orodho, 2005). This study adopted a descriptive survey design which is defined as the method that involves asking a large group questions about a particular issue (Fraenkel & Wallen, 2003). Information were obtained from a sample rather than the entire population at one point in time for a period of two weeks. Descriptive survey research collected data in order to test hypothesis or to answer questions covering the current status of the subject in the study. It also allowed for quick collection at comparatively cheap cost (Grinnell, 1993). This study employed a correlational design which according to Frankel and Wallen (2003) purposely tried to explain important behaviors or to predict likely outcome. For this study, a prediction study approach was adopted to investigate the relationship between the predictor variable (the independent variables) and the criterion variable (dependent variable). Two or more scores were obtained from each individual in the sample, one score for each variable. The pairs of score was then correlated, and the resulting correlation coefficient used to indicate the degree of relationship between the variables.

Population

The population of interest for this study was comprised of primarily RSE beneficiaries who were either employed by the stakeholders CMA and RSE itself, the cross-listed firms that were cross listed in the RSE before 2015 which are 3 in total and the 8 brokerage firms.

Sampling frame

In statistics, a sampling frame is the source material or device from which a sample is drawn. It is a list of all those within a population who can be sampled, and may include individuals, households or institutions. In this respect, a critical sample defined as one considered to be critically enlightened because it is so unusual or exceptional (Fraenkel & Wallen, 2000). The researcher targeted respondents from the classes of people that have substantial knowledge about the activities and trading of shares done at the RSE. These involved were staff from the three cross-listed companies, staff of Rwanda Securities Exchange, brokers and staff of the Capital Markets Authority of Rwanda. This frame gave the researcher enough and informed responses regarding the research questions.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 3.1 below shows the companies that participate in Rwanda Stock Exchange.

Table 3. 1 Listed companies in RSE with number of managers and sample size

Company	Number of Managers
FAIDA Securities	6
DALLAS Securities	6
African Alliance Rwanda	7
MBEA Brokerage	5
CDH Capital Ltd	4
CFC Stanbic	5
Core securities	7
Dyer and Blair	6
Kenya Commercial Bank	18
Nation Media Group	15
Uchumi Supermarket	12
Equity Group Holdings limited	6
Total	**97**

A total of 97 workers majorly managers compose the target population of this study as shown in Table 3.2. The participants were sampled as described in the following sections.

Sample Size

According to Grinnell, (1990), a sample size is the number of elements or objects in the sample. According to this research all the employees of the 12 institution who had knowledge, skills and experience in the trading activities of stock market were given questionnaires. The reason for this selection was that the researcher was aiming at a group of respondents that had ready and informative response in relation to the operation of RSE activities.

The number of participants were determined using Nyanamba (2000) model as stated below.

$$n = \frac{N(cv^2)}{cv^2 + (N-1)e^2}$$

Where n = Sample size, N = Target population, Cv = coefficient of variation taken as 0.5 and e = total tolerance at desired level taken as 0.05 or 95% confidence level

With N = 197 that is 97 managers and 100 identified important informants identified from the suggestions of managers

$$n = \frac{197(0.5^2)}{0.5^2 + 196 * 0.05^2}\ 66.7\ \simeq 67\ (rounded\ upwards)$$

Therefore 67 individuals were to participate in this study and there composition was as shown in Table 3.1

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 3. 2 Population composition and sample size

Company	Number of Managers(N)	Sampled Size	% of N
FAIDA Securities	6	2	67%
DALLAS Securities	6	2	67%
African Alliance Rwanda	7	3	67%
MBEA Brokerage	5	2	20%
CDH Capital Ltd	4	1	20%
CFC Stanbic	5	1	20%
Core securities	7	3	67%
Dyer and Blair	6	2	67%
Kenya Commercial Bank	18	6	55.6%
Nation Media Group	15	5	53.3%
Uchumi Supermarket	12	4	41.7%
Equity Group Holdings limited	6	2	67%
Others	100	35	35%
Total	**197**	**67**	

The total population of these key informants were97and 67 of them were sampled to participate in this study. Not all senior and middle managers were involved with the stock market but respective managers were assigned to the market. Therefore only managers with such responsibilities were able to provide the required information.

Another 34 individuals were randomly sampled from 100 other participants in the stock market. These were identified by the advice of the mangers depending on their level of knowledge of the market. These provided additional information about the level of awareness of the capital market activities.

Therefore in total the sample size comprised of 67 participants for this study.

Sampling and sampling Technique

Purposive sampling a widely used technique for almost all qualitative researches (Fraenkel & Wallen, 2003) since it allows the researcher to ensure that he or she obtains a sample that is uniquely suited to the intent of the study. In this study the managers of the 14 firms in the RSE which include CMA, RSE, the three cross listed companies and the 9 brokerage firms were purposively sampled to participate in the study.

Data collection instruments

Various methods were used for data collection during this study. Key instruments were:

Secondary Data Sources

This involved reviewing various published materials in the libraries and CMA reports, National Bank of Rwanda reports, MINECOFIN, text books and the Newspapers. These constitute the

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bulk of the data used in literature review of this study. Suffice to mention the fact that these data will originally be collected and compiled for other purposes. The major source of secondary data were CMA, RSE and the cross listed companies and other researches done in related or similar fields. There were readily available and already compiled statistical statements and reports whose data were used to facilitate this study. Specifically, they include the RSE statements and newspapers. There was no way this method could be avoided being aware of the fact that most of the materials used for the study were from the secondary data, reviewing them before the analysis was inevitable.

