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Do Investors Reward the Quality of Integrated Reporting

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Abstract

The need for a holistic view in the new era of information processing by investors has brought along the integrated reporting practice. With this type of reporting, firms do not only report financial information to investors; they also communicate the value creation process by relating financial information to non-financial ESG information. International Integrated Reporting Framework provides firms to publish high quality integrated reports. This study aims to examine if the quality of IR disclosure matters for investment decisions of investors and whether this result is affected by firm characteristics, such as size, age or financing preferences. The sample includes 1210 firm-year observations that are obtained by analyzing the integrated reports of 242 firms that are included in integrated reporting index presented in IFRS foundation website, for the period between 2019 and 2023. The findings of fixed effects panel data analysis reveal a significant positive effect of IR quality on returns, especially for bigger firms with less reliance on external financing. On the other hand, firm age and willingness to disclose IR are not priced by investors. The findings of this paper could help the managers shaping the reporting preferences, as well as financing decisions, by considering their effects on firm value. However, managers should also consider the incremental effects of their local investment environment, as this study does not divide the sample for countries or regions.

Keywords: Integrated Reporting, Voluntary Disclosure, Value Relevance

JEL Code: M40, M41, G10

1. Introduction

Up to two decades ago, financial disclosures provided all the information that the stakeholders sought, however, the changing conjuncture has shaped the information demands from the stakeholders. For example, the realities such as global warming, hunger, poverty, etc. in the world have started to affect everybody; and have brought the non-financial information into the foreground. In other words, financial information regarding the firm's performance and conditions with financial indicators has not been sufficient for investors anymore (Kilic and Kuzey, 2018; Ching & Gerab, 2017). Environmental, social and governance (ESG) issues

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have become more relevant for stakeholders (Nurkumalasari et al., 2019). Similarly, investors and creditors have started not to care only about the past performance, but also the future prospects of firms, which are mostly non-financial (Nakajima and Inaba, 2022).

This trend has motivated firms to prepare different reports, such as sustainability reports or corporate social responsibility (CSR) reports, in addition to their financial reports. While financial reports represent information about the financial position and performance of the firm, these additional reports disclose ESG information to stakeholders. However, preparation of separate reports is criticized for having varied target audiences and purposes, higher publication costs and mostly the lack of a holistic perspective in representing the firm performance (Hoque, 2017; Nakajima and Inaba, 2022). It is suggested that separate disclosure of financial and non-financial data might result in decreasing understandability and usefulness of information, as the accuracy of integrating this data depends on the users' capacity.

The need to bridge financial information and ESG performance has triggered the publication of International Integrated Reporting Framework (IIRF) in December 2013. This framework has aimed at providing a more realistic and holistic form of reporting to disclose the overall performance of a firm in generating and sustaining value. The integrated report (IR) integrates all the information about the firm's business model, governance, strategies, different types of capital used, social and economic performance in one report. Advocates of IR support that this kind of a presentation, with a holistic view, provides a more effective communication of the firm's ability to create value (Hughen et al., 2014; de Villiers et al., 2017; Nakajima and Inaba, 2022) as it intends to reflect how sustainability initiatives, together with financial information, are expected to contribute to the long-term growth strategy of a business (Churet and Eccles, 2014; Zúñiga et al., 2020).

According to International Integrated Reporting Council (IIRC; 2013), an integrated report should show a holistic picture of the combination, interrelatedness and dependencies between the factors that affect the organization's ability to create value over time. This powerful content of IR helps to increase transparency and accountability, which contribute to building trust with stakeholders by decreasing the information asymmetry. However, presentation of IR increases reporting and proprietary costs, thus creates a trade-off for firms between investor credibility and cost of publishing the information (Delegkos et al., 2022; Nakajima and Inaba, 2022; Priyadarshani et al., 2023).

There is an extant literature representing proof of a positive relationship between IR publishing and stock market reactions (Lee and Yeo, 2016; Fernando and Hermawan, 2018; Zhou et al., 2017), whereas some other studies found no (or negative) correlation (Willows and Rockey, 2018; Landau et al., 2020). Mostly, the studies have been conducted in South Africa, as it is the only country with mandatory integrated reporting practices for public-listed firms. A narrower literature exists on the value relevance of voluntary IR publication (Mervelskemper and Streit, 2016; Giorgino et al., 2017; Landau et al., 2020; Priyadarshani et al., 2023).

