

# EFFECT OF FINANCIAL ACCOUNTING INFORMATION DISCLOSURE ON STOCK LIQUIDITY OF FIRMS LISTED AT RWANDA STOCK EXCHANGE

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**Abstract:** This study sought to investigate the effect of financial accounting variables on stock liquidity of firms listed at the Rwanda Stock Exchange. The study used earnings per share, net book value per share, return on equity, and cash flow from operation per share as proxies for accounting information. The study was addressing the gap of whether the selected accounting variables have an effect on the stock liquidity and whether one can use them to predict the stock liquidity at the bourse. The main objective of this study was to establish the effect of financial accounting information disclosure on stock liquidity of firms listed at the Rwanda Stock Exchange. Specifically, the study established the effect of earnings per share, book value per share, return on equity and cash flow from operation per share on the equity share investment. The study adopted descriptive and explanatory research designs. Simple and multiple linear regression analysis methods, were employed to determine the relationship between the dependent variable and the explanatory variables. The population of this study comprised of all the eight listed firms at the Rwanda Stock Exchange from January 2012 to December 2016. The sample constituted all the firms that comprise the RSE 20 Share Index. Both primary and secondary data was used to carry out the study. The primary data was collected through questionnaires administered on the respondents. Secondary data was collected for all variables for a period of four years (2012 to 2016) published on the website of Rwanda Stock Exchange, Published annual financial reports of listed companies in Rwanda and the Rwanda Stock Market annual reports. Data analysis was carried out using SPSS Software Version 21. Correlation and regression methods was used to carry out the inferential analysis. Statistical t-test and F- test were used to test the significance of explanatory variables on dependent variable. The results of the study revealed that there is a significant relationship between accounting information and stock liquidity in companies listed on the Rwanda Stock Exchange. All accounting information disclosure variables considered in this study significantly influenced equity share investment. Earnings per share have the highest correlation coefficient with equity share investment, followed by net book value per share, return on equity and then cash flow from operation per share. The study recommends that all listed companies in Rwanda should prepare and disclose accounting information indices that are relevant for stock liquidity alongside with the mandatory financial statements to meet the needs of equity share investors. Furthermore, accounting regulatory bodies and government should impose strict compliance with accounting standard guidelines on listed companies in their preparation and presentation of financial statements. Sanctions should be imposed on the managers who failed to adhere to the accounting standard guidelines in the preparation and presentation of their company's financial statements.

**Keywords:** return on equity information disclosure, stock liquidity, Rwanda Stock Exchange.

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## 1. INTRODUCTION

### 1.1 Background:

Globally, developed countries many studies have been undertaken to explore the relationship between accounting information, share price and investment in equity (Gunathilaka, 2014). All these studies show that accounting information: earnings and book value are significant factors in evaluation of corporations and that these variables are significantly related to share prices and thus investment decisions. Abayadeera (2010) tested for the value relevance of financial and non-financial information in high-tech industries in Australia with a sample size of 91 companies running

through various sectors of the Australian economy. His studies showed that value relevance declined in earnings but increase in book value and the book value is the most significant factor and earnings are the least significant factor in deciding stock liquidity in high-tech industries in Australia.

The determination of a firm's optimal stock liquidity is a difficult one since it involves an analysis of several factors, key among them risk and profitability (Shubita & Alsawalhah, 2012). The decision becomes even more difficult, in times when the economic, social, technological and political environments in which the firm operates exhibits high degree of instability (Shubita & Alsawalhah, 2012). Therefore, the choice among ideal proportion of debt and equity can affect the value of the company, as well as financial performance. Indeed, Chiang, Chan and Hui (2012) study at Hong Kong Stock Exchange (HKSE) concluded that financial performance as measured by profitability and capital structure, a subset of financial structure, are interrelated. Many firms therefore fail for not putting proper strategies, financial among others, in place.

Sultana and Pardhasaradh (2012) claim that investing in equity shares is like investing into ownership of a company, which no other investment instrument can give; unlike any other investment instrument that either gives fixed income or meager returns and no ownership, equity investment gives an opportunity to become a part of the company ownership and also gives regular returns on investment as dividend income or through appreciation in share price. Investing in equity also allows investor to enjoy the flexibility of staying invested as long as he/she wish to, take advantage of the price movements and thus utilize the liquidity. Equity share investors are the primary and major capital providers in the listed companies in Nigeria and they are the owners of the firm. An stock liquidity generally refers to the buying and holding stock of shares on a stock market by individuals and firms in anticipation of income from dividends and capital gains, as the value of the stock rises (Okechukwu, 2014).