Primary Data Sources

This consisted of the original data directly collected from the field. It was the first-hand information collected through observation, interviews and focus group discussions.

Questionnaires

Self-administered questionnaires were designed and given to managers who understood the operation of crossed listed companies. They were Open ended and closed questions. They were administered to all managers of the said institutions. The questionnaires contained a likert scale rating statements with five levels namely Strongly Agree (5), Agree (4), Not sure (3), Disagree (2) and Strongly Disagree (1).

Interview Guides

These were used to get information from selected respondents or especially busy staffs who could find it hard to respond to questionnaires. This was because the mentioned groups of people form the key informants of this study and yet had very limited time to respond to questionnaires. They were therefore the ones charged with strategic planning and decision making, because of their busy schedules, they needed to be guided while responding and to also be given enough room for explanations where necessary.

Both primary and secondary data were collected because secondary data provided the theoretical basis for the study while the primary data sources gave opportunity to collect fresh data from respondents. The data collection procedures employed in qualitative studies involve the researcher making a continuous observation of people, events and occurrences while supplementing with in-depth interviews of the selected participants and examination of the various documents and records which may be relevant to the phenomenon of interest (Fraenkel & Wallen, 2003). In this respect therefore, data were obtain from secondary sources such as company databases, relevant annual reports and the firms' published financial statements available on their websites or archives. While for the sake of examining the relationship between independent and dependent variables, a questionnaire were distributed to the sampled informants as elaborated below.

Data analysis

In order to answer the research questions, several data analysis techniques were adopted.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Hermeneutics data analysis technique:

This implies the theory and methodology of text interpretation. The data to analyse may be written, verbal, and nonverbal communications. This technique is used in different disciplines including social science research and sociology hermeneutics involves the interpretation and understanding of social events through analysis of their meanings for the human participants in the events. The principle upon which this technique is applied is that the interpreter must understand the work of another author and their historical context upon which the author published their thoughts(Willis & Jost, 2007). In this study, the responses of the participants were analyzed and interpreted in context with other authors findings as discussed in literature review chapter. Also during interview sessions, the context on which the respondent provides the answer (their position in the management chain, the firm information policy among others) were noted so as to enable the general interpretation of the data collected in this study.

Thematic analysis

This technique involves analyzing and reporting themes in a given data set according to Braun and Clarke (2006). The collected data especially from open ended questions and interviews were analyzed and grouped under specific themes so as to enable coding and entering into the software (SPSS) for final analysis. However since theme interpretation varies from one person to another, the research grouped the themes as deemed relevant to the current study.

Factor analysis

Factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables (manifest variables). Factor analysis is a technique that requires a large sample size. Factor analysis is based on the correlation matrix of the variables involved, and correlations usually need a large sample size before they stabilize. Regarding sample size: 50 cases is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 or more is excellent(Vanvoorhis & Morgan, 2007). As a rule of thumb, a bare minimum of 10 observations per variable is necessary to avoid computational difficulties(Bruin, 2006). For this reason a factor analysis were performed using SPSS on items that have above 10 items of the variables.

Square and Multiple regression

The frequency of responses were analyzed and their significance evaluated by using a chi square ($\boldsymbol{x^2}$). According Fraenkel and Walles (2000), the nonparametric test of statistical significance appropriate for testing data presented in form of frequency counts is chi square.

Since this study involves multiple variables thus three independent variables trying to predict one dependent variable, a multiple regression were employed to analyse the relationship between the independent variables and the dependent variable in this study. The regression model below were used.

$$\boldsymbol{Y' = a + b_1X_1 + b_2X_2 + b_3X_3}$$

Where Y'will denote the predicted performance of the cross-listed firms, $a, b_1, b_2$and b_3 are constants. $X_1, X_2, and\ X_3$ are the size of the market, regulation framework and technology effects respectively.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

The liker-scale were interpreted by grouping (1+2) = Disagreement and 4+5 = Agreement with 3 as the middle point. The coefficient of multiple regression R generated were interpreted as $-1 \leq R \leq 1$

RESULTS AND DISCUSSION

The general objective of this study was to assess the factors that affect the financial performance of the cross listed companies on the RSE. This chapter presents the response rate, sample firms' characteristics, and descriptive analysis of the data, correlation, regression and ANOVA analysis.

Demographic characteristics

Response rate

A total of 67 questionnaires were distributed to sampled respondents who were the finance mangers (4), operations mangers (5), Portfolio Managers (7), and others (24) of the sampled cross-listed firms. All questionnaires (67) were completed and received which represented 100% response rate. Mugenda and Mugenda (2004) assert that a response rate of more than 50% is adequate for analysis. From the 67 questionnaires received there were no inconsistencies and errors. Therefore, information from all the questionnaires was used for analysis.

Gender

The gender of the respondents is shown as presented in Table 4.1 and the frequency and percentages presented and explained.