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This relationship between IR publication and value relevance is affected by some firm characteristics, such as complexity, age and degree of external financing. According to the suggestions in existing literature, as the complexity increases, it requires higher information processing for users; thus, a combined representation may help to ease the process and decrease information asymmetry with the firm. Besides, investors are suggested to demand more information about newer firms. Therefore, as the age of a firm increases, IR becomes a better option for communication. On the other hand, as the degree of external financing increases, firms have a higher tendency towards declaring more information in order to borrow with lower interest rates. In both cases, representation of comprehensive information via IR, increases transparency and increases the value relevance (Nurkumalasari et al., 2019; Zúñiga et al., 2020; Nakajima and Inaba, 2022; Priyadarshani et al., 2023).

This study contributes to the existing literature in various areas. Initially, the limited number of studies on the subject is extended by this study, which comprehensively evaluates the content of IR disclosures and quantitatively measures its quality. This quantification adds to the value of study, as the previous studies mostly relate the firm's value to financial disclosures, because of difficulty in measuring the non-financial results. In addition, the effects of firm characteristics are also included in the analysis to provide a better understanding of relationship under question.

The analyses are handled by using a sample of 1210 firm-year observations obtained from 242 firms that publish IR from 2019 to 2023. The results reveal that annual stock returns react positively to IRQ, together with size, which leads to evaluation of IR publications by investors, especially in bigger firms. On the other hand, leverage's effect may be accepted as immaterial by coefficient, while age is an insignificant factor in the analysis.

The remainder of the paper proceeds as follows. In the second section, the literature on IR and its value relevance are presented, while the hypotheses are established in the third section. Fourth section is the section where data collection, methodology and findings are explained. The last section finally concludes.

2. Literature Review and Hypothesis Development

Financial reporting has always been the main communication tool for firms to declare financial information to stakeholders. However, as Eccles and Saltzman (2011) and Magnaghi and Aprile (2014) state, financial reporting has lost its sufficiency mainly because of changes in needs of stakeholders and firms started publishing non-financial reports to meet these needs (Cohen et al., 2012; Hughen et al., 2014). The financial and non-financial reporting practices have complemented each other's shortcomings. The well-known form of non-financial reporting, sustainability reporting, is regarded as insufficient in explaining the financial implications of non-financial activities and building a bridge between various information. Besides, financial and non-financial information have been reported by stand-alone practices. In this respect, these reporting practices have

been criticized in complexity and length, which resulted in confusion during decision making process (Eccles and Saltzman, 2011; de Villiers et al., 2014).

IIRC (2011) points out some other factors that reveal the need for integrated approach in reporting. Financial and economic crises, corporate scandals, scarcity of resources and users' desire to be informed about how these resources are intended to be utilized, increasing awareness on environment within the context of sustainability are some of these factors that changed the stakeholders' demands and needs of information. Additionally, Hughen et al. (2014) also states three reasons to apply integrated approach as (i) providing new perspective to current reporting practices, (ii) represent a holistic picture of business and how values are created, and (iii) disclosing all noteworthy information jointly. Under these circumstances, firms are expected to adopt IR for a number of benefits (Hoque, 2017; Sarıoğlu et al., 2019).

2.1. Theoretical background

Researchers have touched several disclosure theories to explain the rationale behind IR framework; the agency theory and signaling theory being the mostly used ones. Firstly, the accuracy of IR in representing the future performance and mitigating information asymmetry is associated with the agency theory, which mainly reflects the importance of corporate disclosure to minimize information asymmetry (Lang and Lundholm, 2000; Eccles et al., 2010; Nakajima and Inaba, 2022). Then, the voluntary disclosure of reliable corporate information to represent the efforts of management to meet information expectations of users is accepted as signals to shareholders in the frame of signaling theory (Nurkumalasari et al., 2019; Nakajima and Inaba, 2022). The signaling theory suggests that information asymmetry causes investors to favor more transparent firms, thus managers disclose information voluntarily to attract investments (Watts and Zimmerman, 1986). Nurkumalasari et al. (2019) and many others have also used signaling theory to base their hypotheses on firms' tendency towards voluntary disclosures and accepted the disclosure of corporate responsibility as firm's efforts to give signals to stakeholders. By providing information, which is controlled by management, the information processing cost of the public is reduced, and information asymmetry is mitigated, in consistency with the signaling theory (Watson et al 2002; Ching and Gerab, 2017; Anifowose et al., 2017).

