



# **Effect of Integrated Financial Reporting on the Value of Firms listed at the Nairobi Securities Exchange**

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## **Abstract**

This study investigated the influence of IFR on the value of firms listed at the Nairobi Stock Exchange (NSE). The study used financial capital reporting, manufactured capital reporting, intellectual capital reporting, human capital reporting, social, and environmental capital reporting as independent variables, firm size as a moderating variable, and firm value and dependent variable. The study used both primary data and secondary data. The secondary data was obtained from individual firms' annual financial reports and websites then captured in a data collection sheet. Data were obtained from a total of 64 firms listed at the NSE with data ranging from January 1, 2016, to December 31, 2020. Multiple linear regression model was used to test the combined effect on the dependent variable. The study found that there was a positive and significant relationship between financial capital reporting and the value of firms listed at the NSE; there was insignificant relationship between manufactured capital reporting and value of firms listed at the NSE; intellectual capital reporting had a positive and significant effect on the value of firms listed at the NSE; there existed a positive and significant relationship between human capital reporting and the value of firms listed at the NSE; environmental capital reporting had insignificant effect on value of firms listed at the NSE; social capital reporting had insignificant effect on the value of firms listed at the NSE. The study further established that firm size had moderating effect on the relationship between integrated financial reporting and the value of companies listed at the NSE. The study concludes that integrated financial reporting has a positive relationship with the value of firms listed at the NSE. The study thus recommended that the management of firms listed at the NSE should strive to adopt the various integrated financial reporting in enhancing the value of their firms.

## **Introduction**

With the increase in uncertainty in the market environment, companies cannot rely on financial reporting alone to remain competitive. Investors require much more information



from companies which will give them a clear understanding of their investment hence information on current performance, strategies and goals are vital to them (Ghani & Said, 2010). The criticisms surrounding financial reporting include the untimely nature of reporting involved, lack of critical information such as risks faced by the business, the historical reporting styles and how difficult it is to obtain information that is relevant to them. Because of these criticisms, the truthfulness and fairness of financial reports is always being questioned. This happens because these reports only give out financial information related to the company and leave out non-financial information regarding the same company which would be useful to track the historical long-term performance of the company (Eccles & Saltzman, 2011).

The latest tool in combined corporate reporting is Integrated Financial Reporting (IFR) which is meant to solve the issues surrounding conventional financial and non- financial reporting and improving prior advancements that increase the amount of information that is extended to the stakeholders of corporations (Eccles, Krzus & Ribot, 2015). Despite the existence of a number of frameworks for reporting corporate information for example the triple bottom line reporting, sufficiency economy philosophy reporting together with sustainable developmental reporting, such kinds of reporting have not been made compulsory for companies hence they are still able to decide which kind of information to give to stakeholders which will be beneficial for their use (Bebbington & Gray, 2001).

Integrated financial reporting was initiated by the International Integrated Reporting Council (IIRC) established in 2010 from the Global Reporting Initiative (GRI) together with the Prince of Wales accounting for sustainability project (IIRC, 2012). The purpose of this system of reporting is to incorporate both financial and non-financial information in the annual accounts of companies. This would be done by providing a framework and spelling out guidelines for the same. The rewards for such a system would be the facilitation of newer business opportunities, improvement in the reputation of corporations, enhancing competitive advantage and mitigating the risks surrounding operational performance. The IIRC did a re-launch of the IFR framework outline in the year 2012 together with a sample of the International Reporting Framework. This sample outlined the meaning of the major elements and principles that the framework aimed to address such as the content and descriptions of the IFR.

Financial capital is broadly understood as the pool of funds available to an organization. This includes both debt and equity finance. This description of financial capital focuses on the source of funds, rather than its application which results in the acquisition of manufactured or other forms of capital (Eccles, Krzus & Ribot, 2015). Manufactured capital is seen as human-created, production-oriented equipment and tools. Intellectual capital is a key element in an organization's future earning potential, with a tight link and contingency between investment in R&D, innovation, human resources and external relationships, which can determine the organization's competitive advantage (IIRC, 2018).

Human capital is generally understood to consist of the individual's capabilities, and the knowledge, skills and experience of the company's employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge,



skills, and experience through individual learning (Churet & Eccles, 2014). Social and environmental capital may include relationships within an organization, as well as those between an organization and its external stakeholders, depending on where social boundaries are drawn. Aspects of social and environmental capital in a business context include: the strength/ efficacy of supply chain relationships (establishing quality expectations, just-in-time delivery systems, and recycling programmes), community acceptance, government relations and relationships with competitors (IIRC, 2018).