Table 4. 1 Gender of Respondents

	Frequency
Female	27
Male	40
Total	67

There were 27 female and 40 implying there were more men respondents than females. The area in Figure 4.1 shows the proportions of gender compositions in percentage.

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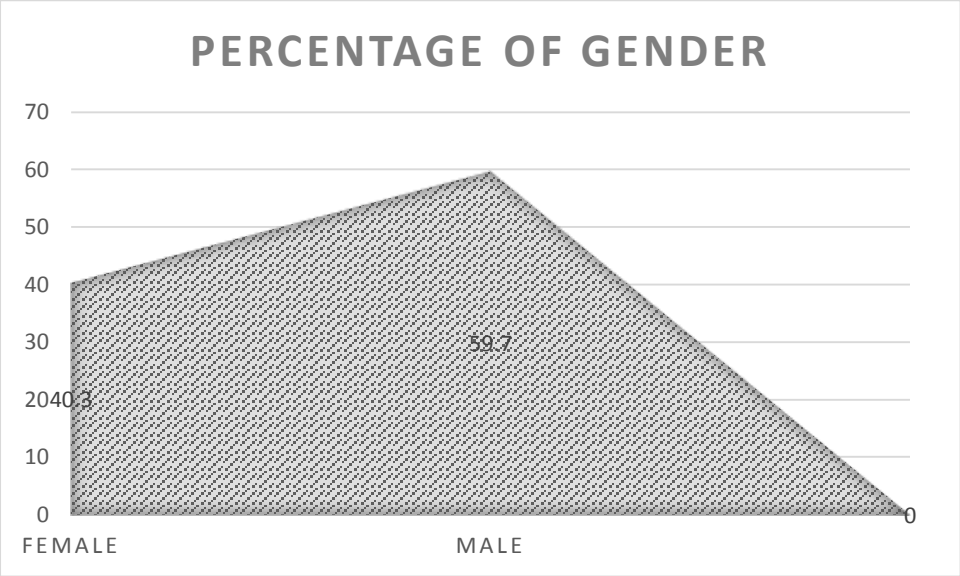

Figure 4. 1Gender of respondents

From the figure 4.1 the height of the trapezium differ from the female edge and the male. The female height is represented by 40.3% while that of male is 59.7%. There are therefore 19.4% more male in the sample implying that gender is not uniformly distributed in this sample.

Educational level

The respondents' educational level was examined so that its effect on the study may be established. People of low literacy level may find it difficult to interpret the questionnaire or asked questions correctly and this can affect the findings. Table 4.2 shows the results of the findings.

Educational level of the respondents

		Gender			
		Female		Male	
		Count	Row N %	Count	Row N %
Educational Level	Primary	0	0.00%	0	0.00%
	Secondary	5	41.7%	7	58.3%
	Bachelor	20	41.7.6%	28	58.3%
	Masters	2	28.6%	5	71.4%

There were 5 (41.7%) and 7 (58.3%) of female and male respondents respectively who possessed secondary education, 20(41.8%) and 28(58.3%) of female and male respondents respectively who had up to bachelor degree and 2 (28.6%) female as well as 5(71.4%) male respondents who had a master's degree. This implies that the greater majority of the respondents possessed at least a bachelor's degree. So with this level of education level, the degree of accurate interpretation of the questions in this study is high.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Age of respondent

The respondents were requested to indicate their age by selecting from four categories i.e. under 20 years, 20-29, 30-49 and 50 and above. The result is summarized in Table 4.3

Table 4.3 Age of the respondents

		Age							
		Under 20 Years		20-29		30-49		50+	
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Gender	Female	8	61.5%	6	40.0%	4	25.0%	9	39.1%
	Male	5	38.5%	9	60.0%	12	75.0%	14	60.9%

As shown in Table 4.4, 8(61.5%) and 5(38.5%) of the respondents were female and male under the age category "under 20 years". In the same note 6 (40%) and 9 (60%) were females and males between 20-29 years, 30-39 and 50 above had 4(25%) and 12 (75%), and 9(39.1%) and 14 (60.9%) were the female and males respondents respectively.

