“Integrated reporting and investor returns of deposit money banks listed on the Nigerian exchange”

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Abstract

The introduction of integrated reporting aims to solve the drawbacks of corporate reporting practices and make companies accountable to their immediate environment, including other stakeholders affected by company operations in generating returns to investors. This study investigated whether there is a statistically significant relationship between integrated reporting and investor returns. Ex post facto research design was used. Ten (10) Deposit Money Banks were sampled using a purposive sampling technique. Data were extracted from the annual reports of the selected banks, and the unweighted method of content analysis was used to extract integrated reporting data with the checklist from the International Integrated Reporting Framework (IIRF, 2021). The integrated reporting disclosure index was used as a proxy for integrated reporting. Proxies used for investor returns are the price-earnings ratio, dividend per share, and market price per share. The results indicate that the integrated reporting disclosure index is positively related with the price-earnings ratio, dividend per share and market price per share, with coefficients of 56.3403, 1.5240 and 16.6122, respectively, for the three (3) models. This implies that an increase in practicing integrated reporting will increase market price per share, dividend per share and price-earnings ratio. Likewise, the integrated reporting disclosure index has a significant effect on dividend per share and price-earnings ratio with p-values 0.000 and 0.001, respectively. However, the disclosure index has an insignificant effect on market price per share, with a p-value 0.184. This study concluded there is a statistically significant relationship between integrated reporting and investor returns.

Keywords
integrated reporting, investor returns, deposit money banks, profit after tax, Nigeria exchange

JEL Classification
G20, G21, G30, G32, G35, M41

INTRODUCTION

Integrated reporting (IR) focuses on an organization's prospects for the future while making both non-financial information and financial information available to the organization's stakeholders (Cohen et al., 2012; Bernardi & Stark, 2018). It is “a concise communication about how an organization’s strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term” (IIRC, 2019). The concept of integrated reporting aims to provide “the answer to the needs of corporate reporting users. They need useful information to make decisions. For example, investors require information that will enable them to forecast the future economic development of an organization and its value growth. Stakeholders are now interested in corporate social responsibility (CSR) and the concept of sustainability in enterprise strategies” (Bochenek, 2020). IIRF has developed Global Reporting Requirements to promote IR which stakeholders can rely on without fear of sub-optimality and information asymmetry. IIRF is expected to promote the quantity and quality of information needed
for informed decisions. Hence, investors can get a clearer picture of a company’s long-term value creation strategy, governance, performance, and prospects. The framework is becoming widely accepted and has developed into a topic of interest to researchers because of the anticipated advantages of IR, which include improving investor returns. The expected benefit now leads a firm’s stakeholders to think that IR can be relevant to the profitability and sustainability of their firms, which is necessary to increase investor returns. With the delineation of the IIRF reporting structure in 2013 in Nigeria, banks have emerged as the first group of institutions to train employees to prepare integrated reports (Iyoha et al., 2017). The impact of IR on investor returns of Nigerian Deposit Money Banks (DMBs) has, however, received little empirical research (Adegboyegun et al., 2020; Iyoha et al., 2017). Therefore, it is important to consider if IR will increase investor returns more effectively than traditional reporting. The literature’s prior research has, however, produced an inconsistent set of findings regarding the impact of IR on investor returns, with a number of them finding insignificant effects (Ehichioya, 2019; Huda et al., 2018; Appiagyei et al., 2016). Hence, the effect of IR on investor returns is still not well known. Consequently, it is crucial to conduct more research studies on how IR affects investor returns. The question this study seeks to answer is: Does IR influences investor returns? Therefore, this study’s main objective is to examine the relationship between IR and investor returns using Nigerian DMBs.

1. LITERATURE REVIEW AND HYPOTHESES

A major critic of the traditional reporting system is in its application of historical data for the presentation of financial information. This reporting system only presents financial reports of past events, however, investors invest for future returns, and determining possible future returns cannot be solely based on past data. This limitation has created the necessity for the evolution of the reporting system that will provide the platform to access both past performance and prospects because past performance is not a guarantee of future performance. IR provides a glimpse into reporting entities process, system, strategy, and risk, which gives prospective and existing investors a basis to establish the predictive and confirmatory value to form an informed investment judgement and decision. Dhaliwal et al. (2014) opined there is an expanding body of research on reporting frameworks such as corporate social reporting and ESG. These were the methodologies used before integrated reporting. For a better understanding of IR’s execution and the value it provides to stakeholders, a more empirical study is still required (Huang & Watson, 2015). The literature relating to the advantages of IR and its effect on investor returns is the main topic of this review.