Firm value is a measure that indicates the fair economic worth of an enterprise (Purwohandoko, 2017). According to Thakor (2014), it is the summation of all the claims of every claimant including shareholders (common and preferred) and creditors (unsecured and secured). In measuring firm value, different approaches are applied when assessing value of private and public companies. Measuring the value of private firms is complicated and is based on a variety of assumptions. Tobin Q is however the most prevalent measure of market value of public companies. This is a ratio of the market value of a publicly listed company to its book value (Tailab, 2014; Sabrina, Witjaksono & Lusianah, 2018).

In Kenya, potential investors obtain important details on how companies listed at the Nairobi Stock Exchange (NSE) operate by examining their annual reports and other Capital Markets Authority (CMA) bulletins. Similar to other exchanges, NSE encourages firms to disclose as much information as possible so that stock prices in the exchange reflect the most current information (Mwangi & Mwiti, 2015). Since 2008, the exchange has greatly focused on corporate governance to an extent of punishing participants for going against the acceptable market regulations.

Firm value is not only critical for ascertaining the market value of the firm, but it also enhances industry value and the economy's prosperity. The declining and highly volatile firm value observed in the NSE over the last decade has raised concern among scholars and financial practitioners. According to Cytonn Report (2020), more than two-thirds of firms listed at the NSE lost value between the year 2015 and 2020. This represents approximately 43 companies. A declining and turbulent firm value implies lost and unstable shareholders wealth which in turn increases risk to the stockholders. It is therefore important to ensure that the firm value is enhanced to ensure growth and stable wealth of the shareholders. Churet and Eccles (2014) hypothesize that IFR has a positive and significant influence on value of firms.

Research studies have been conducted on how IFR affects the value of firms, but these studies have produced mixed results. Suttipun (2017) found that manufactured capital reporting had a positive effect on corporate financial performance, while environmental capital reporting had a negative effect. These findings are in contrast with Adegbayegun, Alade, Ben-Caleb, Ademola, Eluyela and Oladipo (2020) who found that IFR has no significant effect on financial performance. These differences can be attributed to the fact that the principles surrounding IFR may have different influences on the value of the firm. On one hand IFR can be useful to the stakeholders of a firm by meeting their demands and encouraging superior performance (Wild & van Staden, 2013).



In contrast, adopting an IFR system may be costly to the firm hence lowering the performance of the firm and consequently its value (Churet & Eccles, 2014). Further, although there are previous studies on IFR and firm value, the previous studies did not operationalize IFR into its six capitals (financial, manufactured, intellectual, human, social and environmental) which is the gap the current study sought to fill. Kerongo, Nyamute, Okiro and Duncan (2020) and Abbasi and Malik (2015) concluded that firm size has a moderating effect on value of listed firms at the NSE. This study also sought to confirm this assertion by investigate the moderating effect of firm size on the relationship between IFR and value of firms listed at the NSE.

#### Research Hypotheses

**H<sub>01</sub>:** Financial capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>02</sub>:** Manufactured capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>03</sub>:** Intellectual capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>04</sub>:** Human capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>05</sub>:** Environmental capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>06</sub>:** Social capital reporting has no significant effect on value of firms listed at the NSE.

**H<sub>07</sub>:** Firm size has no significant moderating effect on the relationship between integrated financial capital reporting and value of firms listed at the NSE.

**H<sub>08</sub>:** Integrated financial capital reporting of the six capitals (financial, manufactured, intellectual, human, social and environmental) has no significant joint effect on value of firms listed at the NSE.

#### Empirical Literature Review

This section empirical literature based on five strands of literature focus on the relationship between IFR and firm value and they include (i) financial capital reporting and firm value, (ii) manufacture capital reporting and firm value, (iii) intellectual capital reporting and firm value, (iv) human capital reporting and firm value and (v) social and environmental capital reporting and firm value.

#### **Financial Capital Reporting and Firm Value**

Adegboyegun *et al.* (2020) focused on the influence of IFR on the performance of firms in Nigeria between 2009 and 2018. The population of this study was thirteen banks. The dependent variable was profit after tax while the independent variables were IFR index, debt to equity ratio and total asset. The study employed OLS and Panel Co-integration techniques for analysis and found that although IFR has no significant impact on corporate performance in the short run, it has a significant relationship with firm performance in the long run.



Albetairi *et al.* (2018) sought to investigate IFR effects on financial performance in Bahrain and selected five companies in the insurance industry for this study. Financial performance was in this case measured by ROA. Content, descriptive and linear regression analyses were utilized in the study to form an analysis of the data over a four-year period 2012 to 2015. The findings of the study showed there was a disparity in the use of IFR among a variety of companies with each company having different disclosures on the same. The areas in which disclosures improved appeared to be in the external environmental assessment, overview of the organization, governance issues and outlook.