Wang et al (2013) empirically analyzes the relationship between accounting information, stock price and investors' decision making with a few accounting information indexes, based on 60 listed companies in Shanghai Stock Exchange for 2011. The results of their study show that a positive relationship exists between accounting information and stock price, and that the accounting information of the listed companies has an important effect on the quoted companies' stock price and investors' behavior in the market, but the significant degree varies. Earnings per share and return on equity have the most significant correlation with stock price and investors' decisions. Vijitha and Nimalathasan (2014) examined the relevance of accounting information such as earning per share (EPS), net assets value per share (NAVPS), return on equity (ROE) and price earnings ratio (P/R) to investors' investment decision in listed manufacturing companies in Colombo Stock Exchange (CSE), Sri Lanka. Findings of their research revealed that accounting information has the significant impact on investors' investment decision and accounting information is significantly correlated with stock liquidity decision.

Lewllen (2014) studied the dividend yield, asset turnover as well as P/E ratio in the companies listed in New York Stock Exchange. He obtained some reliable evidences as for the prediction power of the dividend yield in the period of 1946-2000. However, the evidences he collected with respect to asset turnover as well as the P/E ratio were not reliable to some extent demonstrating that they generally had a limited prediction power. Stocks with high liquidity have better performance as measured by the firm market-to-book ratio. Shehzad, & Ismail, (2014) established that more liquid stocks have higher operating returns on their assets and more equity in their capital structure. In contrast, their price-to-operating earnings ratios are similar to less liquid stocks. Furthermore, they document that the increase in liquidity, caused by an exogenous shock due to decimalization, improved firm performance.

Kiremu, Galo, Wagala, and Mutegi (2013) conducted study on the effect of annual earnings announcement at the Nairobi Securities Exchange (NSE) by analyzing changes in share prices and trading volumes for the period from 2006 to 2010. Abnormal returns during the event window of 91 days were determined using the event study methodology employing the market model on data from 5 listed companies. Further, the volume reactions were examined by use of the trading activity ratio (TAR). Inferential and descriptive statistics were used to test for significant effect on TAR and price changes. The results obtained indicate that the abnormal returns and TAR were not significant at 5% probability level. Thus, the NSE is of semi-strong efficiency, whereby it is not possible to earn abnormal returns in the NSE using the publicly available information

Ali et al (2010) asserts that preparing financial statements mainly aims at providing users with the required information in order to help them make economic decisions. Current and potential investors are regarded as information users which are composed of diverse aspects. Investors seek to predict the future stock yields, and this can be done through investigating the future stock prices. Hence, predicting future stock price is an essential aspect considered by potential investors. They further emphasize that the fundamental accounting variables include assets, liabilities, and owner's equity, operating

income, net income, operating cash flow and investment cash flow – related. Different accounting variable reflect different analysis. According to CAPM, Beta ( $\beta$ ) is the only variable capable of predicting the return. The recent studies demonstrate that there exist other variables which outperform stock return predictability potential of the Beta. Included among such variables are debt-to-equity, dividend yield, earnings-to-price, and asset turnover ratios.

Rwanda is member of East African Community and has trade relationship with free commerce, property and personnel movement with the members. Whatever happens to one as far as development is concerned usually affect the other. They are more or less partners and progress rather than competitors in business. Development programs in the communities' countries often follow the same pattern eg. 2020 development in Rwanda and 2050 program in Kenya. Even the program initiative and content are similar. Like many of their policies, constitution and institution including financial system.

The Rwanda Stock Exchange Limited was incorporated on 7th October 2005 with the objective of carrying out stock market operations. The Stock Exchange was demutualized from the start as it was registered as a company limited by shares. The company was officially launched on 31st January 2011. Currently only eight companies are listed at RSE Four of which are local and four cross listed. The study therefore aimed at determining the effect of accounting information at RSE

**1.2 Statement of the Problem:**

Investment in securities of companies listed at the Rwanda stock Exchange by the local investors and cross listing has steadily gained momentum over the last few years. However, around 8 companies listed at the Rwanda stock Exchange have been praying primordial role over 7 years and the number is not growing due to liquidity issue as a key concept for operating in the financial markets around the world. Institutional investors avoid the companies that have high fluctuating results and perceived as risky.

The government of Rwanda has a goal to develop the economy by 2020 therefore it has to encourage participation and growth of the stock market, thereby facilitating the growth, flow, and regulation of the stock market. The government ensures that investors are protected, it also advises, and guides companies seeking capital and provide an important infrastructure and conducive environment for business development.

Few studies on accounting information disclosures have been carried in the region. Previous studies by Odhiambo (2015) found a general association between firm's accounting variables and risk. The study further concluded that daily price movements in the NSE are significantly related to investor sentiment. There is a need of study to examine the effect of accounting information on stock liquidity in the listed companies in Rwanda with a view to establishing the association of accounting information with / and its influence on stock liquidity. This study therefore fills the gap by providing empirical accounting information indices, once disseminated, that can assist more equity share investors in making investment decisions.

