“Nexus between investor returns of Nigerian deposit money banks and integrated reporting with the moderating role of profit after tax”

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ARTICLE INFO
Adegbola Olubukola Otekunrin, Babatunde Ayodeji Owolabi, Oluwasikemi Janet Owolabi and Yinka Lydia Emmanuel (2024). Nexus between investor returns of Nigerian deposit money banks and integrated reporting with the moderating role of profit after tax. Banks and Bank Systems, 19(3), 1-8. doi:10.21511/bbs.19(3).2024.01

DOI
http://dx.doi.org/10.21511/bbs.19(3).2024.01

RELEASED ON
Friday, 12 July 2024

RECEIVED ON
Saturday, 29 July 2023

ACCEPTED ON
Thursday, 28 March 2024

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JOURNAL
“Banks and Bank Systems”

ISSN PRINT
1816-7403

ISSN ONLINE
1991-7074

PUBLISHER
LLC “Consulting Publishing Company “Business Perspectives”

FOUNDER
LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES
41

NUMBER OF FIGURES
0

NUMBER OF TABLES
2

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NEXUS BETWEEN INVESTOR RETURNS OF NIGERIAN DEPOSIT MONEY BANKS AND INTEGRATED REPORTING WITH THE MODERATING ROLE OF PROFIT AFTER TAX

Abstract

Integrating reporting strives to address issues with corporate reporting procedures and hold businesses responsible for their local surroundings, as well as additional stakeholders impacted by their operations in producing returns for investors. This study employed Nigerian deposit money banks to examine whether investor returns with profit after tax and integrated reporting are statistically and significantly related. Ex post facto research methodology was applied. Purposive sampling was used to sample ten Nigerian deposit money banks. Data were taken from the annual reports of the chosen banks. The international integrated reporting framework of 2021 checklist was utilized to extract integrated reporting data using the unweighted content analysis method. The integrated reporting disclosure index was used as a proxy for integrated reporting. Market price per share, dividend per share, and price-earnings ratio were used as proxies for investor returns. Profit after tax was used as a moderating variable. The results indicate that with the moderating variable, which is Profit after tax, integrated reporting and price-earnings ratio are related to coefficients of 9.9585. Integrated reporting and dividend per share are related to coefficients of 3.151612. Integrated reporting and market price per share are related to coefficients of 36.7535. Dividend per share and integrated reporting disclosure are significantly related to p-values of 0.001. Market price per share and integrated reporting disclosure are significantly related to p-values of 0.002. This study concluded that integrated reporting and investor returns are statistically and significantly related to the moderating role of Profit after tax of Nigerian deposit money banks.

Keywords

profit after tax, deposit money bank, investor returns, integrated reporting, leverage, Nigerian exchange

JEL Classification

G35, G30, M41

INTRODUCTION

Integrated reporting (IR) focuses on a firm’s potential future and offers stakeholders access to both non-financial and financial information (Cohen et al., 2012). 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, 2013). The concept of IR aims to provide “the answer to the needs of corporate reporting users well beyond convention reporting to include non-financial information. 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.”
To encourage IR that stakeholders can rely on without worry of sub-optimality and information asymmetry, IIRF has created a Global Reporting framework. IRF is anticipated to advance the number and quality of data required for effective decisions. Investors can learn more about the firm’s long-term wealth generation plan, performance, governance, and future prospects. The framework is gaining acceptance and has become a research issue of interest due to the envisaged benefits of IR, which include enhancing returns for investors. The projected benefit now gives the firm’s stakeholders cause to believe that IR could be essential to both the sustainability and the profitability of their business, both of which are necessary for raising investors’ returns. Banks are the first set of organizations to train staff to create IR after the IIRF reporting framework was defined in Nigeria in 2013 (Nwanya et al., 2020). The impact of IR on investor returns of Nigerian deposit money banks (NDMBs) has, however, received minute experiential research (Nwanya et al., 2020). Hence, it is crucial to consider whether IR will boost return on investment with greater efficiency than conventional reporting. Nevertheless, the results of earlier studies in the literature on the influence of IR on investor returns have been mixed. Some of them find negligible impacts (Appiagyei et al., 2016; Huda et al., 2018; Ehichioya, 2019; Nwanya et al., 2020). Consequently, it remains unclear how IR affects the returns of investors. Therefore, further research needs to be done to determine how IR impacts investors’ returns. Thus, the key objective of this study is to use NDMBs to investigate if the returns of investors and IR are related.