The theoretical framework underpinning this study is the agency theory postulated by Jensen and Meckling (1976). Agency theory was adopted as the theoretical framework for this study as it identifies the fundamental agency problem of information asymmetry between agent and principal owing to differing objectives, as well as differing reactions to risk (Otekunrin et al., 2020; Otekunrin et al., 2022). The information imbalance between the two parties is a major concern in this study. Investors appear to want to maximize their own wealth, which may contrast with the manager’s purpose of self-promotion. Consequently, there is a propensity for a knowledge gap between both parties. To avoid this imbalance, an IR approach believes that all relevant information must be made available. IR can be linked to the value creation of firms as it provides both financial and non-financial information on firms’ performance which communicates the utilization of investments made by investors. IR enhances integrated thinking and better resource allocation in an organization. Scholars have considered the effect of IR on firms in both developed and developing countries.

Islam (2020) examined the effect of IR on firm performance by considering the voluntary disclosure regime of Bangladesh. The findings indicate that IR has a positive significant effect on firm performance in terms of operational performance, financial performance, and market growth performance. Likewise, Barth et al. (2017) found that a positive relationship exists between IR and expected cash flows, stock liquidity, and the value of firms. Also, Dey (2020)
established that in Bangladesh's banking sector, IR is found to have a positive significant effect on the market-to-book value ratio. Cooray et al. (2020) found no evidence to back up the informed stakeholder's position on IR in Sri Lanka. Instead, it revealed a substantial positive association with firm value when paired with earnings data (earnings per share), demonstrating that IIRF-compliant IR enhances the value relevance of accounting data. The results from this study showed that profitability and company size had a positive but insignificant effect on IR, while stakeholder pressure had a positive and significant effect on investor reactions. The findings also showed that IR had a positive but insignificant impact on investor reactions.

El-Deeb (2019) opined that Egyptian stock exchange companies will benefit from implementing IR. It was found that IR does not have a significant effect on the short-term performance of the listed firms, but it does have a significant impact on long-term company performance (Otekenrin et al., 2022; El-Deeb, 2019). Also, Vitolla et al. (2020) revealed that Intellectual disclosure quality is positively associated with firm performance. In the same vein, Pavlopoulos et al. (2019) found that the level of IR quality increases the value relevance of accounting information disclosed by firms. Adelowotan and Udofia (2021) suggests that IR positively moderated the relationship between environmental expenditures and firm value. An investigation conducted by Moloi and Iredele (2020) found a statistically significant difference in firm value due to the quality of integrated reporting. Similarly, Owolabi et al. (2020) opined that an integrated report containing disclosures on financial capital, manufactured capital, intellectual capital, and social connection capital distinguishes a firm as a better-performing one amongst its peers to its stakeholders. Agarwal (2021) added to the growing literature on IR by suggesting that IR quality is favorably linked with the education level of board members and adversely with the participation of female board members.

In addition, the study found that profitability and leverage are good variables to control such relationships. Also, Mawardani and Harymawan (2021) revealed that board members’ “quality” rather than their “number” is more important in enhancing IR quality. To buttress the importance of IR, Cooray et al. (2020) suggested that IIRF-compliant increases the value and relevance of accounting information. Furthermore, Salvi et al. (2020) discovered that firms that publish their integrated reports experience lower costs of debt. Dewi and Dian (2020) opined that firm size is a major determinant of the effect of IR on the value of firms. According to Sayar and Topdemir (2018), IR has a significant effect on MPS, dividend per share (DPS), and price-earnings ratio (PER). Likewise, Cosma et al. (2018) measured firm value with an MPS to examine the effect of IR on firm value in South Africa. The study found a positive relationship between IR and firm value. In the same vein, Huei and Kee (2021) revealed that the financial performance of firms can be enhanced through IR, which could be moderated by board diversity. The above review indicates that studies have examined the effect of IR on investor returns, firm performance, and value in both developed and developing nations. However, these studies have measured investor returns with either market price per share or earnings per share rather than employing various measures to measure the holistic worth of investors’ return. Thus, this study measures investor returns with PER, DPS, and MPS while controlling for financial leverage and moderating with profit-after-tax.