**1.3 Research Objectives:**

**1.3.1 General Objective:**

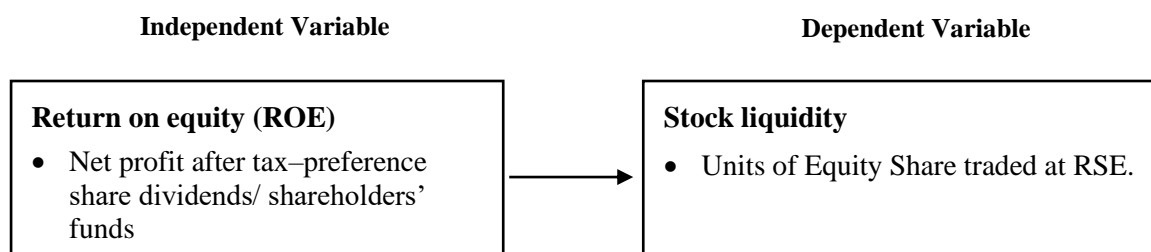
The general objective of this study was to investigate the effect of financial accounting information disclosure on stock liquidity of firms listed at the Rwanda Stock Exchange.

**1.3.2 Specific Objectives:**

The following specific objectives that guided the study:

1. To determine the effect of return on equity information disclosure on the stock liquidity of firms listed at the RSE.

**2. CONCEPTUAL FRAMEWORK**



### 2.1 Return on equity (ROE) on stock liquidity:

Wang et al (2013) carried out a study on the accounting information and investors' reaction in Shanghai Stock Exchange and reported that correlation analysis and regression analysis of accounting information and investors' reaction show that the accounting information has some effect on equity investors reaction and stock price, but the significance diversified. They claimed that accounting information of rate of return on stockholders' equity are most significant and that it has direct impact on investors' decisions and share price. Kabajeh et al (2012) examined the relationship between the return on equity (ROE) ratio and Jordanian insurance public companies share prices and equity share investors reactions during the period (2002-2007). The results of their study showed a positive relationship between the ROE ratio and Jordanian insurance public companies share prices. The results also revealed that equity share investors' decisions are positively influenced by the return on equity.

However, according to Rosenboom and Van (2009), return on equity (ROE) is not an absolute indicator of investment value. After all, the ratio gets a big boost whenever the value of the shareholder equity, the denominator, goes down. If, for instance, a company takes a large write-down, the reduction in income (ROE's numerator) occurs only in the year that the expense is charged; the write-down therefore makes a more significant dent in shareholder equity (the denominator) in the following years, causing an overall rise in the ROE without any improvement in the company's operations. Having a similar effect as write-downs, share buy-backs also normally depress shareholders' equity proportionately far more than they depress earnings. As a result, buy-backs also give an artificial boost to ROE. Moreover, a high ROE doesn't tell you if a company has excessive debt and is raising more of its funds through borrowing rather than issuing shares. So, the more debt a company has, the less equity it has; and the less equity a company has, the higher its ROE ratio will be. Another pitfall of ROE concerns the way in which intangible assets are excluded from shareholder's equity. Generally conservative, the accounting profession normally omits a company's possession of things like trademarks, brand names, and patents from asset and equity-based calculations. As a result, shareholder equity often gets understated in relation to its value, and, in turn, ROE calculations can be misleading. A company with no assets other than a trademark is an extreme example of a situation in which accounting's exclusion of intangibles would distort ROE. After adjusting for intangibles, the company would be left with no assets and 40 probably no shareholder equity base. ROE measured this way would be astronomical but would offer little guidance for investors looking to gauge earnings efficiency.

## 3. TARGET POPULATION

Kothari (2014) described population as all items in any field of inquiry and is known as the 'universe'. Target population is defined as those units for which the findings of the survey are meant to generalize (Garson, 2012)

The target population of this study comprised of all eight listed companies in Rwanda and all eight registered stock brokerage firms. From each five members involved in day to day running of the stock business was targeted hence the target population of this study was 80 respondents.

### 3.1 Sample Frame:

Curwin, & Slater, (2008) elucidated sampling frame as a list that contains the names of all the elements in a universe. For this study a sample size of 67 respondents was determined from a total population of 80 individuals using the formula by Yamane (1967).