On the other hand, the legitimacy theory supports that firms need to disclose information on environmental and social performances (Dowling and Pfeffer, 1975) and a firm's existence is justified by the values it generates, matching society's needs. Similarly, Nakajima and Inaba (2022) suggest firms appeal their legitimacy by disclosing information about their social and environmental performance through IR (Mousa and Hassan, 2015).

Finally, the holistic representation of IR to all stakeholders as target audiences is accepted to be in line with the stakeholder theory, which postulates that firms focus on a range of stakeholders and serve society, environment and economy (Nakajima and Inaba, 2022).

2.2. Stakeholders' Reactions to Integrated Reporting

An integrated report provides information about the value-creation process of a firm, including the opportunities and risk in the market and the firm's reaction to these factors by using its business model and a variety of capitals it utilizes, as well as its past performance. In other words, IR provides future prospects in addition to financial and non-financial past performances, as it is intended to inform how ESG and financial information contribute to the long-term growth strategy of the firm (Churet and Eccles, 2014; Zúñiga et al., 2020). In this frame, Barth et al. (2017) also states that increased information content helps to predict the future cash flows more accurately, which affects the reactions of stakeholders to information presented.

2.2.1. Integrated Reporting and Firm Value

Presentation of comprehensive information helps to mitigate information asymmetry, increase the level of accountability and maintain good relationships with the capital providers. Previous studies have usually related this situation with the firm value and revealed positive relationship between IR and stock market reaction (Lee and Yao, 2016; Giorgino et al., 2017; Cosma et al., 2018; Nakajima and Inaba, 2022). According to economic theories and empirical studies, the increased level of corporate disclosure prevents investors' adverse selection problem and increases the market value through decreasing information asymmetry (Lang and Lundholm, 2000; Botosan, 2006; Lundholm and Van Winkle, 2006).

Cosma et al. (2018) analyze the stock market reaction to announcement of IR awards in South Africa, where IR is mandatory for public firms, and proved the positive reaction of stock prices to awards announcements. This result reflects the importance of improving the IR disclosure quality from the perspective of shareholders. Barth et al. (2017) have also examined the relationship between IR quality and stock liquidity, firm value, expected future cash flows and cost of capital for South African firms. They have used bid – ask spreads to proxy the stock liquidity while Tobin's Q value proxied the market value. Findings of the study reveal that stock liquidity and firm value have positive relationships with integrated reporting. Another study that finds positive relationship between IR quality and market value, proxied by Tobin's Q, for South African firms belongs to Lee and Yeo (2016). They state that IR quality can be used as effective signals to investors, as traditional reports are not sufficient in terms of information content. They also state that this relationship becomes more apparent for complex companies, in which information processing is more difficult for outsiders (Garcia-Sanchez et al., 2013; Delegkos et al., 2022).

Analyzing the relationship from the voluntary disclosure perspective, Giorgino et al. (2017) and Nakajima and Inaba (2022) conclude that markets have tendencies to react positively to IR publication. According to the findings of Nakajima and Inaba (2022), disclosure of ESG information in integrated reports receive higher response from market participants.

On the other hand, there are studies that found no or negative correlation. For example, Willows and Rockey (2018) have applied event study method to search for reaction of investors to IR in Johannesburg Stock Exchange and found no significant reaction. Basnayaka and Priyadarshani (2021) and Priyadarshani et al. (2023) also discovered that IR does not have an enhancing role in value relevance of corporate disclosures for Sri Lankan-listed companies in Colombo Stock Exchange.

Nurkumalasari et al. (2019) have found no effect of IR on firm value, either, with the suggestion that IR is not an appropriate medium to be used as signal to stakeholders. Difficulty in quantification of non-financial information and investors' insufficient understanding about the relevance of IR content are considered as the main factors (Abhayawansa et al. 2018). Similarly, Singh et al. (2012) have also stated that length and excessiveness of integrated report may limit the readability for some users. Besides, investors who depend on technical analysis base their decisions on historical quantitative data and IR is only a supplementary source for decision making. For these investors, environmental disclosure and CSR are irrelevant for financial analysis as stated in studies of Campbell and Slack (2011), Krasodomska and Cho (2017) and Hsiao and Kelly (2018).

