Financial managers' perceptions on firm characteristics and internet financial reporting disclosure among selected financial institutions in Rwanda.

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Abstract: Internet financial reporting has been the major platform of information dissemination among the corporations as it offers the potential for companies to reach a wider range of users without time limits, or boundaries at more cost-effective. However, the adoption of IFR disclosure among African countries is still low; and it has not received much attention from researchers in the context of Rwanda. Therefore, this research assessed the relationship between firm characteristics and internet financial reporting disclosure among financial institutions in Rwanda. Three theories guided this research namely: diffusion of innovation theory, agency theory and signalling theory guided the research. As methodology applied, the research design was a mix of descriptive, empirical and correlational research design using qualitative and quantitative approaches. A sample of 115 employees from 23 sampled companies were randomly selected from a total population of 30 insurance and banking sector companies accredited by the National Bank of Rwanda. The data was analysed using IBM SPSS Statistics. As key findings, descriptive statistics indicated that the adoption of IFR disclosure among selected financial institutions in Rwanda is low as the overall rate of IFR disclosure is estimated at 25% where IFR user support index is most developed (36.0%), followed by IFR technology (27.6%). IFR content disclosure is low 26.0% while IFR timeliness is too low 10.4%. The regression results indicated that 51.8% of variance in dependent variable were explained by independent variables. The regression coefficients revealed that firm size was positive and significant to IFR disclosure ($\beta 1 = 0.267$; p= 0.001); profitability of the firm was positive and significant to IFR disclosure ($\beta 2 = 0.158$; p= 0.006); leverage of the firm was positive but not significant to IFR disclosure ($\beta 3 = 0.042$; p= 0.391); liquidity of the firm was positive and significant to IFR disclosure ($\beta 4 = 0.269$; p= 0.002); firm ownership structure was positive but not significant to IFR disclosure ($\beta 5 = 0.006$; p= 0.231). The research conclude that confidence in financial markets is needed by the users of financial reporting, including regulators and investors; such confidence can be obtained by disclosing more information on the internet. The research recommends financial institutions improving the contents of information disclosed, adopting eXtensible Business Reporting Language (XBRL) technologies, providing updated information, and developing investor relationship interface. The National Bank of Rwanda as the regulator is recommended to motivate IFR disclosure among financial institutions for contributing to the development of the country by showing their real faces to Rwandan as well as foreign investors.

Key words: Firm characteristics, internet financial reporting disclosure, size, profitability, leverage, liquidity, ownership structure.

I. BACKGROUND TO THE STUDY

Financial Accounting Standards Board (2000) defines internet financial reporting (IFR) as the use of internet technologies such as the World Wide Web for corporate performance and financial information distribution. Dolinšek and Skerbinjek (2017) found that the usage of internet in financial reporting is on the increase among firms around the world and the growth of internet technology has allowed firms to provide more direct and rapid disclosure of corporate information and a move away from traditional and expensive hard copy reporting. In this line, maintaining a high quality, effective and up-to-date website has become a strategic priority to ensure good information flow (Dolinšek & Skerbinjek, 2017). Mohd, Ismail and Zakuan (2013) outline the main benefits of adopting IFR namely: helping investors make an effective decision concerning their investment portfolios, communicating information more speedily with wider coverage and at lower cost, providing a platform to integrate new technologies, reducing the cost of providing paper-based financial statements and providing more information than that contained in the hard copy version of the annual reports, and communicating with previously unidentifiable information users via IFR (Mohd, Ismail & Zakuan, 2013).