1. LITERATURE REVIEW AND HYPOTHESES

The primary issue of the conventional reporting approach is that it presents financial facts using historical information. This reporting method offers financial information for past occurrences, but investors make investments in anticipation of future returns. Hence, it is impossible to predict potential future returns only based on prior information. Since previous financial achievement is not indicative of future financial performance, it has become necessary to develop a reporting system that would give users access to both previous financial accomplishments and future financial prospects. IR offers potential and current investors an opportunity to develop both prognostic and assenting value to form an informed investment judgment and choice by providing an insight into the processes, strategy, systems, and risk of reporting companies. According to Dhaliwal et al. (2014), an increasing quantity of research has been done on reporting perspectives such as CSR and sustainability reporting (i.e., social, economic, and environmental-ESG reporting). Further empirical investigation is still needed to gain a deeper knowledge of how IR is implemented and the benefits it offers to stakeholders (Huang & Watson, 2015). The primary focus of this review is the scientific research on the benefits of IR and how it affects returns for investors. The agency theory proposed by Jensen and Meckling (1976) is the theoretical foundation for this investigation. The underlying agency problem, or information asymmetry between the principal and agent because of the difference in the interests of the principal and agent as well as their different responses to risk, is identified by agency theory (Eluyela et al., 2020). In this study, the unequal information sharing among the two parties is a key issue. Investors seem to be interested in increasing their wealth, which can be at odds with the manager’s motivation, which is promoting oneself. Hence, there is a tendency for both parties to have information gaps. An IR strategy contends that every pertinent detail must be made public to prevent information gaps. Since IR gives both non-financial and financial information on companies’ performance, which indicates how investments of investors are being used, it is possible to relate IR to the value generated by companies. IR is expected to improve resource management and incorporate thinking inside firms. The impact of IR on businesses in mutually developing and developed countries has been studied by academics. Another theory adopted in this study is the signaling theory. The knowledge gap between the agent and the principal is acknowledged by the signaling theory, just as it is in agency theory. IR is one way; one party attempts to lessen the asymmetry in the distribution of information by telling the other side crucial information about itself in a credible manner. Firms can concentrate on their good sides
and take advantage of the inherent information asymmetry in the industry by using disclosure approaches such as integrated reporting.

In Bangladeshi voluntary disclosure frameworks, Islam (2020) investigates the impact of IR on corporate worth. According to the results, IR positively and significantly affects a firm's market growth, value, financial, and operational performance. Dey (2020) revealed that IR is proven to have a considerable favorable impact on the market-to-book value ratio in the banking industry of Bangladesh. In a similar manner, Barth et al. (2017) discovered a favorable correlation between IR and stock liquidity, business valuation, and anticipated cash flows. The enlightened stakeholder's viewpoint on IR in Sri Lanka was not supported by any evidence, according to Cooray et al. (2020). However, when combined with profits data (EPS, i.e., earnings per share), it showed a significant positive connection with company value, proving that IIRF-compliant and IR improve the value germaneness of accounting information. The study's findings revealed that stakeholder pressure had a positive and large impact on investor reactions, whereas profitability and firm size were favorable but negligible impacted by IR. Nevertheless, another study claimed firm size is a key factor in determining how IR affects a firm's value (Dewi & Dian, 2020).

The use of IR, according to El Deeb (2019), will assist Egyptian stock exchange firms. It emerged that while IR substantially impacts long-term corporate performance, it does not have a major impact on the short-term performance of the listed companies (Otekunrin et al. 2017). Similarly, according to Vitolla et al. (2020), there is a positive correlation between intellectual disclosure quality and company performance. In a similar manner, Pavlopoulos et al. (2019) observed that the quantity of IR quality raises the value relevance of accounting information released by firms. According to Adelowotan and Udofia (2021), IR was revealed to have a favorable moderating effect on the link between environmental expenditures and business value. According to Moloi and Iredele's (2020) analysis, the caliber of integrated reporting causes a statistically significant difference in company worth. Akin to this, Owolabi et al. (2020) believed that a company's stakeholders would see it as having higher performance than its peers if it provided an integrated report. Agarwal (2021) contributed to the increasing body of literature on IR by arguing that IR quality is positively correlated with board members' educational attainment and negatively correlated with their representation among women. Additionally, Hayyin and Iman (2021) found that improving the "quality" of IR is more significant than increasing the "number" of board members. Cooray et al. (2020) suggested that IIRF-compliant raises the relevance and value of accounting information to support the significance of IR. Additionally, Salvi et al. (2020) found that businesses that disclose their IR have lower financing costs.