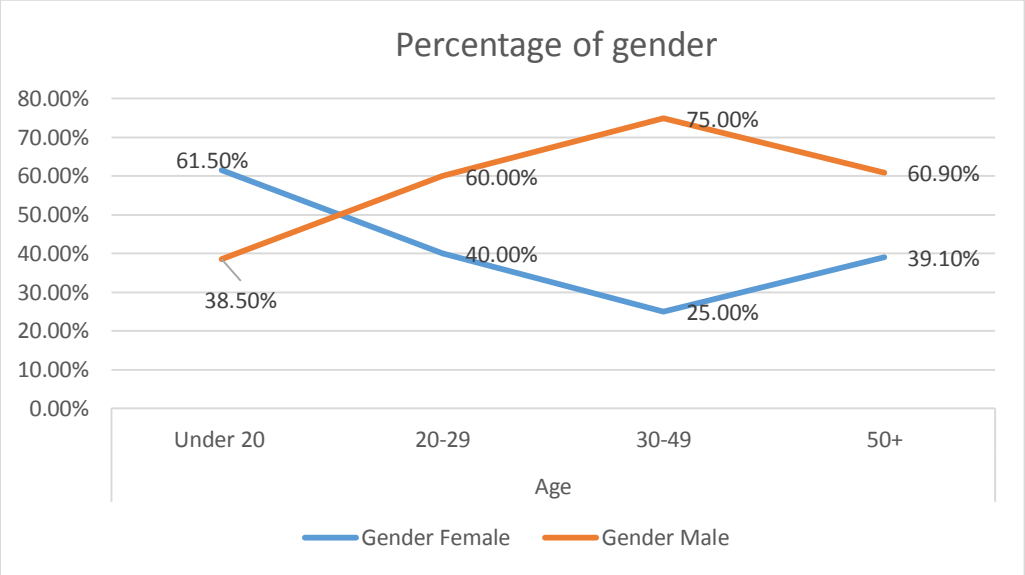

Figure 4. 2 Percentage of respondents by age

The line graph shows that the male respondents of age category 30-49 years were the majority. There were more females at the age under 20 however in all the other categories the male were the majority. It is also revealed that all the age categories are represented by the gender

Job type

The respondents were asked to identify the job or position they held at their work place. This question aimed at identifying the number of experts in the study. Table 4.4 summarizes the findings.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 4. 4 Position held by respondent

		Gender			
		Female		Male	
		Count	Row N %	Count	Row N %
Position	Finance Manager	2	33.3%	4	66.7%
	Operations Manager	3	37.5%	5	62.5%
	Portfolio Manager	2	22.2%	7	77.8%
	Others	20	45.5%	24	54.5%

There were 2 (33.3%) finance managers, 3 (37.5%) operations managers, 2 (22.2%) Portfolio managers and 20 (45.5%) other females. It is also seen that the male sample composed of 4 (66.7%) finance managers, 5 (62.5%) operations Managers, 7 (77.8%) Portfolio Managers and 24 (54.5%) others. The figure 4.3 shows the graphical representation of the findings.

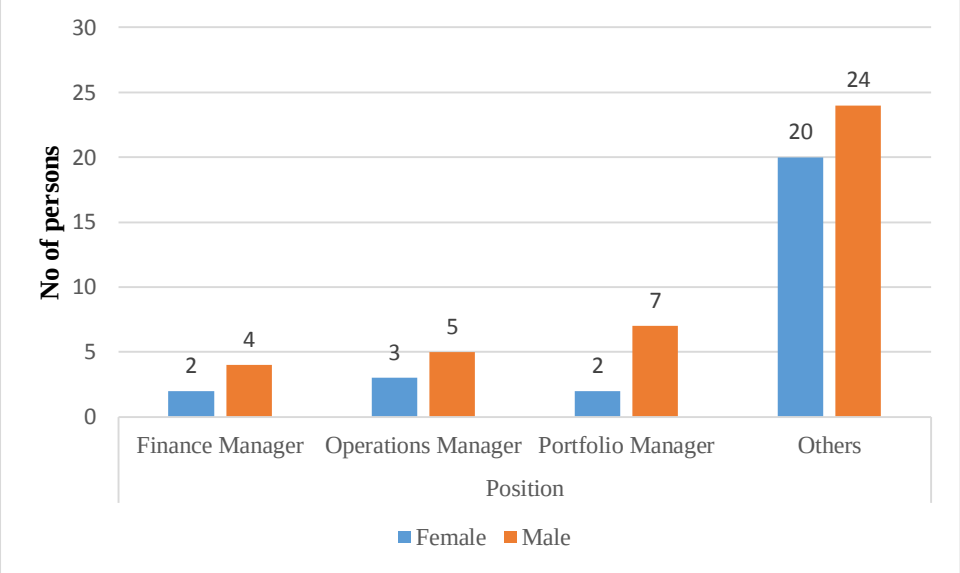

Figure 4. 3 the proportion of respondents by Job position

From figure 4.3, males are dominating at all the positions and even in the various other participants. However, among the managers, there are more female operations managers than in any other managerial positions. Therefore with the mix of various managerial positions, the study is confident to drink from the vast experience of different managers.

FINDINGS

The relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE

The first objective of this study was to examine the relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE. According to Kiwanuka (2002), awareness of the market operations is important for the success of a security market. That in the capital market "the first step in confidence building is creating a critical mass of informed investors".

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 4.5 Respondents view about Public awareness of the capital market activities

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
The Public is aware of how the stock exchange operate	20	29.9 %	19	28.4%	23	34.3 %	0	0.0%	5	7.5%
The Public is aware of the firms listed on the stock exchange	3	4.5%	7	10.4%	13	19.4 %	17	25.4%	27	40.3 %
The stock exchange distributes flyers to create awareness	8	11.9 %	7	10.4%	20	29.9 %	12	17.9%	20	29.9 %
The Public is aware of the various financial instruments on the stock exchange	1	1.5%	8	11.9%	18	26.9 %	20	29.9%	20	29.9 %
The exchange carries out awareness campaigns for investors	4	6.0%	14	20.9%	27	40.3 %	3	4.5%	19	28.4 %