Despite those advantages, in African countries, the adoption of IFR is still low as affirmed by the research of Indrawati et al. (2021) on the disclosure of financial information at the government level using 10 African countries namely Somalia, South Soudan, Egypt, South Africa, Libya, Algeria, Angola, Democratic Republic of Congo, and Tunisia randomly selected; and 3 websites from each country namely the official government website, Ministry of finance website, and audit board website. The research found that the financial

information is difficult to find and where it exists lack detailed information and thereby affecting investors' decision making (Indrawati et al., 2021). Momany and Pillai (2013) found that the cause of low adoption of IFR is that it is mostly voluntary, there is still no guidance, no recommendations or regulation regarding the scale and scope of financial disclosures for companies. Some companies prefer to disclose only little financial information, while others provide full sets of financial information (Momany & Pillai, 2013; Boshnak, 2020).

In Rwanda, there was no research found on determinants of IFR; and Rwanda Stock Exchange is at its infancy stage with only 10 listed companies for the whole country. Yet, the country plans to become a mid-income country with a knowledge-based economy. Rwanda is actively promoting e-Payment for every level of financial transactions. Efforts in promoting Information and Communication Technologies (ICT) in all domains of economy of the country is undoubtable for Rwanda. The survey conducted in 2013 on leverage ICT for growth and well-being among 131 developed and developing economies ranked Rwanda on top in East Africa, 6th in Africa and 91th globally with a score of 3.68 (The World Bank, 2020).

The fact that IFR is voluntary and is therefore adopted deliberately by some companies led to question about the relationship between firms' characteristics and the adoption of IFR.

Research problem

The adoption of IFR disclosure among African countries is still low. Financial information is difficult to find; and where it exists lack detailed information (Indrawati et al., 2021). Empirical results about determinants of IFR are contradicting: Some researchers found significant relationship between IFR disclosure and firm size (Niwayan & Soni, 2016), profitability (Malawat, 2016), leverage (Ismail, 2012), liquidity (Oyelere et al., 2013), ownership structure (Poh-Ling & Gregory, 2015). However, other researchers found insignificant relationship between IFR disclosure and firm size (experience of Zigama CSS), profitability (Niwayan & Soni, 2016), leverage (Almilia, 2019), liquidity (Aboutera & Hussein, 2017), and ownership structure (Aboutera & Hussein, 2017). Experience shows that many companies in Rwanda are still lagging behind and they did not take full advantage of the computer technologies to adopt IFR disclosures; and the issues related to IFR disclosure in Rwanda has not received much attention from researchers since no empirical research on the relationship between firm characteristics and IFR disclosure in the context of Rwanda. Among the outstanding research questions, taking the case of financial institutions accredited by the National Bank of Rwanda, is the question concerning the current IFR status in Rwanda and the relationship between firm characteristics and IFR disclosure.

Objectives of the study

The general objective of the study is to assess the financial managers' perceptions on relationship between firm characteristics and internet financial reporting disclosure among selected financial institutions in Rwanda. Specific objectives are: to analyze the relationship between firm size, profitability, leverage, liquidity, ownership structure and internet financial reporting disclosure in selected financial institutions in Rwanda.

Research hypotheses

$H0_{1-5}$: There is no significant relationship between firm size, profitability, leverage, liquidity, ownership structure and internet financial reporting disclosure among selected financial institutions in Rwanda.

Theoretical review

To explain the companies' motivations to disclosure financial reporting using internet, this research used three theories namely: (i) Diffusion of Innovation Theory (DOI) by Everett M. Rogers in 1962 according to which the adoption of a new idea, behavior, or product (i.e., innovation) does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. The adopters are therefore into five categories namely the innovators or venturesome, early adopters or respectable, early majority or deliberate, late majority or skeptical, and laggards or traditional (Everett, 1983). (ii) Agency theory by Alchian and Demsetz (1972). The theory argues that firms can be regarded as a nexus for a set of contracting relationships among individuals: the managers as agents and shareholders as principals. The theory argues that the value of a firm cannot be maximized if appropriate incentives or adequate monitoring are not effective enough to restrain firm managers from using their own discretion to maximize their own benefits and this engage agency costs (Bendickson et al., 2016). (iii) and Signaling theory by Spence (1973) according to which a company management uses voluntary disclosure to signal to users of financial information that can increase the credibility and success of the company and if the company has bad news for sure the company tends not to inform the news to the public (Bergh *et al*., 2018). In line with Diffusion of Innovation Theory, this research found that IFR is a deliberate innovation in financial reporting and there are no rules or regulation enforcing for their adaptation. Some companies adopt it quickly while other have the plan to adopt it but still did not yet implemented it while some other companies are not ready for its adoption. Agency theory also justify the low adoption of IFR by companies. In fact, publishing financial statements require disclosing the true financial data. And yet, the managers who do not perform well tend to hide their poor performance. Such managers profit the deliberate adoption of IFR and do not disclose full information online. Lastly, the signaling theory states that IFR is a sign of good news and performing companies tend to disclose full information confidently. In this line, poor