### ***Manufactured Capital Reporting and Firm Value***

Wen *et al.* (2017) investigated the potential contribution to financial performance that would arise from the implementation of IFR among the top 50 companies listed in the Malaysian stock exchange from 2012 to 2015. The eight concepts drawn from the IIRC framework were investigated in connection with the adoption rate IFR. Included in this analysis is the overview of the whole organization, external environment, opportunities, model of the business, governance structures, opportunities and hindrances to performance, and they layout of performance presentation. From the data it was observed that listed companies in Malaysia reported a 50% compliance with all the elements with the exception of performance presentation.

Churet and Eccles (2014) Utilized the Robecom SAM's proprietary database which contains a survey of over 2,000 companies on the annual corporate sustainability assessment to determine the usage and growth in the adoption of integrated reporting, and possible effects of its use on key indicators on quality of management and financial performance. The assessment begins with a report by the authors stating that even though only 12% of the companies in the database practiced this reporting, this represented a 50% rise in its use from 2011 up to 2012. The report also shows that a positive relationship exists between integrated reporting and quality of management, which has been concluded by several studies to be very beneficial in indicating the efficiency of management in creating value in the long term. This relationship was significantly stronger in sectors such as healthcare with good infrastructure and medical equipment.

### ***Intellectual Capital Reporting and Firm Value***

Suttipun (2017) focused on the level and extent of IFR in the annual reports of companies listed in the Thailand Stock Exchange (TSE). The specific objective was to test the different levels of IFR between TSE100 companies and NonTSE100 companies, and between companies awarded for Corporate Social Responsibility (CSR) and those companies which were not awarded for the same together with the effect of IFR on financial performance. A random sample of 150 companies listed from the TSE was selected. The study utilized content analysis to determine the extent and level of IFR in annual reports between 2012 and 2015. The findings showed that on average, a total of 603.59 words of IFR were used by companies in their annual reports. The commonest form of IFR in this case was intellectual capital reporting while the least was environmental capital reporting. Significant differences in IFR between TSE100 and non-TSE100 companies, as well as between CSR award and non-CSR award companies were identified. Manufactured capital reporting and holding a





CSR award had a positive effect on corporate financial performance, while the corporate financial performance showed a negative correlation to environmental capital reporting.

### ***Human Capital Reporting and Firm Value***

Hurghis (2015) studied if financial performance influences the extent to which an integrated report is prepared and issued in accordance with IIRC framework. To answer the objective of the study the correlation between a disclosure index and financial performance (measured using return on assets and earnings per share) was tested, on a sample from the companies participating at IIRC Pilot Programme, between 2012 and 2014. The results highlight that financial performance of the company from the IIRC Pilot Programme, did not influence the extent to which the issued integrated financial report, is in accordance with the IIRC Framework. Nevertheless, issuing an integrated financial report should not depend on the financial performance of the company because it is a voluntarily practice and it is also very flexible.

Wild and van Staden (2013) studied the extent of adoption of IFR on a total of 58 companies within the database. The aim was to establish how characteristics of corporations such as industry, size, profitability level, country and auditor affect the level of IFR. Their results showed that many of the companies address selected capitals in their annual financial reports such as human, financial, social and natural capitals. Others such as manufactured and intellectual capitals were not sufficiently covered. From the study conducted, it was clear that a negative relationship exists between the industry type and the level of IFR, but no relationship was established between the IFR level and the remaining corporate elements under investigation.

### ***Social and Environmental Capital Reporting and Firm Value***

Atkins and Maroun (2015) explores the initial reactions of the South African institutional investment community to the first sets of integrated reports being prepared by companies listed on the Johannesburg Securities Exchange. Interpretive thematic analysis was used to identify themes and principles and construct an initial assessment of the investors' views on South African integrated reporting. The new reporting framework is seen as an improvement on the traditional annual report of South African listed companies. In general, there was more emphasis on non-financial measures and evidence of an effort to integrate financial and metrics to provide a better understanding of organizational sustainability. The length of reports, repetition and a check box approach to reporting does, however, detract from the usefulness of the reports and undermine the development of an integrated thinking.