According to extant studies (Li et al., 2018; Eccles & Kizus, 2011; Dam & Scholtens, 2015), workers, consumers, investors, and other interested parties would reward businesses that demonstrate accountability and transparency by disclosing relevant non-financial and financial information. Considering this, if there is a reward, high-quality integrated reports ought to result in higher financial results as indicated by MPS, DPS, and PER while controlling for financial leverage and moderating with profit-after-tax. In keeping with the above line of reasoning, the goal of this study is to determine whether there is a significant relationship between investor returns and IR. This study believed that, considering the literature, a favorable relation might be found. That is, it is anticipated that businesses that have implemented
IR of outstanding quality will show an increase in investor return. Therefore, this study examined the effect of IR on investor return of listed DMBs in Nigeria. Hence, the following hypotheses in their null form were tested:

**H01:** Integrated reporting does not have a significant effect on the MPS of listed DMBs.

**H02:** Integrated reporting does not have a significant effect on the DPS of listed DMBs.

**H03:** Integrated reporting does not have a significant effect on PER of listed DMBs.

2. METHODOLOGY

For this study, an ex post facto research design was used. 14 DMBs that were listed on the Nigerian Stock Exchange as of December 31, 2020, made up the study’s population. Using a purposeful sampling approach, 10 DMBs with stock listed on the Nigerian exchange were chosen for the sample. The unweighted method of content analysis was used as a tool where items in the International Integrated Reporting Framework (IIRF, 2021) were used as a checklist against items in the annual reports of the sampled firms. Thus, when disclosure of an item was found, it was scored 1; and when otherwise, a score of zero (0) was given (Islam, 2020; Vitolla et al., 2020). The secondary source of data was used to obtain data from the annual report of the sampled firms for the period of 2011 to 2020.

This study employed descriptive and inferential statistics to analyze the panel data obtained. The model specification is as follows:

Model 1:

\[ MPS_{it} = \alpha_0 + \beta_1 IRDIX_{it} + \beta_2 FL_{it} + \epsilon_{it}, \]

Model 2:

\[ DPS_{it} = \alpha_0 + \beta_1 IRDIX_{it} + \beta_2 FL_{it} + \epsilon_{it}, \]

Model 3:

\[ PER_{it} = \alpha_0 + \beta_1 IRDIX_{it} + \beta_2 FL_{it} + \epsilon_{it}, \]

where \( MPS = \) Market price per share; \( DPS = \) Dividend per share; \( PER = \) Price earnings ratio; \( IRDIX = \) IR disclosure index; \( FL = \) Financial Leverage (Total debt/Total equity).

3. RESULTS AND DISCUSSION

This study investigated whether there is a statistically significant relationship between IR and investor returns using selected Deposit Money Banks listed on the Nigerian exchange. The integrated reporting disclosure index (IRDIX) was used as a proxy for integrated reporting. Proxies used for investor returns are the price-earnings ratio (PER), dividend per share (DPS), and market price per share (MPS). Also, the study specifically examines if integrated reporting has a significant effect on the MPS. Additionally, the study specifically examines if integrated reporting has a significant effect on the DPS, and finally, study specifically examines if integrated reporting has a significant effect on the PER. To this end, the figures in Table 1 indicate that averagely, the returns of investors for the period under study have been above average with mean values of 1236%, 63.5%, and 1134%, representing PER, DPS, and MPS, respectively. Also, the mean value of 94.5% for the IR disclosure index (IRDIX) is high and indicates that the sampled firms have been engaging in the disclosure of IR practices.