performing companies tend to avoid IFR because of bad news of their financial situation.

Empirical review

Empirical research are contradicting on the relationship between firm characteristics and IFR. On the relationship between Firm size and IFR disclosure, A research of Adugna and Bhupendra (2021) on determinants of internet financial reporting insurance and banking sector companies listed on the national bank of Ethiopia found positive relationship between form size and IFR disclosure (p-value= 0.031). This finding is supported by Aqel (2014) while analysing companies listed in the Istanbul stock exchange; and a research of Dolinšek et al. (2014) on determinants of internet financial reporting in Slovenia. However, Hossain, Momin, and Leo (2012) on IFR disclosure by listed companies in Qatar; and a research of Yao et al. (2012) in Bangladesh provide empirical evidence indicating that the company's size does not impact IFR practices.

Concerning the relationship between Profitability and IFR disclosure, A research of Malawat (2016) on determinants and comparison of IFR in developing country and developed country of Southeast Asia using case study of property and real estate industry in Indonesia and Singapore found that profitability measured by ROA has significant effect to internet financial reporting (p- value= 0.035). This finding is supported by Bekiaris et al. (2014) while assessing IFR quality and corporate characteristics using the case of construction companies listed in Greek and Cypriot Stock Exchange. However, a research of Niwayan and Soni (2016) on IFR disclosure in manufacturing companies listed in the Indonesia Stock Exchange found that profitability does not significantly affect the IFR (p- value= 0.480).

On the relationship between Leverage and IFR disclosure, Adugna and Bhupendra (2021) analysed determinants of IFR disclosure using a case of Ethiopian insurance and banking sector companies listed on the national bank of Ethiopia and found that company's leverage and IFR practice have a significant negative association (p-value= (-.00224). However, Ismail (2012) found a positive relationship between leverage and IFR disclosure among Gulf Cooperation Council countries (six Middle Eastern countries namely Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman). Hannon (2014), while analyzing the e-voluntary disclosure of financial information using Jordanian phenomenon found that leverage significantly affects IFR practices. A research of Malawat (2016) on determinants and comparison of IFR in developing country and developed country of Southeast Asia using case study of property and real estate industry in Indonesia and Singapore found that leverage does not have significant effect to internet financial reporting (p-value= 0.235). This finding is supported by the research of Almilia (2019) which found that leverage is not significantly explanatory variable for the IFR index in Indonesia.

On the relationship between Liquidity and IFR disclosure, Muganda, Umulkher and Hardy (2014) examined the association between organizational factors and internet financial reporting (IFR) in Kenya banks and found that liquidity has significant positive relationship with IFR disclosure (p-value= 0.067). This finding is supported by researchers such as Agboola and Salawu (2012) on the determinants of IFR using empirical evidence from Nigeria; Oyelere et al. (2013) who found a positive relationship between company liquidity and IFR disclosure among New Zealand companies; and Agboola and Salawu (2012) support this finding. However, a research of Niwayan and Soni (2016) on the effect of firm characteristics on IFR disclosure among manufacturing companies listed in the Indonesia Stock Exchange found that liquidity does not significantly affect the IFR disclosure (p-value= 0.879).