The respondents were asked whether they are aware of how stock exchange operates. Accordingly, 39 (58.3%), 23 (34.3%), 5 (7.5%) of the respondents agreed, were neutral, and strongly agreed with the question. This implies that majority of the Rwandan public are unaware of the operations of the stock market. This finding contradicts that of Acquah-sam & Salami (2013) in which the greater majority of respondents had much knowledge about the operations of the capital market of Ghana. Another statement asked the respondents if the public is aware of the companies that are listed in the stock exchange of Rwanda. A total agreement of 34(65.7%) against 10 (14.9%) was registered. 13(19.4%) did not comment. This gives an implication that though the public is not very aware of the operations at RSE, they have knowledge of the various firms listed in the stock exchange. There are several websites that show the listed companies in the stock market of Rwanda an initiative that sometimes is driven by the company's own desire to advertise other than the campaigns of RSE. A total of 32 (47.8%) agreed that the RSE distribute flyers to create awareness, 20(29.9%) did not comment while 15(22.3%) disagreed. Again it is observable that there is a mixture of agreement on the use of flyers and on the statement that the public is aware of the various financial instruments on the stock exchange, 9 (13.4%) disagreed, 18(26.9%) neutral and 40 (59.8%) agreed. The participants are aware of the financial instruments on the stock exchange. Lastly the exchange varies out awareness campaign for investors was the final question and 18(26.9%) disagreed while 21(32.9%) agreed. This statement had mixed responses with 27 (40.4%) none response. The RSE reports that there is a lot of public education through campaigns Capital Market Authority (2011) however this findings disagrees with the level of the awareness of the market. The level of awareness of the market is pictured by Figure 4.4

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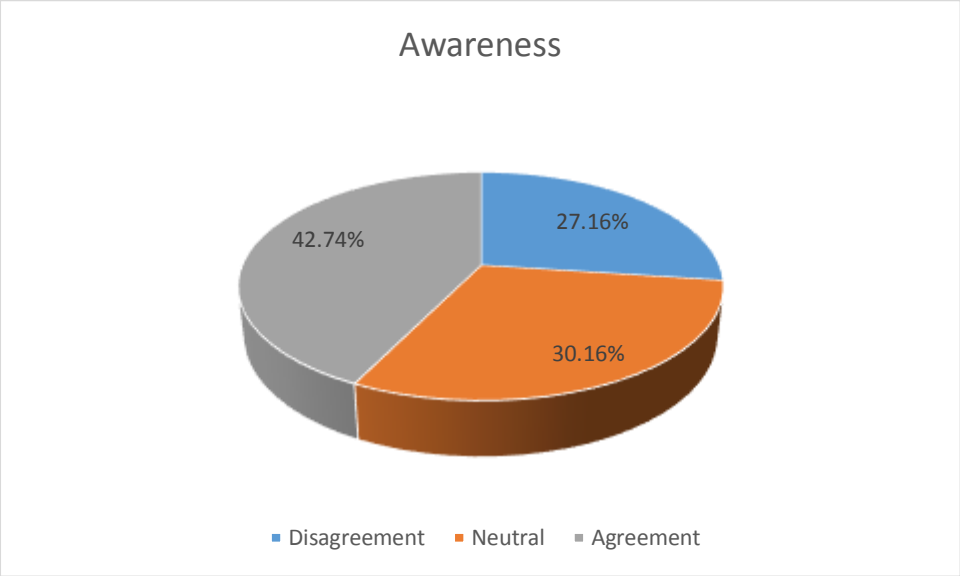

Figure 4. 4 Overall Score on awareness of the market

As shown in Figure 4.4, 42.74% agreed with the awareness statements, 30.16% disagreed and 27.16% were neutral. This implies that more respondents agreed that there is awareness of the market though the disagreement is also high. Rooij, Lusardi, and Alessie (2007) argue that when a household is knowledgeable about capital market, their participation increases.

The relationship between awareness and financial performance was analyzed using Pearson coefficient and the results are shown in Table 4.6.

Table 4.6 Correlation result for Awareness and financial performance

	Performance		
	Pearson Correlation	Sig. (2-tailed)	N
Awareness	-.489	.173	67

The analysis result shows that the correlation between Awareness and Financial Performance produces Pearson's Correlation Coefficient *r (67) = -.489, P>.05*. This result implies that the current market awareness is negatively impacting affecting the performance of the sampled firms negatively though the p-value is statistically insignificant. This finding confirms the results of Acquah-sam and Salami (2013) in which the respondents who had much knowledge of the capital market participated more than those with little knowledge. They further found that the level of financial literacy influenced capital market participation and investment in capital market securities. And in the study of Bosire & Evode (2014) the financial performance of most listed companies in Rwanda Capital Market are being greatly affected by the level of public awareness.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

The effect of regulation framework on the financial performance of the cross-listed companies on the RSE

The second objective of the study aimed at assessing the effect of regulatory framework on financial performance of cross-listed firm at the RSE. The constructs that measured this item were three and their respective assessment are as shown in Table 4.7.