This is supported by the maximum and minimum values of 1 and 0.75, respectively. The mean value of financial leverage (FL) is 8.7746, which is high and shows that the firms are highly geared. A close observation of the trend analysis for IR disclosure index (IRDIX) shows that for the 10 years under study (2011–2020), the disclosure index has been on the increase ranging from score of 0.75 to 1. This implies that the sampled firms highly comply with the disclosure requirements of IR as provided by IIRF, which is supported by maximum and minimum values of 1 and 0.75, as shown in Table 1 (descriptive statistics).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. dev.</th>
<th>Max.</th>
<th>Min.</th>
<th>Obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPS</td>
<td>11.3413</td>
<td>14.6398</td>
<td>105</td>
<td>0.52</td>
<td>100</td>
</tr>
<tr>
<td>DPS</td>
<td>0.635</td>
<td>0.8218</td>
<td>3</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>PER</td>
<td>12.3691</td>
<td>21.7960</td>
<td>94.74</td>
<td>-80.77</td>
<td>100</td>
</tr>
<tr>
<td>IRDIX</td>
<td>0.945</td>
<td>0.1040</td>
<td>1</td>
<td>0.75</td>
<td>100</td>
</tr>
<tr>
<td>FL</td>
<td>8.7746</td>
<td>18.7594</td>
<td>191.2</td>
<td>3.03</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1. Descriptive statistics

Source: Author’s computation (2023).
In Table 2, the results for models 1, 2 and 3, random effect was the most appropriate method of estimation, as the Hausman test shows an insignificant prob (chi$^2$) of 0.38, 0.69 and 0.59 for model 1, 2 and 3, respectively. Also, Breusch-Pagan Lagrangian Multiplier test was conducted as a confirmatory test, and it shows significant p-values of 0.0000, 0.0000 and 0.0000, respectively, for models 1, 2 and 3, thus, indicating the appropriateness of random effect for the estimation of the three (3) models. The results in Table 2 indicate that the IR disclosure index ($IRDIX$) is positively related with PER, DPS and MPS with coefficients of 56.3403, 1.5240 and 16.6122, respectively, for the three (3) models. This implies that an increase in practicing IR will increase MPS, DPS and PER by 1,661%, 152% and 5,634%, respectively. Likewise, $IRDIX$ has a significant effect on $DPS$ and $PER$ with p-values 0.000 and 0.001 < 0.05 significance level, respectively. However, $IRDIX$ has an insignificant effect on MPS with p-value 0.184. Also, the control variable financial leverage (FL) shows a negative relationship with MPS, DPS and PER with coefficients of –0.0051, –0.0005 and –0.4527, respectively, for the three (3) models. This implies that an increase in financial leverage will result in a decrease in MPS, DPS and PER by 0.51%, 0.05% and 45.2%, respectively. Likewise, financial leverage does not have a significant control effect on MPS and PER by 0.938 > 0.05 and 0.762 > 0.05, respectively. However, financial leverage has a significant effect on PER with p-value of 0.0000. The adjusted R$^2$ of 0.0205, 0.1819 and 0.3221 implies that the explanatory variables are only responsible for 2.05%, 18.15 and 32.2% changes in MPS, DPS and PER, respectively.

Thus, the study does not reject hypothesis one that Integrated reporting does not have a significant effect on MPS of listed DMBs in Nigeria. However, the study does rejects hypotheses two and three that Integrated reporting does not have a significant effect on $DPS$ of listed DMBs in Nigeria, and integrated reporting does not have a significant effect on price-earnings ratio of listed DMBs.

The findings of this study highlighted the interactions between integrated reporting and shareholder returns. The result of hypothesis 1 indicated that integrated reporting has a positive but insignificant effect on MPS of DMBs in Nigeria. This implied that integrated reporting is not factored in the share price of DMBs on the Nigeria stock Exchange (NSE) to the extent of exerting a significant effect on the market price of DMBs. Empirical evidence in previous studies is however conflicting, data from Adeboyegun et al. (2020), Barth et al. (2017), and Lee and Yeo (2016) show that integrated reporting is not factored in the share price of DMBs on the Nigeria stock Exchange (NSE) to the extent of exerting a significant effect on the market price of DMBs. The results from Soumillion (2018), Nurkumalasari et al. (2019), and Bijlmakers (2018) are the exact reverse. Furthermore, looking at the empirical evidence from the mandatory and voluntary disclosure environment, the result from the study by Barth et al. (2017) in South Africa, which has a mandatory integrated reporting regime, revealed a rise in firm valuation consistent with integrated reporting – related disclosures. The findings are similar with Dey (2020), Islam (2020), and Adeboyegun et al. (2020) whose studies carried