Concerning the relationship between Ownership structure and IFR disclosure, A research of Adugna and Bhupendra (2021) on determinants of internet financial reporting using a case of insurance and banking sector companies listed on the national bank of Ethiopia found that company's ownership structure and IFR practice have a significant positive association (p-value= (0.0207). Several researchers support this finding among others Bekiaris et al. (2014); Dolinšek et al. (2014); and Poh-Ling and Gregory (2015) who found positive relationship between ownership structure and IFR disclosure among Malaysian listed firms; and Yao et al. (2012) while assessing ownership structure and IFR disclosure among 83 companies in Bangladesh. Also the study on 77 Nigerian companies that was conducted by Agboola and Salawu (2012) found that companies with dispersed ownership have a greater tendency to adopt IFR than companies with lesser ownership dispersion. On the contrary, a research of Garg and Gakhar (2010) on Web-based corporate reporting practices in India found that that the company's ownership structure does not influence the extent of internet financial disclosure practices. This research is supported by Aboutera and Hussein (2017) who found that ownership structure is insignificant among Egyptian Companies.

The table below 1 summarizes the position of different researchers on the relationship between firm characteristics and IFR disclosure.

Table 1: Empirical results on the relationship between firm characteristics and IFR

| Relationship	Theory	Significant to IFR	Insignificant to IFR
Firm size & IFR	Agency theory: Larger companies tend to adopt IFR.	Adugna & Bhupendra (2021); Aqel (2014); Dolinšek et al. (2014)	Hossain, Momin, &Leo (2012); Yao et al. (2012)
Profitability & IFR	Signaling theory: Greater profitable firms want to signal	Malawat (2016); Bekiaris et al. (2014)	Niwayan and Soni (2016)

	the good news to investors by IFR.		
Leverage & IFR	Agency theory : Firm with high leverage use IFR face agency costs	Adugna & Bhupendra (2021); Hannon (2014),	Malawat (2016)
Liquidity & IFR	Signaling theory: highly liquid firm use IFR as a sign of good performance.	Muganda, Umulkher &Hardy (2014); Agboola & Salawu (2012).	Aqel (2014); Niwayan and Soni (2016)
Ownership structure & IFR	Agency theory : Firms with diffused ownership adopt IFR to help its shareholders	Bekiaris et al. (2014); Dolinšek et al. (2014); Agboola and Salawu (2012)	Garg and Gakhar (2010)

Source: Secondary data (2022).

Research framework

This research has two variables namely dependent variable which is IFR disclosure (IFRD) under which four variables (indexes) were analyzed namely content index, timeliness index, technology index and user support index; and independent variable which is firm characteristics under which five variables were analyzed namely firm size, profitability, liquidity, leverage, and ownership structure. The relationship between the two variables is schematized by the following figure 1.

Figure 1: Conceptual framework
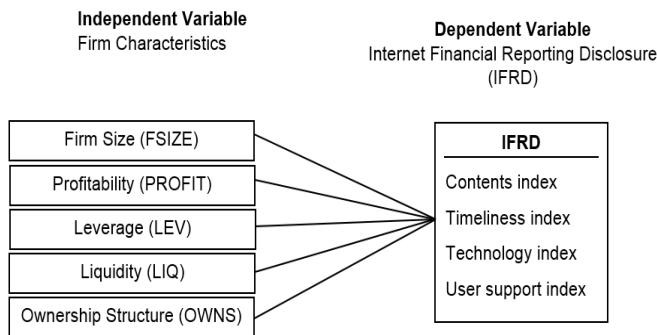
Source: Modified from Niwayan and Soni (2016), Pernamasari (2019), Adugna and Bhupendra (2021), Zhang (2014), and Almilia (2019).