## **Data and the Empirical Strategy**

### **Data**

A descriptive research design was used in finding out the effects of IFR on the value of firms listed at the Nairobi Securities Exchange. The population of the study comprised of the entire 64 firms listed as at 31<sup>st</sup> December 2020. The study used a census design where all the 64 listed firms will be selected. The study utilized both primary and secondary data to find out the effect of IFR on value of firms listed at the NSE. Secondary data refers to the information that has been collected by other individuals (Cooper & Schindler, 2008). A questionnaire



was given to each listed firm via Google forms. Data was screened for completeness and variables with missing or incomplete data deleted. Version 24 of the Statistical Package for Social Sciences (SPSS) tool was used to analyze data. Data analysis encompassed exploration of descriptive and inferential statistics. The descriptive statistics showed the measure of central tendencies and dispersion using mean, standard deviation, maximum and minimum. The regression analysis was also used to test the hypothesis at 95% confidence level (level of significance  $\alpha = .05$ ). A significance level of below 0.05 led to rejection of the null hypothesis. The analyzed data was presented in form of tables, pie charts and graphs.

### Empirical Strategy

The following multiple linear regression model was used to examine the joint effect of integrated financial reporting of the six capitals (financial, manufactured, intellectual, human, social and environmental) on value of companies listed at the NSE. The multiple linear regression was as indicated below:

$$Y = \alpha + \beta_i X_i + \varepsilon_t \quad 1.1$$

Where Y is the dependent variable and denotes firm value. The independent variables are denoted by X and  $i = 1, 2, \dots, n$ . The constant and error term are denoted by  $\alpha$  and  $\varepsilon_t$ , respectively and  $\beta$  is the parameter to be estimated (coefficient). From Eqn. 1 we can include the independent variables as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon_t \quad 1.2$$

Where  $X_1, X_2, \dots, X_6$  denote financial capital reporting, manufactured capital reporting, intellectual capital reporting, human capital reporting, environmental capital reporting and social capital reporting, respectively.

To test the effect of the integrated financial report on firm value we introduce firm size as our moderating variable. This is line with the findings of Parlopoulos et al. (2019) that firm size does influence the quality of IFR. The following model was used to examine the moderating effect of firm size on the relationship between integrated financial reporting capitals and value of companies listed at the NSE. The multiple linear regression was as indicated below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 M + \beta_8 X_1 M + \beta_9 X_2 M + \beta_{10} X_3 M + \beta_{11} X_4 M + \beta_{12} X_5 M + \beta_{13} X_6 M + \varepsilon_t \quad 3.7$$

where M denotes firm size. It is important to note that firm size influences IFR and this has been established in the extant literature.

In this study, a total of 64 questionnaires were administered to the 64 sample respondent. All the 64 questionnaires were dully filled and returned translating into a response rate of 100% which was considered excellent for research analysis.

### Regression Analysis and Study Results



### Descriptive Statistics

Descriptive statistics are used to depict the features of the data in a study. This is because they This section contains descriptive analysis for the variables of financial capital reporting, manufactured capital reporting, intellectual capital reporting, human capital reporting, environmental capital reporting, social capital reporting, firm size and value of firm. A Likert scale of 1 to 5 (**1-Never, 2-Rarely, 3-Sometimes, 4-Often, 5- Always**) was presented for answering by respondents.

*Table 1: Descriptive Analysis on Financial Capital Reporting*

Statement	Never	Rarely	Someti mes	Often	Always	Mean	Std. Dev.
The firm provides a breakdown of how its long-term projects are financed	1.60%	1.60%	7.80%	64.10%	25.00%	4.094	0.729
The firm provides information on how its short-term projects are financed	4.70%	17.20%	14.10%	48.40%	15.60%	3.531	1.098
The firm provides a breakdown of its financing mix	0.00%	1.60%	29.70%	46.90%	21.90%	3.891	0.758
The firm provides a trend of its earnings per share over a period of time	1.60%	1.60%	35.90%	42.20%	18.80%	3.750	0.836
<b>Overall</b>						<b>3.816</b>	<b>0.855</b>

Based on the results in Table 1, majority of the study participants (64.10%) indicated that their firms were providing breakdown of how their long-term projects are financed often, while 25.00% were certain that their firms were always providing the breakdown. The results also show that most of the firms often provided information on how their short-term projects were being financed as indicated by 48.40% of the study participants. Further, majority of the respondents (46.90%) were positive that their firms were often providing a breakdown of their financing mix.





Finally, most of the firms (42.20%) were providing trends of their earnings per share over a period of time as indicated by most of the respondents. The responses had an overall mean and standard deviation of 3.816 and 0.855, respectively. These results imply that most of the firms listed at the NSE often adopt financial capital reporting practices. According to Eccles, Krzus and Ribot (2015), financial capital reporting focuses on the source of funds, rather than its application which results in the acquisition of manufactured or other forms of capital which is in agreement with the above findings.