**Table 2. Regression output using random effect estimation**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 (MPS)</th>
<th>Model 2 (DPS)</th>
<th>Model 3 (PER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>–4.3124</td>
<td>–0.80001</td>
<td>–36.8995</td>
</tr>
<tr>
<td>p-value</td>
<td>0.727</td>
<td>0.053</td>
<td>0.025</td>
</tr>
<tr>
<td>$IRDIX$</td>
<td>16.6122</td>
<td>1.5240</td>
<td>56.3403</td>
</tr>
<tr>
<td>p-value</td>
<td>0.184</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>FL</td>
<td>–0.0051</td>
<td>–0.0005</td>
<td>–0.4527</td>
</tr>
<tr>
<td>p-value</td>
<td>0.938</td>
<td>0.762</td>
<td>0.000</td>
</tr>
<tr>
<td>Adj. R$^2$</td>
<td>0.0205</td>
<td>0.1819</td>
<td>0.3221</td>
</tr>
<tr>
<td>Hausman Test</td>
<td>1.91</td>
<td>0.73</td>
<td>1.04</td>
</tr>
<tr>
<td>p-value</td>
<td>0.3852</td>
<td>0.6926</td>
<td>0.5934</td>
</tr>
<tr>
<td>Breusch-Pagan LM Test</td>
<td>67.94</td>
<td>265.95</td>
<td>51.97</td>
</tr>
<tr>
<td>p-value</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Thus, the study does not reject hypothesis one that Integrated reporting does not have a significant effect on MPS of listed DMBs in Nigeria. However, the study does rejects hypotheses two and three that Integrated reporting does not have a significant effect on $DPS$ of listed DMBs in Nigeria, and integrated reporting does not have a significant effect on price-earnings ratio of listed DMBs.
out in a voluntary integrated reporting disclosure environment discovered a substantial correlation between the market-to-book value ratio and integrated reporting disclosure. Hypothesis 2, on the other hand, provides that integrated reporting has a significant effect on DPS of listed DMBs. Hypothesis 3 result also showed that integrated reporting has a significant effect on the price-earnings ratio of listed DMBs. This finding is supported by Adelowotan and Udofia (2021) and suggests that IR positively moderated the relationship between environmental expenditures and firm value. It is safe to say from this study and previous empirical studies that variables of firm value interact in different dimensions with integrated reporting.

CONCLUSION

This study investigated whether there is a statistically significant relationship between integrated reporting and investor returns. The results indicate that the integrated reporting disclosure index is positively related to the price-earnings ratio, dividend per share and MPS, respectively, for the three (3) models. This implies that an increase in practicing integrated reporting will increase MPS, dividend per share and price-earnings ratio, respectively. However, integrated reporting disclosure index has a significant effect on dividend per share and price-earnings. Nevertheless, the integrated reporting disclosure index has an insignificant effect on market price per share. This study concluded there is a positive relationship between integrated reporting and investor returns. It implied that by practicing integrated reporting there will be an increase in investor return. Hence agency costs arising from shareholders’ interest conflicting with management’s interest according to agency theory would be minimized. This study recommends that existing and prospective investors should base investment decisions not just on the financial performance of a reporting entity but consider matters of the non-financial performance of a reporting entity as it has been empirically established to have a significant impact on their future returns.

AUTHOR CONTRIBUTIONS

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Formal analysis: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Adegbola Otekunrin, Jerry D. Kwarbia.
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Project administration: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Jerry D. Kwarbia.
Software: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Jerry D. Kwarbia.
Supervision: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Jerry D. Kwarbia.
Validation: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Adegbola Otekunrin, Jerry D. Kwarbia.
Visualization: Oluwasikemi Janet Owolabi.
Writing – original draft: Oluwasikemi Janet Owolabi, Adegbola Otekunrin, Jerry D. Kwarbia.
Writing – reviewing & editing: Oluwasikemi Janet Owolabi, Babatunde Ayodeji Owolabi, Adegbola Otekunrin, Jerry D. Kwarbia.

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CONFLICT OF INTEREST

The study has no conflict of interest.

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