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

Where;

n= Sample size

N=Total population size (80)

e= 0.05 level of significance

$$n = \frac{80}{1 + 80(0.05)^2} = 67$$

The sample frame for this study is shown in the Table 3.1

Table 3.1: Sampling Frame

Area of Operation	Sample Frame	Proportions
Stock brokers	8	7
Investment Advisers	16	13
Portfolio Managers	56	47
<b>Population</b>	<b>80</b>	<b>67</b>

#### 4. EFFECT OF RETURN ON EQUITY ON STOCK LIQUIDITY

The study carried out examinations of several factors of return on equity if they had an influence on the stock liquidity. Results in Table 4.8 indicated the responses to statements in respect of various factors of return on equity that influence stock liquidity.

The study in table 4.8 showed that the majority of respondents 73.4% (15.8% strongly agreed + 57.6% agreed) confirm that there is a relationship between return on equity information disclosed in listed firms' financial statements and stock liquidity while 24% of respondents were neutral. However very few respondents 1.2% rejected the fact that return on equity information disclosure has an effect on stock liquidity

Table 4.2: Respondents views on Return on Equity information disclosure on stock liquidit

Statements	S D	D	N	A	S A	M e a n	St d e v
There is a relationship between return on equity disclosed in a firm's financial statement and stock liquidity.	0.0%	0.0%	15.0%	55.6%	29.4%	4.13	0.70
Return on equity is useful in stock liquidity	0.0%	1.7%	35.0%	51.1%	12.2%	4.14	0.70
Return on equity determines the amount of stock liquidity	0.0%	1.5%	19.4%	55.0%	16.7%	4.06	0.68
Regular and consistent improvement in return on equity disclosed by a firm enhance stock liquidity	0.0%	1.6%	26.7%	55.0%	16.7%	3.78	0.52
Timely and regular announcement of return on equity share enhance stock liquidity.	0.0%	1.1%	23.9%	71.1%	3.9%	4.12	0.69

Source: Primary data, 2018.

In view of the fact that the majority (85%) of responses pointed out that there is a relationship between return on equity ratio disclosed in the listed firms' financial statements and stock liquidity in the listed firms in Rwanda, this finding suggests that equity share investors in Rwanda considered the return on equity as a guide when considering investing in equity share of firms. The means of the factors evaluated under return on equity ratio were presented in Table 4.8. The means for all factors were between 3.78 and 4.14. This imply that majority of the respondents were in agreement that the factors listed under return on equity have influence on stock liquidity. The standard deviations of the factors were between 0.52 and 0.70. This result suggests that there are no much differences in the respondent's opinions in respect to all factors under return on equity ratio. This is consistent with Paananen (2008) who found that return on equity is significantly related with the share price; hence stock liquidity.

#### 5. CONCLUSIONS

The findings under survey method showed that there is existence of strong relationship between return on equity and stock liquidity in the companies listed on Rwanda Stock Exchange. This finding was supported by respondents' reactions which showed that a great majority (85.0%) accepted the fact that there is a relationship between return on equity and stock liquidity in the listed companies in Rwanda and that return on equity significantly influenced equity share investors' investment decision.

##### 5.1 Recommendations:

Given the importance of accounting information in investment decision makings in Rwanda, the study of financial factors that influence investment decision makings will be beneficial for the investors in Rwanda, as these factors possess strong explanatory power and hence, can be used to make accurate investment decisions. Therefore, investors are suggested to take cognizance of accounting information variables of company before investing. The study recommends that all listed

companies in Rwanda should prepare and disclose additional information on the financial accounting indicators used for investment decisions alongside with the mandatory financial statements. This is expected to provide clearer information about the operating and financial performances of companies to equity share investors.

Furthermore, since it was found that compliance with accounting regulation in the preparation and presentation of a company's financial reports improves the quality of the financial reports, the study recommends that all listed companies in Rwanda should adhere to accounting regulation when preparing their financial reports. Accounting regulatory bodies in Rwanda and preparers of accounting reports should make efforts toward improving the quality of published financial reports because the reports are widely used by investors in Rwanda and foreign investors for investment decision. Strict regulations and sanctions should be put in place to prevent Managers who may want to engage in the sharp practice of financial statements window dressing by fraudulent manipulation of accounting information disclosed in company's financial statements.

## **5.2 Areas for further research:**

The conclusions of survey study were based on the views expressed by the Stock brokers, Investment Advisers and Portfolio Managers on the relationship between accounting information and stock liquidity. Non-professional investors were not included in the survey study.

Future research can consider the opinions of non-professional investors on the effect of accounting information variables on the stock liquidity. This study focused only on quantitative financial accounting information factors. There are other non-financial accounting information variables, such as corporate goodwill, research and development, product quality, board composition, ownership concentration among others that may influence investors' stock liquidity in a firm. Future research should consider the influence of these non-financial accounting information variables on the stock liquidity in the listed companies in Rwanda.

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