According to Sayar and Topdemir (2018), the price-earnings ratio (PER), dividend per share (DPS), and market price per share (MPS) are all significantly impacted by IR. Sayar and Topdemir (2018) also assert that IR has a considerable impact on PER, DPS, and MPS. Also, in the claim of Sayar and Topdemir (2018), IR significantly affects PER, DPS, and MPS. Similarly, Cosma et al. (2018) used an MPS to quantify firm value and analyze how IR affected company worth in South Africa. The research indicated that company worth and IR are related positively. In a similar manner, Huei and Kee (2021) found that IR, which might be tempered by board diversity, can improve a company's financial performance. According to the aforementioned review, in both developing and developed countries, studies have investigated how IR affects the returns of investors, company worth, and financial performance. These studies used MPS, DPS, and PER to calculate the returns of investors with profit-after-tax (PAT) as a moderating factor. Studies to date have shown that companies that provide pertinent non-financial and financial information can expect to be rewarded by employees, customers, investors, and other stakeholders (Dam & Scholtens, 2015; Eccles & Kizus, 2011; Li et al., 2018). Accordingly, if there is a benefit, high-quality integrated reporting should lead to better financial performance and better return on investment for the investors, and for this reason, profit-after-tax is used as a moderating factor in this study. The purpose of this study is to ascertain if investor returns and IR are substantially and statistically related in accordance with the logic presented above. According to the literature,
it was thought by this investigation that a positive relationship may be established between investors’ return and IR. In other words, it is expected that firms that have successfully implemented IR will see an improvement in investor returns. Therefore, this study examined the effect of IR on investor returns of listed NDMBs with the moderating role of Profit after tax. As a result, the following null-form hypotheses were examined:

\[ H_{01}: \text{Integrated reporting and Market price per share are not related in Nigerian deposit money banks.} \]

\[ H_{02}: \text{Integrated reporting and Dividend per share are not related in Nigerian deposit money banks.} \]

\[ H_{03}: \text{Integrated reporting and Price-earnings ratio are not related in Nigerian deposit money banks.} \]

2. METHODOLOGY

An ex post facto research design was employed for the purpose of this study. 10 out of 23 NDMBs on the Nigerian Exchange Group (NGX) as of 2020 were selected for this study, which used a purposeful sample methodology. The IIRF 2021 was utilized as a checklist over the yearly reports of the sampled NDMBs using the unweighted approach of content analysis as an instrument. As a result, if any item’s disclosure was discovered, it received a score of 1, and when it was not, it received a score of zero (Vitolla et al., 2020; Islam, 2020). Data from the NDMB annual reports for 2011 to 2020 are secondary data used. To analyze the panel data gathered for this study, inferential and descriptive statistics were used. The following are the algorithm’s requirements:

Model 1:

\[ MPS_{it} = \alpha_i + \beta_1 IRDIX_{it} + \beta_2 \ln PAT_{it} + \beta_3 \left( IRDIX_{it} \cdot \ln PAT_{it} \right) + \epsilon_{it}, \]  

Model 2:

\[ DPS_{it} = \alpha_i + \beta_1 IRDIX_{it} + \beta_2 \ln PAT_{it} + \beta_3 \left( IRDIX_{it} \cdot \ln PAT_{it} \right) + \epsilon_{it}, \]  

Model 3:

\[ PER_{it} = \alpha_i + \beta_1 IRDIX_{it} + \beta_2 \ln PAT_{it} + \beta_3 \left( IRDIX_{it} \cdot \ln PAT_{it} \right) + \epsilon_{it}. \]  

Table 1. Description of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Measurements</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investors return</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market price per share</td>
<td>MPS</td>
<td>Number of issued shares split by market capitalization</td>
<td>Wahl et al. (2020)</td>
</tr>
<tr>
<td>Dividend per share</td>
<td>DPS</td>
<td>Declared dividend divided by Number of shares issued</td>
<td>Cooray et al. (2020); Salvi et al. (2020)</td>
</tr>
<tr>
<td>Price-earnings ratio</td>
<td>PER</td>
<td>Earnings per share Market price per share</td>
<td>Mans-Kemp &amp; Van der Lugt (2020)</td>
</tr>
</tbody>
</table>

Integrated Reporting

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Measurements</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated reporting disclosure index</td>
<td>IRDIX</td>
<td>Number of items disclosed Number of items on the checklist</td>
<td>Islam (2020), Vitolla et al. (2020)</td>
</tr>
</tbody>
</table>

Moderating Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abbreviation</th>
<th>Measurements</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit After Tax</td>
<td>PAT</td>
<td>Profit after tax</td>
<td>Taiwo et al. (2022)</td>
</tr>
</tbody>
</table>