II. RESEARCH METHODOLOGY

This research used a mix of descriptive, empirical and correlational research design. By descriptive design, the uses measures of frequency such as frequency and percentage; measures of central tendency such as mean; measures of dispersion or variation such as standard deviation (Yellapu, 2018; Fatih, 2022; Nassaji, 2019). By empirical design, the research embodies the following elements: a research question, a particular and planned design for the research, the

gathering of primary data, a particular methodology for collecting and analyzing the data, the limitation of the data to a particular group, area or time scale, known as a sample, the ability to recreate the study and test the results known as reliability, and the ability to generalize from the findings to a larger sample and to other situations (Dan, 2017). Correlational design was applied by computing inferential statistics allow to test a hypothesis or assess whether the data is generalizable to the broader population.

The total population of the study is 30 accredited banking and insurance companies in Rwanda. 14 insurance companies including 12 private insurance companies and 2 public insurance companies; 11 Commercial banks; 3 Microfinance banks; 1 Cooperative bank; and 1 Development bank. From each company, 5 employees directly working in the field of finance were selected to participate in this research. The total population in terms of employees is therefore 150 staffs. The research applied Yamane's formula to compute a sample of 23 companies totalizing 115 staffs (Anokye, 2020).

$$n = \frac{N}{1+Ne^2}$$

$$= \frac{30}{1+30*(10\%)^2} = \frac{30}{1+30(0.01)} = \frac{30}{1+0.3} = \frac{30}{1.3} = 23.07692308 \approx 23$$

(companies).

The sample of 23 companies were selected by applying probability sampling where each company had equal chance to be selected; and the researcher applied cluster sampling by subdividing those companies into five clusters with similar characteristics such as insurance companies, commercial banks, microfinance banks, cooperative bank, development bank. Inside each cluster the researcher selected randomly 11 Insurance companies; 8 Commercial banks; 2 Microfinance banks; 1 Cooperative bank; and 1 Development bank.

Two types of data collection methods were applied: Web content analysis checklist (Ghosh, 2018) and a questionnaire designed in five levels Likert scale where the scale of measurement was 1 = Strongly disagree (SD); 2 = Disagree (D); 3 = Uncertain (U); 4 = Agree A); 5 = Strongly Agree (SA) (Warmbrod, 2014). Validity was tested using content validity test by Yaghmale (2003) and analysed four key elements namely: relevance, simplicity, clarity, and ambiguity. The results indicated that the tool was valid; and reliability was tested by computing Cronbach's Alpha and the results indicated that the tool was reliable at 81.7%.

The data was analyzed using IBM SPSS Statistics to compute descriptive as well as inferential statistics. Before running regression analysis the researcher tested five assumptions of multiple regression to check whether they are not violated. These assumptions are: linear relationship, no auto-correlation, no or little multicollinearity, normality, and homoscedasticity (Rosenthal, 2017).

Model specification

The research model of data analysis applied are the following:

$$IFRD = \beta_0 + \beta_1 SIZE + \beta_2 PROFIT + \beta_3 LEV + \beta_4 LIQ + \beta_5 OWNS + \varepsilon.$$

Where: IFRD indicates Internet Financial Reporting Disclosure which is a dependent variable (Y); β_0 = intercept; β_{1-5} indicates the slope for the population model; SIZE = firm size; PROFIT = profitability of the firm; LEV = leverage; LIQ = liquidity; OWNS = ownership structure; ε = other factors.

III. RESULTS

Summary of IFR disclosure among selected financial institutions

The data collected from the questionnaire were computed and at each variable (content index, technology index, user support index and timeliness index) six questions were asked in forma of five levels Likert scale and we computed the mean of answers in percentage. The summary presented in table 2 below is therefore the summary extracted from the tables. As indicated in the table 2 the overall IFR disclosure among selected financial institutions in Rwanda is low 50.6%. User support is more developed (36.0%), followed by IFR technology (27.6%). IFR content disclosure is 26.0% while IFR timeliness is 10.4%.

Table 2: Overall status of IFR disclosure among selected financial institutions in Rwanda

IFR indexes	Yes	
	Mean (%)	%
Content index	52.7	26.0
Technology index	55.8	27.6
User support index	72.8	36.0
Timeliness index	21.1	10.4
Average	**50.6**	**100**

Source: Field data (2022).