Table 4.7 Response to regulatory framework

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The regulations are clear and understandable	3	4.5%	2	3.0%	17	25.4 %	14	20.9 %	31	46.3%
The regulations are enabling firms to operate favorably	5	7.5%	9	13.4 %	19	28.4 %	19	28.4 %	15	22.4%
The regulations are attracting foreign firms	5	7.5%	5	7.5%	14	20.9 %	10	14.9 %	33	49.3%

The respondents were requested to provide their view on how clear and understandable the regulations are. To this, a total of 5 (7.5%) disagreed, 17 (25.4%) did not comment while 45 (67.2%) agreed implying that the regulations are clear and understandable. The second question asked whether the regulations are enabling firms to operate favaroubly. On average 14 (20.9%) respondents disagreed, 19(28.4%) neutral and 24(50.8%) agreed. This implies that the majority of the respondents view the regulations as enabling firms to operate well. The respondents were asked if the regulations are attracting foreign firms to participate in the RSE. Ten (15%) disagreed, 14 (20.9%) neutral and 43 (64.2%) agreed. The implication is that the majority of the respondents find the regulations attractive. In a study by Koedijk & Dijk (2004), a firm's risk profile is closely linked to its home country and this occurrence was explained by De Menil (1999) when he explained that both cyclical structure and institutional country-specific factors significantly contribute to the explanation of cross-country difference in ROA for larger non-financial firms. He found that regulatory environments affect the level of capital deepening and in a conducive regulations level the ground for both the domestic and foreign firms to make fortunes. Table 4. Examines if the cross-listed firms are actually finding the favourable regulations as a motivation to make fortunes.

Table 4.8 Correlation between Regulation and Financial Performance of the firms

	Performance		
	Pearson Correlation	Sig. (2-tailed)	N
Regulation Framework	.684	.037	67

Correlation is significant at 0.05 (2-tailed)

The results of the analysis shows that regulation framework and Performance correlated with $r\ (67) = .684, P<.05$. This means that the regulation framework positively and significantly at .037 level influenced the performance of the firms and that regulation framework attributed to $r^2 = 47\%$ of the overall influence of financial performance of the cross-listed companies. This is in line with the findings of Lombardo and Pagano (2000) who found that theTotal stock

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

market returns are positively correlated with overall measures of the quality of institutions, such as judicial efficiency and rule of law, controlling for risk. [They also found that] dividend yields and earnings price ratios also correlate positively with judicial efficiency and rule of law, controlling for risk and expected earnings growth… [Interpreting] the positive cross country correlation between the overall quality of the legal system and the expected return on equity as resulting from the curtailment of insiders' private benefits and the increase of firms 'profitability associated with better institutions. (p. 53). In this line therefore the good performance of the cross-listed firms from the stand point of the respondents is attributed to the conductively regulated environment. The rule of law and well established judicial system in Rwanda are enabling the cross-listed companies to perform well.

Technology and the performance of cross-listed companies

The third objective of this study aimed at determining the relationship between technology and the performance of the cross-listed companies. Three statements evaluated this objective and the response of the participants were captured and summarized as indicated in Table 4.9

Table 4.9 application of technology at RSE

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The technology used at RSE is advanced	6	9.0%	4	6.0%	14	20.9%	16	23.9%	27	40.3%
The software and interfaces are user friendly	4	6.0%	5	7.5%	12	17.9%	11	16.4%	35	52.2%
The Network is reliable and accessible for online activities	1	1.5%	7	10.4%	10	14.9%	20	29.9%	29	43.3%

The response to the first statement asking if the technology used at RSE is advanced enough to support cross-listing demands was rated by 10 (15%), 14(20.9%) and 43(64.2%) respondent disagreement, no comment, and agreement respectively. This shows that the majority believe the technology is advanced. Nine (13.5%) of the respondents disagreed that the software and interfaces are user friendly, 12 (17.9%) and 46(68.6%) did not comment and agreed respectively. There was strong agreement with the user friendliness of the software employed at RSE according to the respondents. Finally, about the network being reliable and accessible for online activities, 8 (11.9%) disagreed as opposed to 49(73.2%) who agreed though 10(14.9%) did not commit to any view. This means that the network is reliable and accessible for the operations of the cross-listed companies.

Whether the use of technology as required by the RSE regulation increases the financial performance of cross-listed firms is a confusion that researchers still have to settle. This study correlated the use of technology at RSE and the financial performance of the cross-listed companies and the results are as shown in Table 4.10.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 4.10 Effect of technology on financial performance

	Performance		
	Pearson Correlation	Sig. (2-tailed)	N
Technology	.506	.094	67

The result shows that *r (67) = .506, P=.094* implying that the relationship was positive and no significant. This shows that the use of technology is influencing financial performance positively and the finding contradicts a study by Halling, Marco, Otto, and Josef (2008) which found that the fraction of total trading activity that took place in the U.S. was higher for small and technology oriented cross-listing because technology made it very easy for investors to evaluate the firms.