3. RESULTS AND DISCUSSION

This study used a sample of NDMBs to examine whether IR and investor returns are statistically and significantly related to PAT as a moderating variable. Integrated reporting was represented by IRDIX. PER, DPS, and MPS are proxy measures used to measure investor returns. In particular, the study investigates whether IR and MPS are related in NDMBs both without and with the moderating influence of PAT. The study also explicitly investigates whether IR and DPS are related in NDMBs both with and without the PAT’s moderating impact. In particular, the study investigates whether IR and PER are related in NDMBs both without and with the moderating influence of PAT. Table 2 shows models 1, 2, and 3 without and with the moderating effect of PAT on integrated reporting and investor returns. For models 1, 2, and 3, it was observed that the coefficients of the integrated reporting disclosure index reduced when the interaction variable (IRDIX \cdot \ln\text{PAT}) was introduced from 19.0163 to –151.6602, 1.6506 to –14.8372,
and 66.9603 to 12.4795, respectively. IRDIX and MPS are significantly related to p-values of 0.000 when the moderating variable \((IRDIX \cdot \ln PAT)\) was introduced. Also, IRDIX and DPS are related significantly with p-values of 0.000 when the moderating variable \((IRDIX \cdot \ln PAT)\) was introduced. However, IRDIX and PER are not related significantly with p-values of 0.521 when the moderating variable \((IRDIX \cdot \ln PAT)\) was introduced. Furthermore, Table 2 shows that the moderating variable \((IRDIX \cdot \ln PAT)\) and MPS are positively related with coefficients of 36.7535. Also, the moderating variable \((IRDIX \cdot \ln PAT)\) and DPS are positively related to coefficients of 3.1516. Similarly, the moderating variable \((IRDIX \cdot \ln PAT)\) and PER are positively related to coefficients of 9.9585. Also, the results indicate that PAT significantly moderates the effect of IR on MPS with p-values of 0.000 < 0.05 and that PAT significantly moderates the effect of IR on DPS with p-values of 0.000 < 0.05. However, PAT does not significantly moderate the effect of IR on PER with a p-value of 0.521 > 0.05. The adjusted R² of 0.1010, 0.2698, and 0.0662 imply that the descriptive variables are solely responsible for 10.10% changes in MPS, 26.98% changes in DPS, and 6.62% changes in PER.

\[
MPS_{\mu} = 122.3473 - 151.6602IRDIX_{\mu} - 27.5651\ln PAT_{\mu} + 36.7535(IRDIX_{\mu} \cdot \ln PAT_{\mu}) + \epsilon_{\mu},
\]  
\[
DPS_{\mu} = 11.8979 - 14.8372IRDIX_{\mu} - 2.3636\ln PAT_{\mu} + 3.1516(IRDIX_{\mu} \cdot \ln PAT_{\mu}) + \epsilon_{\mu},
\]  
\[
PER_{\mu} = -7.9716 + 12.4795IRDIX_{\mu} - 7.4687\ln PAT_{\mu} + 9.985(IRDIX_{\mu} \cdot \ln PAT_{\mu}) + \epsilon_{\mu}.
\]

Thus, the study rejects hypothesis one, \(H_{01}: IR \text{ and } MPS \text{ are not related in NDMBs,}\) and accepts the alternative hypothesis.

This study also rejects hypothesis two, \(H_{02}: IR \text{ and } DPS \text{ are not related in NDMBs,}\) and accepts the alternative hypothesis.

However, this study also accepts hypothesis three, \(H_{03}: IR \text{ and } DPS \text{ are not related in NDMBs,}\) and rejects the alternative hypothesis.

The results of this study showed how IR and investor returns interact, with PAT serving as a moderator. The result of hypothesis one indicated that IR has a positive and significant effect on MPS with the moderating role of Profit after tax. This meant that IR is taken into account in NDMB’s market share prices on the NGX to the point where it has a noticeable impact on the market share price of NDMBs, with PAT acting as a moderator. This finding is supported by empirical evidence from earlier studies, including those by Lee and Yeo (2016), Barth et al. (2017), and Adegboyegun et al. (2020), which demonstrate that IR positively affects a firm’s value. Likewise, Cosma et al. (2018) demonstrate equivalent results. The results from Bijlmakers (2018), Nurkumalasari et al. (2019), and Soumillion (2018), though, are precisely the opposite. Additionally, Barth et al.’s (2017) study in South Africa, which has a mandatory IR regime, revealed a rise in firm valuation reliability with in-