Diagnostic tests

Linearity test

Pearson correlation test was used to assess the correlation among variables. The results indicated that the assumption of linearity was not violated since the correlation coefficient for variables is between -0.5 and +0.5.

Autocorrelation test

The results indicated that there is no autocorrelation since the Durbin-Watson statistic values for the variables fall between 1.5 and 2.5 (Akter, 2014).

Table 3: Autocorrelation test results

Model Summary[b]	
Model	Durbin-Watson
1	1.820[a]
a. Predictors: (Constant), OWNERSHIP, PROFITABILITY, LEVERAGE, LIQUIDITY, SIZE	
b. Dependent Variable: IFRD	

Source: Field data (2022).

Multicollinearity test

The results indicated that the VIF results are between 1.661 and 1.274 (below 5) for all the variables; while tolerance is between 0.785 and 0.602 (above 0.2). Such VIF and tolerance diagnosis signify that there is no threat of multicolinearity as the rule of thumb states that VIF should be between 1 and 5; and tolerance should not be below 0.2 (Daoud, 2017).

Table 4: Multicollinearity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	SIZE	.640	1.563
	PROFITABILITY	.785	1.274
	LEVERAGE	.670	1.492
	LIQUIDITY	.710	1.409
	OWNERSHIP	.602	1.661
a. Dependent Variable: IFRD			

Source: Field data (2022).

Normality test

The research applied Kolmogorov-Smirnova and Shapiro-Wilk tests. The results of Kolmogorov-Smirnova indicate that the p- value for all variables are greater than 0.05; they are statistically not significant. They are therefore normally distributed (Ghasemi, & Zahediasl, 2012).

Table 5: Normality test results

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SIZE	.227	115	.160	.894	115	.290
PROFITABILITY	.377	115	.390	.726	115	.370
LEVERAGE	.285	115	.170	.868	115	.191
LIQUIDITY	.174	115	.280	.928	115	.421
OWNERSHIP	.136	115	.093	.952	115	.161
a. Lilliefors Significance Correction						

Source: Field data (2022).

Homoscedasticity test

The research applied Levene's test of equality of error variances and the results show that Levene's Test of Equality of Error Variances resulted in non-significant data with p-value = 0.675 (p- value> 0.05). Thus the results indicates that this assumption is not violated as the p- value >0.05 (Jamshidian, & Jalal, 2010).

Table 6: Homoscedasticity test results

Levene's Test of Equality of Error Variances[a]			
Dependent Variable: IFRD			
F	df1	df2	Sig.
.875	111	3	.675
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + SIZE + PROFITABILITY + LEVERAGE + LIQUIDITY + OWNERSHIP			

Source: Field data (2022).

Inferential statistics

Correlation matrix

Pearson correlation results indicate that there is no correlation among all variables since no variable has a value greater than or equal to 0.25 except Ownership to Size presenting p-value= 0.398 indicating weal correlation. The significance of the correlation (sig.) with the p- value <0.05 indicates that the correlation is significant, which means that such relationship exist not only in the sample size but also in all financial institutions. Where the p- value>0.05 (not significant), this indicates that the relationship exists only in sample size and not in the entire population. This is the case for Ownership structure and Leverage variables with insignificant correlation. The positive sign indicate there is positive correlation among variables (+) which means that two variables tend to move in the same direction so that when one variable tends to decrease as the other variable decreases, or one variable tends to increase when the other increases