*Table 2: Descriptive Analysis on Manufactured Capital Reporting*

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>	<b>Mean</b>	<b>Std. dev.</b>
The firms' annual report outlines use of ecological products in manufacturing	3.10%	12.50%	26.60%	40.60%	17.20%	3.563	1.022
The firms' annual report usually outlines the value of equipment owned by the firm	1.60%	3.10%	31.30%	46.90%	17.20%	3.750	0.836
The firms' annual report outlines the infrastructure owned by the firm	1.60%	17.20%	31.30%	29.70%	20.30%	3.500	1.054
The firms' annual report reports assets manufactured by the firm	3.10%	12.50%	18.80%	35.90%	29.70%	3.766	1.109
<b>Overall</b>						<b>3.645</b>	<b>1.005</b>

It is evident from the results that most (40.60%) of the firms often had their annual report outline use of ecological products in manufacturing, this was affirmed by a mean response



and standard deviation of 3.563 and 1.022, respectively. The results also reveal that most of the participants (46.90%) were confident that their firms' annual reports usually outlined the value of equipment owned by the firm. Further, most (31.30%) of the firms sometimes had their annual reports outline the infrastructure owned by the firm.

Finally, most of the firms (35.90%) often had their annual reports contain assets manufactured by the firm. In overall, the responses had an average mean and standard deviation of 3.645 and 1.005 respectively. This implies that most of the study participants agreed that their firms were engaged in manufactured capital reporting often and their responses did not deviate from the mean response. According to Eccles, Krzus and Ribot (2015), manufactured capital is seen as human-created, production-oriented equipment and tools where a distinction is drawn between inventory (as a short term asset) and plant and equipment (tangible capital).

*Table 3: Descriptive Analysis on Intellectual Capital Reporting*

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>	<b>Always</b>	<b>Mean</b>	<b>Std. Dev.</b>
The firm annual report has a section on organization reputation	0.00%	1.60%	3.10%	45.30%	50.00%	4.438	0.639
The firms' annual report has a separate section that describes external outcomes such as brand loyalty	0.00%	1.60%	21.90%	56.30%	20.30%	3.953	0.700
The firms' annual report has a section on intellectual property	0.00%	0.00%	7.80%	28.10%	64.10%	4.563	0.639
The firms' annual report has a separate section that describes external outcomes such as customer satisfaction	0.00%	0.00%	21.90%	35.90%	42.20%	4.203	0.780
<b>Overall</b>						<b>4.289</b>	<b>0.690</b>



On the basis of the results in Table 3, the results indicated that most of the firms (50%) always had their annual reports contain sections on organization reputation as was also confirmed by a mean response and standard deviation of 4.438 and 0.639, respectively. It is also evident that most of the respondents (56.30%) agreed that their firms' annual reports often contained separate sections that describe external outcomes such as brand loyalty. Similarly, most of the firms (64.10%) studies revealed that their annual reports had sections on intellectual property.

Finally, majority of the respondents (42.20%) indicated that their firms' annual reports had sections on intellectual property. This agrees with the assertions by The IIRC (2013) that, integrated thinking helps a company to adopt a business model which will aid the company in fulfilling its business objectives and also help the firm address corporate governance matters and requires all companies to incorporate integrated thinking in making a connection between strategies, sustainability, risks and opportunities, and governance requirements annually in their reports.

*Table 4: Descriptive Analysis on Human Capital Reporting*

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Someti mes</b>	<b>Often</b>	<b>Always</b>	<b>Mean</b>	<b>Std. Dev.</b>
The firms' annual report has a separate section of management report dedicated to Human resource	1.60%	3.10%	7.80%	45.30%	42.20%	4.234	0.850
The firms' annual report has a separate section that describes internal outcomes such as employee morale	0.00%	4.70%	29.70%	20.30%	45.30%	4.063	0.974
The firms' annual report has a separate section that describes director's remuneration	0.00%	4.70%	15.60%	42.20%	37.50%	4.125	0.845
The firms' annual report has a separate section that describes stakeholders' relationships	0.00%	4.70%	20.30%	18.80%	56.30%	4.266	0.947
<b>Overall</b>						<b>4.172</b>	<b>0.904</b>



It is evident from the table that most of the firms (45.30%) often had annual reports that contained separate sections of management report dedicated to Human Resource. The results also show that most of the firms (45.30%) always had their annual reports contain separate sections that describe internal outcomes such as employee morale as also affirmed by a mean of 4.063 and standard deviation of 0.974. Finally, it is evident that most of the firms listed at the NSE (56.30%) always their annual reports with separate sections that describes stakeholders' relationships.