2.2.2. Factors Affecting the Usefulness of Integrated Reporting

The previous studies have depended on the extent of IR's adoption and its effects on value relevance on some specific firm characteristics, such as the complexity, age and the extent of external financing, as the moderators.

2.2.2.1. Moderating Role of Complexity

The increased complexity limits the generation and usability of relevant information for investors. For example, Cohen and Lou (2012) state that it is difficult to convert information into asset prices for those investors with limited capacity and resources, in firms with complex structures. Thus, they need more information about the financial and ESG performances of firms (Garcia-Sanchez et al., 2013) which is represented through IR in an integrated approach. As a result, the IR disclosure quality is found to increase the firm value, especially for complex firms (Lee and Yeo, 2016). Nurkumalasari et al. (2019) also defines high-quality IR disclosure as a sufficient approach to provide true signals to investors in these firms.

For example, size, as a widely used proxy for complexity, is expected to affect the value relevance of IR, because larger firms are accepted to have higher capacity to get involved in social and environmental activities, and they have responsibilities to meet a higher variety of information demands from a wider range of stakeholders (Crisostomo et al., 2011; Busco et al., 2019). Therefore, it is suggested that IR disclosure may be a better way to provide signals to stakeholders, rather than separate financial and CSR reports.

2.2.2.2. Moderating Role of Firm Age

It is expected that the demand for information is greater for young, high-risk firms, especially in emerging industries. Therefore, managers are more likely to publish comprehensive information via IR and reduce the information asymmetry (Barton and Waymire, 2004). Consistent with prior studies, Lee and Yeo (2016) use

firm age to proxy for market demand for information about newer firms, and they accept it as one of the main determinants of IR.

2.2.2.3. Moderating Role of Leverage

Degree of external financing is found to be an important factor that moderates the relationship between IR disclosure and firm value, with the incremental effect of information asymmetry. Compared to shareholders, external providers of capital request more comprehensive disclosure that builds trust with the firm (Al-Najjar and Al-Najjar, 2017). Similarly, the firms that base more on external financing are found to have tendencies to disclose extensive information and decrease the cost of capital by reducing information asymmetry (Garcia-Sanchez and Noguera-Gamez, 2017). In another research, Chen et al. (2010) provides evidence that the quality of disclosed corporate governance information has higher value relevance for firms with higher external financing needs.

3. Hypothesis Development

Although there are contrary results too, the empirical studies and theories generally conclude that the disclosure of information through IR increases transparency and accountability. In other words, improving the quality of IR disclosure increases the firm value with the help of trust built between investors and the firm. This relationship is also found to be moderated by some firm characteristics, such as the complexity, age and the financial leverage of firms. The complexity, which is proxied by firm size in this study, enhances the relationship between IR disclosure quality and stock prices, because the bigger the firms the more comprehensive information investors need. Additionally, IR disclosure quality is more important for younger firms. On the other hand, as the firms rely more on external financing, they are assumed to be more desirous of disclosing information in order to decrease their cost of capital.

Following these prior findings, this study hypothesizes that there is a positive relationship between the quality of IR disclosures and the stock prices, under the moderation of firm complexity, firm age and financial leverage. Besides, the desire of firms to disclose information is an important factor that may build more trust with the investors, compared to mandatory disclosure. Correspondingly, the following panel regression model with year dummies as the fixed effect is formulated, in the study:

$$RET_{i,t} = \alpha_{i,t} + \beta_1 IRQ_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 AGE + \beta_5 VOLIR_{i,t} + D_{year} + \varepsilon_{i,t}$$

where $RET_{i,t}$ stands for annual stock return; $IRQ_{i,t}$ for the integrated reporting quality; $SIZE_{i,t}$ for firm size; $LEV_{i,t}$ for the degree of leverage; $AGE_{i,t}$ for the firm age; $VOLIR_{i,t}$ for voluntary IR used by firm "i" in year "t"; D_{year} for the dummy variable to specify the year. $\alpha_{i,t}$ in the model represents the intercept of regression line while $\varepsilon_{i,t}$ represents the disturbance term. Therefore, considering the previous literature, theoretical background, and formulated model, we proposed the proceeding hypothesis:

H_1: The quality of IR is positively related to firm value.