Table 7: Correlation Matrix

		SIZE	PROFIT*	LEVER*	LIQ*	OWNER*	IFRD
SIZE	Pearson Correlation	1	.023	.092	.106	.398**	.025
	Sig. (2-tailed)		.031	.452	.048	.001	.048
	N	115	115	115	115	115	115
PROFITABILITY	Pearson Correlation	.023	1	.030	.076	.043	.190
	Sig. (2-tailed)	.031		.805	.036	.727	.046
	N	115	115	115	115	115	115
LEVERAGE	Pearson Correlation	.092	.030	1	.102	.098	.209
	Sig. (2-tailed)	.452	.805		.006	.423	.138
	N	115	115	115	115	115	115
LIQUIDITY	Pearson Correlation	.106	.076	.102	1	.139	.065
	Sig. (2-tailed)	.048	.036	.006		.254	.021
	N	115	115	115	115	115	115
OWNERSHIP	Pearson Correlation	.398**	.043	.098	.139	1	.210
	Sig. (2-tailed)	.001	.727	.423	.254		.336
	N	115	115	115	115	115	115
IFRD	Pearson Correlation	.025	.190	.209	.065	.210	1
	Sig. (2-tailed)	.048	.046	.138	.021	.336	
	N	115	115	115	115	115	115
**. Correlation is significant at the 0.01 level (2-tailed).							

(PROFIT= PROFITABILITY; LEVER= LEGERAGE; LIQ= LIQUIDITY; OWNER= OWNERSHIP; and IFRD= IFR DISCLOSURE).

Source: Field data (2022).

Model coefficients results

Table 8: Model coefficients

Relationship	β	p	Decision	Supporting Theory	Consistent with	Contrast with
SIZE & IFR	.267	.001	H01 rejected	Agency theory	Adugna & Bhupendra (2021); Niwayan & Soni (2016)	Hossain, Momin, & Leo (2012); Yao et al. (2012)
PROFITABILITY & IFR	.158	.006	H023 rejected	Signaling theory	Malawat (2016)	Niwayan & Soni (2016)
LEVERAGE & IFR	.042	.391	H03 accepted	Signaling theory	Malawat (2016); Almilia (2019)	Adugna & Bhupendra (2021)
LIQUIDITY & IFR	.269	.002	H04 rejected	Signaling theory	Muganda, Umulkher & Hardy (2014)	Niwayan & Soni (2016)
OWNERSHIP & IFR	.006	.231	H05 accepted	Diffusion of innovation theory	Garg & Gakhar (2010); Aboutera & Hussein (2017)	Bekiaris et al. (2014); Dolinšek et al. (2014); Poh-Ling & Gregory (2015)

Source: Primary data (2022).

Coefficient of determination (R^2)

The model summary indicates that R^2 = .518 (51.8%). These results indicate that 51.8% of change in IFR disclosure come from firm size, profitability, leverage, liquidity and ownership structure. The remaining 49.2% come from other factors (Maydeu-Olivares, & Forero, 2010).

Table 9: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.72[a]	.518	.421	.27890
a. Predictors: (Constant), OWNERSHIP, PROFITABILITY, LEVERAGE, LIQUIDITY, SIZE				
b. Dependent Variable: IFRD				

Source: Field data (2022).

Analysis of Variance (ANOVA)

The result presented indicate that F (8,106) = 7.0 > $F_{critical}$ =2.03, p<0.05. Based on these statistical findings, the model is fit to predict study variables.

Table 10: Results of Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.840	8	.105	7.0	.000[b]
	Residual	1.590	106	.015		
	Total	2.430	114			
a. Dependent Variable: IFRD						
b. Predictors: (Constant), OWNERSHIP, PROFITABILITY, LEVERAGE, LIQUIDITY, SIZE						

Source: Field data (2022).