Overall, the responses had a mean and standard deviation of 4.172 and 0.904, respectively. This implies that most of the firms actually often used human capital reporting. These findings are supported by the conclusion made by Churet and Eccles (2014) that, human capital is generally consist of the individual's capabilities, and the knowledge, skills and experience of the company's employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, and experience through individual learning.

*Table 5: Descriptive Analysis on Environmental Capital Reporting*

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Someti mes</b>	<b>Often</b>	<b>Always</b>	<b>Mean</b>	<b>Std. Dev.</b>
The firms' annual report has a separate section of management report dedicated to charity and social responsibility.	0.00%	0.00%	4.70%	54.70%	40.60%	4.359	0.574
The firms' annual report has a separate section showing corporate commitment to environmental protection	0.00%	6.30%	7.80%	39.10%	46.90%	4.266	0.859
The firms' annual report has a separate section explaining environmental partnerships	0.00%	0.00%	10.90%	40.60%	48.40%	4.375	0.678
The firms' annual report has a separate section showing	1.60%	7.80%	18.80%	39.10%	32.80%	3.938	0.990



environmental risk  
management

**Overall**

**4.234 0.775**

The results show that most (54.70%) of the firms often had their annual reports containing separate sections of management report dedicated to charity and social responsibility. Additionally, most (46.90%) of the firms always had their annual report include separate sections showing corporate commitment to environmental protection. Further, most of the firms (48.40%) had in their annual report separate sections explaining environmental partnerships.

Finally, it is evident that most (39.10%) of the firms listed at the NSE had in their annual reports separate sections showing environmental risk management. The results had an overall mean and standard deviation of 4.234 and 0.775 respectively. This implies that most of the firms listed at the NSE often implement environmental capital reporting. The results above agree with the assertions by IIRC (2018) that aspects of environmental capital in a business context include: the strength/ efficacy of supply chain relationships (establishing quality expectations, just-in-time delivery systems, and recycling programmes), community acceptance, government relations and relationships with competitors.

*Table 6: Descriptive Analysis on Social Capital Reporting*

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Someti mes</b>	<b>Often</b>	<b>Always</b>	<b>Mean</b>	<b>Std. Dev.</b>
The firm annual reports have a section for shared norms and values in the company	1.60%	3.10%	12.50%	45.30%	37.50%	4.141	0.870
The annual report has a separate section of management report dedicated to charity and social responsibility	3.10%	3.10%	17.20%	42.20%	34.40%	4.016	0.968
The firms' annual report has a separate section dedicated to a firm's social license to operate	1.60%	0.00%	28.10%	45.30%	25.00%	3.922	0.822
The firms' annual report has a separate section of	3.10%	4.70%	21.90%	35.90%	34.40%	3.938	1.022





CSR covering social disclosures

**Overall**

**4.004 0.921**

Based on the results in Table 6, most of the firms (45.30%) often had in their annual reports sections for shared norms and values in the company. Similarly, most of the firms (42.20%) often had in their annual reports separate sections of management report dedicated to charity and social responsibility. Further most (45.30%) of the firms' annual reports often contained separate sections dedicated to a firm's social license to operate. Moreover, most (35.90%) of the respondents indicated that their firms' annual report often had separate sections of CSR covering social disclosures. The overall mean and standard deviation of the response on the variable was 4.004 and 0.921 respectively. This is a clear indication that most of the firms listed at the NSE often include sections on their annual reports on social capital reporting. These results are supported by the argument of Mwiti (2014) that firms can increase stock returns by increasing their voluntary disclosure owing to the ability of voluntary disclosure to act as a corporate governance tool.

*Table 7: Descriptive Analysis on Firm Size*

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Firm size	64	0.4	10	7.3778	1.81929

Based on the results in Table 7, the minimum firm size of the firms measured in terms of the firm's total assets was 0.4 while the maximum firm size value was 10. The mean firm size value was 7.3778 with standard deviation of 1.81929.

*Table 8: Descriptive Analysis on Value of the Firm*

	N	Minimum	Maximum	Mean	Std. Deviation
Firm Value	64	0.1	1	0.6384	0.23783

Based on the results in Table 8, the minimum firm value calculated in terms of Tobin Q (Market value of equity/ book value of equity) was 0.1, while the maximum firm value was 1. The mean firm value was found to be 0.6384 with standard deviation of 0.23783.