The financial performance of cross-listed companies

The dependent variable of this study was financial performance of the cross-listed companies and the constructs included shares traded, Market Capitalization and return on Equity. A number of questions as structured in the following section were designed to examine these constructs. Also a secondary data collected from company databases was analyzed and the details appended in appendix (II- Tables)

Shares Traded

To measure the shares traded by the firms, three questions were devised and the response of the participants registered as shown in Table 4.11

Table 4.11 Response to shares traded

Shares Traded	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	N %	Count	%	Count	%	Count	N %
The share outstanding of the cross listed companies is better than for domestic companies	23	34.3%	11	16.4%	18	26.9%	4	6.0%	11	16.4%
The price of shares is favorable for cross listed companies	5	7.5%	3	4.5%	7	10.4%	10	14.9%	42	62.7%
Cross listed companies have a larger market capitalization than domestic companies	19	28.4%	4	6.0%	17	25.4%	1	1.5%	26	38.8%

The response to the question comparing the share outstanding of the cross-listed and domestic companies revealed that 34(50.7%) disagreed, 18 (26.9%) did not commit while 15(22.4%) agreed with the question. This means that the majority of the respondents denied that there is

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

a difference between cross-listed and domestic companies as far as shares outstanding. On whether the price of shares is favorable for cross-listed companies, 8(12%) disagreed, 7 (10.4%) did not comment, while 52 (77.6%) agreed with the statement. The implication is that the majority of the respondents view the prices per share favorable for cross-listed companies. Finally, the respondents were asked whether cross-listed companies have a larger market capitalization that domestic companies. To this 23(34.4%) disagreed, 17(25.4%) did not comment and 27 (40.3%) agreed with the statement. One respondent said "the market size of the cross-listed companies is bigger and so their market capitalization is also bigger when summed though when considered in Rwandan market alone, the foreign companies do not seem to be doing better than the domestic ones". The findings in this study contradict that of Onyuma, Mugo, and Karuiya (2012) that found out that the profitability and liquidity ratio of EABL improved after cross-listing however the shares outstanding declined. The same finding shows that Jubilee Insurance registered a significant improvement in its issued shares after cross-listing.

The shares traded by the domestic companies in the period 2011 – 2014 stood at an average of 494613 while that of the cross-listed companies was 205763. Table 4.13 shows the t test result when compared with the test value (shares traded by domestic companies)

Table 4. 12 1 t-test for shares traded

One-Sample Test

	Test Value = 494613					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Shares Traded	6.933	66	.000	2447263.03134	1742509.4453	3152016.6174

As shown in the table, there was a significant difference between the differences in the mean value of the traded shares since the p = .000. This implies that the domestic companies traded more shares while the cross-listed ones traded less (mean difference of 2,447,263 shares)

Market Capitalization

The market capitalization of the cross listed companies was measured using two items and the findings summarized as shown in Table 4.13

Table 4.13 Response to the Market Capitalization

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The total assets of the cross listed companies increases after cross-listing	7	10.4%	12	17.9%	23	34.3%	16	23.9%	9	13.4%
The total equity turnover of cross listed companies is increased more than domestic companies	34	50.7%	5	7.5%	11	16.4%	10	14.9%	7	10.4%

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

The respondents were asked if the total assets of the cross listed companies increased after cross-listing. The result shows that 19(28.3%) disagreed, 23 (34.3%) did not comment and 25 (37.3%) agreed with the statement. This gives an impression that there is no sure position about the increase in assets of the cross listed companies. And that the equity turnover of the cross-listed companies increased more than that of the domestic ones, 39 (58.2%) disagreed, 11(16.4%) neutral and 17 (25.3%) agreed with the statement. This means that majority of the respondents disagree that cross-listed companies are have increase in equity turnover than the domestic ones. This finding contradicts that of Onyuma et al. (2012) who found that equity turnover of cross-listed companies increased because investors seemed to show more interest in cross-listed companies than the domestic ones. In Rwanda actually the domestic companies are doing better than the foreign listed companies CMA (2014). For example KCB made no sales in 2011 while Bank of Kigali Ben (2014).

Generally there is no evidence that the cross-listed company's market capitalization is better than that of the domestic companies as revealed by 21.625% disagreement against 15.65% agreement. RSE (2015) shows that almost all the cross-listed companies made no transactions while Bralirwa made fortunes hence increasing its market capitalizations.

Table 4.14 shows the comparison between the market capitalization of the domestic and cross-listed companies.

Table 4. 142 Comparison between domestic and cross-listed market capitalisation

	One-Sample Test					
	Test Value = 160.625					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Market Cap	37.456	66	.000	2891.10634	2736.9981	3045.2146

The market capitalization of the domestic was at $160.625 while that of the cross-listed companies was $143. The mean difference was 2891.1 and was significant at p = .000. This implies that the domestic companies have larger market capitalization as far as the Rwanda market is concerned however as observed by the respondents, when sum up cross-listed companies have larger market capitalizations.

Return on Equity

To measure the return on Equity of the cross-listed companies, three questions were asked and the respondents required to provide their views as summarized in Table 4.15.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Table 4.15 Respondents opinion about Return on Equity of cross-listed companies

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Many people are buying shares from cross listed companies	26	38.8 %	13	19.4 %	13	19.4 %	6	9.0%	9	13.4%
The shares traded of cross listed companies have increased	27	40.3 %	7	10.4 %	15	22.4 %	7	10.4 %	11	16.4%
Investors feel more confident to buy shares from cross listed companies	10	14.9 %	19	28.4 %	21	31.3 %	8	11.9 %	9	13.4%

The respondents were asked whether many shares were being bought from cross-listed companies. A total of 39(58.2%) disagreed while 15(22.4%) agreed and 13 (19.4%) did not comment. This means that the cross-listed companies are not making many transactions just as confirmed by the July scenario recorded by RSE (2015). An examination of whether the shares traded of the cross-listed companies was increasing showed that 34(50.7%) disagreed, 15 (22.4%) had no comment and 18(25%) agreed.