IV. CONCLUSION

The first objective of the research was to analyze the relationship between firm size and internet financial reporting disclosure in selected financial institutions in Rwanda. β1= 0.267 for the company's size which indicate that when the company's market capitalization increases by 1 unit, the internet financial reporting practices will increase by 0.267 holding all other independent variables constant. The second objective of the research was to find out the relationship between profitability and internet financial reporting disclosure in selected financial institutions in Rwanda. β2= 0.158 for the profitability of the company which indicates that when the company's profit increases by 1 unit, the internet financial reporting practices will increase by 0.158 holding all other independent variables constant. The third objective of the research was to assess the relationship between leverage and internet financial reporting disclosure in selected financial institutions in Rwanda. The study found that the leverage of the firm has no significant relationship with IFR disclosure. The fourth objective of the research was to analyze the relationship between liquidity and internet financial reporting disclosure in selected financial institutions in Rwanda. β4= 0.269 for the liquidity of the company which indicates that

when the company's liquidity increases by 1 unit, the internet financial reporting practices will increase by 0.269 holding all other independent variables constant. The fifth objective of the research was to examine the relationship between ownership structure and internet financial reporting disclosure in selected financial institutions in Rwanda. The study found that the firm's ownership structure has no significant relationship with IFR disclosure. Small companies, less profitable companies, low liquid companies are encouraged to break the fear and adopt IFR as a mechanism to reach a wide market at lower costs to attract investors and improve their financial position and face issues of agency problems.

V. RECOMMENDATIONS

To insurance and banking sector companies

1. Small firms tend to avoid IFR disclosure due to limited financial resources. Yet, financing IFR disclosure is an investment itself where a company that disclose its financial and non- financial information access a wider market of multiple customers and investors.
   In this line, small firms are recommended to invest in IFR disclosure for taking advantages of large market and enter into competition with other companies.

2. Non – profitable companies tend to hide their financial situation because they have no good news to the public. However, through IFR disclosure, even non- profitable companies may find support such as other companies which may buy them based on their history and their customers. The example is the Bank Populaire du Rwanda. Disclosing financial and non-financial being profitable or not profitable, is an indicator of honesty in business and this may be a strength vis- a- vis the investor. In this line, even non- profitable companies are recommended to disclose full information for participating on global market and increase their business.

3. The research indicated that leverage is not significant to IFR Disclosure. This means that companies with high leverage and those with low leverage may or not disclose their information (financial and non-financial) depending upon other factors than leverage itself. The research recommends leveraged and non-leveraged firms to disclose their full information for the sake of the country development as well as the company's development and participation to the global market where all activities are accomplished online.

4. Less liquid companies hide their financial and non-financial information to the public. It is true that liquidity is an indicator of capability to fulfill short-term obligations. However, a company may be less-liquid due to heavy investment which in near future generate more income. Therefore less liquid companies are recommended to disclose their full information and profit a wide range of investors and customers over the world.

5. The research found that ownership structure is insignificant to IFR disclosure. And the research found that IFR disclosure in low among companies. Therefore, all companies with all types of ownership structure are recommended to disclose full information in order to be accessible by users locally as well as internationally.

6. In overall, financial institutions are recommended:

    i. To improve financial and non- financial information disclosed on their website

    ii. To improve technologies used on their website and adopt eXtensible Business Reporting Language (XBRL)

    iii. To provide updated financial and non-financial information on their website and timely

    iv. To develop investors relationship interface on their websites (for companies without this interface) and to enrich its content for companies already having created this interface.

To the National Bank of Rwanda

    i. To encourage insurance and banking sector companies adopting IFR disclosure by making it a recommendation not only for improving transparency but also motivating them contributing more on the development of the country by showing their real faces to Rwandan as well as foreign investors.

Suggestions of area for further research

This research assessed the relationship between firm characteristics and IFR disclosure among insurance and banking sector companies. Specifically, the research used five independent variables namely firm size, profitability, leverage, liquidity and ownership structure. Further studies should extend the variables and integrate other variables such as auditor type (is company audited by local audit company with international affiliation more likely to get better protection against uncertainty from internet disclosure relative to a company audited by local audit firm?), age (do new companies have an incentive to use the internet as a strategy to attain a competitive advantage or not?), board composition, and Internationality. In this case, the topic should not change. Alternative research may be "A quantitative analysis of the relationship between firm characteristics and IFR disclosure". In this case, instead of collecting the views of financial managers, the researcher should use quantitative dataset.

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