### **Correlation Analysis**

*Table 9: Correlation Matrix*

		Firm Value	Financial Capital	Manufactured Capital	Intellectual Capital	Human Capital	Environmental Capital	Social Capital	Firm size
Firm Value	Pearson Correlation	1.000							
	Sig. (2-tailed)								



Financial Capital	Pearson Correlation	.561**	1.000						
	Sig. (2-tailed)	0.000							
Manufactured Capital	Pearson Correlation	.631**	.580**	1.000					
	Sig. (2-tailed)	0.000	0.000						
Intellectual Capital	Pearson Correlation	.518**	0.144	.357**	1.000				
	Sig. (2-tailed)	0.000	0.256	0.004					
Human Capital	Pearson Correlation	.515**	.287*	.408**	.283*	1.000			
	Sig. (2-tailed)	0.000	0.022	0.001	0.024				
Environmental Capital	Pearson Correlation	.434**	.275*	.355**	.388**	.272*	1.000		
	Sig. (2-tailed)	0.000	0.028	0.004	0.002	0.030			
Social Capital	Pearson Correlation	.299*	0.159	.267*	0.161	0.074	.371**	1.000	
	Sig. (2-tailed)	0.017	0.209	0.033	0.205	0.560	0.003		
Firm size	Pearson Correlation	.626**	.368**	.472**	0.227	.318*	0.019	0.176	1.000
	Sig. (2-tailed)	0.000	0.003	0.000	0.072	0.010	0.884	0.165	

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

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

Results in table 9 revealed that there was a positive and significant association between financial capital reporting and firm value ( $r=0.560$ ,  $P\text{-value}=0.000<0.05$ ). Secondly the results show that there existed a positive and significant association between manufactured capital reporting and firm value ( $r=0.631$ ,  $P\text{-value}=0.000<0.05$ ). The results further revealed that there was a positive and significant association between intellectual capital reporting and firm value ( $r=0.518$ ,  $P\text{-value}=0.000<0.05$ ). Moreover, there was a positive and significant



association between human capital reporting and firm value ( $r=0.515$ ,  $P\text{-value}=0.000<0.05$ ). The correlation results further indicate that there existed a positive and significant association between environmental capital reporting and firm value ( $r=0.434$ ,  $P\text{-value}=0.00<0.05$ ). Similarly, the study established a positive and significant association between social capital reporting and firm value ( $r=0.299$ ,  $P\text{-value}=0.017<0.05$ ). Finally, the study found out that there was a positive and significant association between the moderating variable firm size and firm value ( $r=0.626$ ,  $P\text{-value}=0.000<0.05$ ).

### Regression Analysis

The overall regression analysis was conducted between all the independent variables (financial, manufactured, intellectual, human, social and environmental) and value of firms. Mugenda and Mugenda (2003) contend that multiple linear regression analysis helps in generating an equation that describes the statistical relationship between more predictor variables and the response variable. Table 10 shows the overall model summary and analysis of variance.

*Table 10: Overall Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.794a	0.630	0.591	0.15214		
a Predictors: (Constant), Social Capital, Human Capital, Intellectual Capital, Financial Capital, Environmental Capital, Manufactured Capital						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.244	6	0.374	16.16	.000 <sup>b</sup>
	Residual	1.319	57	0.023		
	Total	3.563	63			

a. Dependent Variable: Value of firm

b. Predictors: (Constant), Social Capital, Human Capital, Intellectual Capital, Financial Capital, Environmental Capital, Manufactured Capital

The model fitness results in Table 10 show that all the six capital reporting variables (financial, manufactured, intellectual, human, social and environmental) were satisfactory variables in explaining value of firms listed at the NSE. This is supported by coefficient of determination also known as the R square of 0.630, implying that financial capital reporting, manufactured capital reporting, intellectual capital reporting, human capital reporting, environmental capital reporting and social capital reporting jointly explain 63.0% of the variations in the dependent variable, which in this case is value of the firms listed at NSE. This further points to the fact that joint effect of the six variables is higher than their individual effects on the value of firms listed at the NSE. The results also imply that the remaining 37 percent of the change in value of the firm can be explained by other variables not part of the current study. Table 11 shows the overall analysis of variance results.

Table also indicate that the overall model was statistically significant. Further, the results imply that financial capital reporting, manufactured capital reporting, intellectual capital



reporting, human capital reporting, environmental capital reporting and social capital reporting are good predictors of value of the firm among firms listed at NSE. This was supported by an F statistic of 16.16 and the reported p value (0.000) which was less than the conventional probability of 0.05. It is therefore evident that financial capital reporting, manufactured capital reporting, intellectual capital reporting, human capital reporting, environmental capital reporting and social capital reporting had significant combined effect on the value of firms listed at the NSE. Table 11 shows regression coefficients analysis of the overall model.