<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></td>
<td>No moderation</td>
<td>With moderation</td>
<td>No moderation</td>
</tr>
<tr>
<td>Constant</td>
<td>-6.7225</td>
<td>122.3473</td>
<td>-0.9285</td>
</tr>
<tr>
<td>p-value</td>
<td>0.596</td>
<td>0.001</td>
<td>0.032</td>
</tr>
<tr>
<td>IRDIX</td>
<td>19.0163</td>
<td>-151.6602</td>
<td>1.6506</td>
</tr>
<tr>
<td>p-value</td>
<td>0.138</td>
<td>0.002</td>
<td>0.000</td>
</tr>
<tr>
<td>lnPAT</td>
<td>-0.0000</td>
<td>-27.5651</td>
<td>-3.1800</td>
</tr>
<tr>
<td>p-value</td>
<td>0.544</td>
<td>0.000</td>
<td>0.417</td>
</tr>
<tr>
<td>IRDIX · lnPAT</td>
<td>-36.7535</td>
<td>-3.1516</td>
<td>9.9585</td>
</tr>
<tr>
<td>p-value</td>
<td>0.0256</td>
<td>0.1010</td>
<td>0.1890</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.1010</td>
<td>0.2698</td>
<td>0.0662</td>
</tr>
</tbody>
</table>

Source: Author’s computation (2023).
tegrated reporting-related disclosures when investigating empirical evidence from the mandatory and voluntary disclosure environment.

The results concur with those of Adegboyegun et al. (2020), Dey (2020), and Islam (2020), whose investigations in a setting of voluntary IR disclosure found a significant relationship between MPS ratios and IR. Hypothesis 2 shows IR and DPS are related in NDMBs with the moderating role of Profit after tax. Hypothesis 3 shows IR and DPS are not related in NDMBs with the moderating role of PAT. This result implies that IR positively minimized the link between environmental expenditures and company worth, which is, in contrast, the conclusion of Adelowotan and Udofoja (2021). This study and other empirical investigations provide strong evidence that integrated reporting and return of investors, as well as company value characteristics, interact on a number of levels.

CONCLUSION

This study examined if IR and investor returns had a statistically significant link with the moderating role of Profit after tax using Nigerian deposit money banks. The findings show that for the three models, the IR disclosure index is positively correlated with PER, DPS, and MPS. This suggests that PER, DPS, and MPS will all increase when IR is practiced more. However, DPS and MPS are significantly impacted by the IR disclosure index. Even so, the PER is not significantly affected by the IR disclosure index. This study concluded that IR and investor return positively correlate in Nigerian deposit money banks. It suggested that implementing IR would boost investor return. As a result, agency costs resulting from conflicts between shareholders’ interests and management’s interests could be reduced under the agency theory, given that it has been scientifically proven that a reporting entity’s non-financial performance significantly affects investor returns. Current and potential investors are advised to base investment decisions not only on the financial performance of a reporting entity but also on these factors.

AUTHOR CONTRIBUTIONS

Conceptualization: Adegbola Olubukola Otekunrin, Babatunde Ayodeji Owolabi, Yinka Lydia Emmanuel.
Data curation: Adegbola Olubukola Otekunrin, Yinka Lydia Emmanuel.
Formal analysis: Adegbola Olubukola Otekunrin, Yinka Lydia Emmanuel.
Funding acquisition: Adegbola Olubukola Otekunrin, Yinka Lydia Emmanuel.
Investigation: Babatunde Ayodeji Owolabi, Oluwasikemi Janet Owolabi.
Methodology: Babatunde Ayodeji Owolabi, Yinka Lydia Emmanuel.
Project administration: Adegbola Olubukola Otekunrin, Babatunde Ayodeji Owolabi, Oluwasikemi Janet Owolabi.
Resources: Adegbola Olubukola Otekunrin.
Software: Adegbola Olubukola Otekunrin, Yinka Lydia Emmanuel.
Supervision: Adegbola Olubukola Otekunrin, Babatunde Ayodeji Owolabi, Yinka Lydia Emmanuel.
Validation: Babatunde Ayodeji Owolabi, Oluwasikemi Janet Owolabi, Yinka Lydia Emmanuel.
Visualization: Adegbola Olubukola Otekunrin, Oluwasikemi Janet Owolabi, Yinka Lydia Emmanuel.
Writing – original draft: Adegbola Olubukola Otekunrin, Oluwasikemi Janet Owolabi, Yinka Lydia Emmanuel.
Writing – reviewing & editing: Adegbola Olubukola Otekunrin, Babatunde Ayodeji Owolabi, Yinka Lydia Emmanuel.

ACKNOWLEDGMENT

The involvement of those who helped make this study successful is acknowledged below. We appreciate your involvement.
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http://dx.doi.org/10.21511/bbs.19(3).2024.01