Table 4.16 is summary of the t test analysis of the equity turnover of the cross-listed companies.

	One-Sample Test Test Value = 97186.36383					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Equity	7.807	66	.000	2180430.60632	1622833.4972	2738027.7154

It was revealed that at a test value $97186.4, the mean difference between the equity turnover of the domestic and cross-listed companies was $2180430.6 with a p-value = 0.000. This implies that the difference was significant since cross-listed companies had a turnover of $83704 as compared to $97186.4.

The Linear Regression model in Table 4.15 provides the analysis of all the variables on the financial performance of cross-listed companies.

Table 4.17 Linear regression model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.511[a]	.261	.213	.58950

a. Predictors: (Constant), Size, Regulation framework, Awareness, Technology
b. Dependent Variable: Performance

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

The result shows that size, regulation frame work, Awareness and technology predict the financial performance by only 26.1% in this sample and the remaining 73.9% to other factors beyond the scope of this study.

Table 4.18 shows the significance of the relationship.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.615	4	1.904	5.478	.001[b]
	Residual	21.546	62	.348		
	Total	29.160	66			

a. Dependent Variable: Performance
b. Predictors: (Constant), Size, Regulation framework, Awareness, Technology

From the table, the relationship was significant with p = .001 implying the market size, regulation framework, awareness and technology positively and significantly affect the financial performance of the cross-listed companies. This finding confirms several previous studies in this area. For instance, Mikkelson et al. (1997) pointed out that firms that the strong financial performance may follow cross-listing in countries that are substantially integrated in the world market. However there are other factors other than listing alone that lead to cash increase. Therefore cross-listed companies in Rwanda need to consider factors such as availability of service providers, competitiveness between other listed firms among others. Onyuma et al. (2012) observes that the cost of equity capital of a cross listed firm were relatively lower due to decline in transaction costs or "an improvement in the quality of information available to investors" hence favorable to the firm firm's profitability. This concept is dependent upon the environment in which the firm operates in. for instance if the environment is highly competitive and the firm is a follower, it will gain nothing or very less while monopolies will take the lions' share.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The general objective of this study was to assess the factors that affect the financial performance of the cross listed companies on the RSE. In this chapter, the summary of the findings, conclusions and recommendation based on the findings are provided.

Summary

This study was guided by three objectives namely; to examine the relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE, to assess how the regulation framework affect the financial performance of the cross-listed companies on the RSE and to determine the relationship technology the performance of cross-listed companies.

(i) The relationship between the level of awareness of the market by the public and the financial performance of cross-listed companies in RSE

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

The analysis result shows that the correlation between Awareness and Financial Performance produces Pearson's Correlation Coefficient *r (67) = -.489, P>.05.* This result implies that the current market awareness is negatively impacting the performance of the sampled firms though the p-value is statistically insignificant. This finding confirms the results of Acquah-sam and Salami (2013) in which the respondents who had much knowledge of the capital market participated more than those with little knowledge. They further found that the level of financial literacy influenced capital market participation and investment in capital market securities. And in the study of Bosire & Evode (2014) the financial performance of most listed companies in Rwanda Capital Market are being greatly affected by the level of public awareness.

(ii) How the regulation framework affect the financial performance of the cross-listed companies on the RSE

The results of the analysis showed that regulation framework and Performance correlated with *r (67) = .684, P<.05*. This means that the regulation framework positively and significantly influenced the performance of the firms. In this line therefore the good performance of the cross-listed firms from the stand point of the respondents is attributed to the conducive regulations in the market environment. The rule of law and well established judicial system in Rwanda are enabling the cross-listed companies to perform well.

(iii) The relationship between and technology the performance of cross-listed companies

The result showed that the relationship between technology and financial performance produced *r (67) = .506, P=.094* implying that the relationship was positive and insignificant. This shows that the use of technology is influencing financial performance positively and the finding contradicts a study by Halling, Marco, Otto, and Josef (2008) which found that the fraction of total trading activity that took place in the U.S. was higher for small and technology oriented cross-listing because technology made it very easy for investors to evaluate the firms.

Recommendations

Based on the findings of this study, the following logical recommendations are put forward.

This study found that the level of awareness of the public of Rwanda about the activities of the capital market is not profiting the listed companies. The investors therefore are not informed on the activities and cannot make decisions pertaining to investing in the stock exchange. The capital market authority and the RSE must gear up their campaign strategies so that the public is much more aware of their activities. Introduction of capital market into the school syllabus, word of mouth, use of media could be among the possible considerations. The managers of the cross-listed companies need also to devise several creative means of displaying their activities so as to attract potential investors.

The cross-listing decision must not be entirely based upon the desire to increase on profitability. In fact in this study, the domestic companies are found to be performing better than the cross-listed companies in several ways. The management of firms therefore need to cross-list with the mind to explore new markets and create investor awareness other than profit making.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Suggestions for further studies

(i) There is need to carry out a related study so as to increase the generalizability of this study

(ii) A study on the factors affecting the performance of listed companies in the RSE needs to be carried out.

(iii) The effect of cross-listing on market depth, tightness and resilience independently

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