*Table 11: Multiple Regression of Coefficients*

<b>Model</b>		<b>Unstandardized Coefficients</b>		<b>Standardized T Coefficients</b>	<b>Sig.</b>
		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	
(Constant)		-0.434	0.131		0.002
1	Financial Capital Reporting	0.063	0.021	0.296	0.005
	Manufactured Capital Reporting	0.036	0.019	0.207	0.066
	Intellectual Capital Reporting	0.076	0.024	0.293	0.002
	Human Capital Reporting	0.047	0.018	0.238	0.011
	Environmental Capital Reporting	0.013	0.021	0.06	0.538
	Social Capital Reporting	0.026	0.021	0.109	0.220

a. Dependent Variable: Value of firm

The regression model therefore is as follows;

$$Y = -0.434 + 0.063X_1 + 0.036X_2 + 0.076X_3 + 0.047X_4 + 0.013X_5 + 0.026X_6$$

Regression coefficients in Table 11 show that there was a positive and significant relationship between financial capital reporting and the value of firms listed at the NSE ( $\beta = .036$ ,  $p=0.005<0.05$ ). The results also show that there was insignificant relationship between manufactured capital reporting and value of firms listed at NSE ( $\beta = .063$ ,  $p=0.066>0.05$ ). It is further evident from the results that intellectual capital reporting had a positive and significant effect on the value of firms listed at the NSE ( $\beta = .076$ ,  $p=0.002<0.05$ ). Moreover, the results show that there existed a positive and significant relationship between human capital reporting and value of firms listed at the NSE ( $\beta = .047$ ,  $p=0.011<0.05$ ). In addition, environmental capital reporting had insignificant effect on value of firms listed at the NSE ( $\beta = .013$ ,  $p=0.538>0.05$ ).

Finally, the results show that social capital reporting had insignificant effect on value of firms listed at the NSE ( $\beta = .026$ ,  $p=0.220>0.05$ ). The results are consisted with studies by Albetairi et al. (2018) who found that the business model, strategy and resource allocation had positive associations with Return on Assets; Churet and Eccles (2014) which revealed a positive relationship between integrated reporting and quality of management; the relationship was significantly stronger in sectors such as healthcare; Suttipun (2017) who



found that on average, a total of 603.59 words of IFR were used by companies in their annual reports and that the commonest form of IFR in this case was intellectual capital reporting while the least was environmental capital reporting and the study by Oluwagbemiga (2014) that voluntary disclosure is measurably critical in clarifying financial specialists' choice and execution of recorded organizations in Nigeria.

## **Conclusion**

Based on the study findings, a majority of the firms listed at NSE provide breakdown of how their long-term projects are financed often, most of the firms listed at the NSE often provided information on how their short term projects were being financed. The study also concludes that majority of the listed firms at the NSE often provide a breakdown of their financing mix. The study moreover concludes that most of the firms listed are providing trends of their earnings per share over a period of time as indicated by most of the respondents. The study further concludes that most of the firms listed at the NSE often adopt financial capital reporting practices and that financial capital reporting focuses on the source of funds, rather than its application which results in the acquisition of manufactured or other forms of capital.

Further, the integrated financial reporting used in this study have positive relationship with value of firms listed at the NSE. The study concludes that there exists a positive and significant relationship between financial capital reporting and the value of firms listed at the NSE. The study also concludes that there is a positive but insignificant relationship between manufactured capital reporting and value of firms listed at NSE. It is further concluded that intellectual capital reporting has a positive and significant effect on the value of firms listed at the NSE. Moreover, the study concludes that there exists a positive and significant relationship between human capital reporting and value of firms listed at the NSE. Environmental capital reporting has positive but insignificant effect on value of firms listed at the NSE.

Integrated reporting with its unique blend of capital reporting and traditional reporting allows companies that are willing to be flexible and to embrace integrated thinking to take on opportunities that continue to create value for the company. Basically, integrated reporting is an attempt by these companies to address the evolving needs of the growing number of stakeholders. Increased data and implementation of this method of reporting will demonstrate whether the integrated reporting model currently satisfies these stakeholders' needs. The study further concludes that much as there are multiple frameworks for reporting corporate information for example the triple bottom line reporting, sufficiency economy philosophy reporting together with sustainable developmental reporting, such kinds of reporting have not been made compulsory for companies hence they are still able to decide which kind of information to give to stakeholders which will be beneficial for their use.

Lastly, firm size moderates the relationship between integrated financial reporting and value of companies listed at the NSE. Even though integrated reported reporting demands a significant amount of time, money and effort, there appears to be minimal financial benefit for companies that have adopted integrated reporting.





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