Considering the integrated reports' comprehensive content, the value relevance of these reports may be influenced by a variety of macro-level conditions, such as economic crisis, epidemic diseases, etc. Therefore, the presence or the direction of relationship between the quality of IR disclosure and firm value may change from year to year. To examine the year effect on this relationship, we have established another hypothesis as follows:

***H2:** The year has significant effect in this relationship.*

4. Research Methodology

4.1. Data

In compliance with the objective of this study, the firms that publish IR between the years 2019 and 2023 construct the main sample. The list of IR publishing firms is obtained from the website of IFRS foundation, as the main organization behind IIRC. Although the entire sample includes 496 firms, the number is decreased to 242 by taking the discontinued or unavailable integrated reports into account. Totally, 1210 integrated reports are analyzed, and the corresponding firms' annual stock returns are calculated by using the stock prices obtained from the stock exchanges, where the relevant firms are listed. Besides, the necessary data to calculate "SIZE" and "LEVERAGE" variables are available in the content of IR. Other information is accessed from the website of each firm regarding the "AGE" and type of IR application as voluntary or mandatory.

4.2. Variables and Measurement

In the frame of this study, we expect the annual stock returns to react positively to IR quality. Besides, we examine if some firm characteristics such as size, age and reliance to external finance affect this relationship. Therefore, the fixed effect panel regression analysis is conducted to test hypothesis. In the model, annual stock return ($RET_{i,t}$), the dependent variable, is calculated by using the formula represented below:

$$RET_{i,t} = \frac{Stock\ Price_{i,t} - Stock\ Price_{i,t-1}}{Stock\ Price_{i,t-1}}$$

Considering both the previous studies (Pistoni et al., 2018; Songini et al., 2022) and IIRC's integrated reporting framework (IIRC; 2021), a scoring method is developed to measure the quality of IR disclosure (*IRQ*), the independent variable. Accordingly, considering the integrated reporting framework, 18 items have been adopted to score integrated reports. Of these items, 3 items are related to fundamental concepts, 7 items to guiding principles, and 8 items to content elements. In the scoring method, 4-points scale is used, where "0=Absence of information"; "1=Poor information"; "2=Balanced information partially supported by quantitative data"; and "3=Excellent information supported by quantitative data". In this scoring method, maximum scores of 9, 21 or 24 points can be achieved from each part, and a maximum of 54 points can be achieved in total.

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"*SIZE*" variable is measured as the natural logarithm of total assets, while "*LEVERAGE*" is measured by debt-to-equity ratio calculated as follows:

$$D/E = \frac{Total\ Liabilities}{Total\ Shareholders\ Equity}$$

Finally, "*AGE*" is measured by the number of years that firms are operating. Moreover, a dummy variable is included in the model regarding the type of IR practice. It is scored as "1" for voluntary disclosure and "0" for mandatory IR practice.

5. Data Analysis and Empirical Results

The descriptive statistics are presented in Table 1. The statistics reveal that the sample has an average annual return of 41.93%, however there is material deviation among observations with 59.81%. This level of deviation may be linked to usage of a multi-national sample, with differing market conditions. The score for the quality of IR varies in a range between 37 to 52, while the mean score is 45.78 out of 54. The relatively small value of deviation (3.01) reflects that firms that prefer publishing IR, generally follow the principles of IIRF at a similar extent. The descriptives for AGE variable represent that the sample includes both very young and very old firms (from 2 years-old to 193 years-old), creating another material deviation of 43.63 years found. The fact that IR disclosure is mandatory only in South Africa may explain the reason of having almost 80 percent of total sample disclosing integrated reports voluntarily.

Table 1. Descriptive Statistics

	Observation	Minimum Statistics	Maximum Statistics	Mean Statistics	Standard Deviation Statistics
RET (%)	1210	-21.33	168.17	41.93	59.81
IRQ	1210	37	52	45.78	3.01
SIZE	1210	15.79	27.56	17.36	1.65
LEV	1210	0.27	11.81	0.91	0.38
AGE	1210	2	193	28.44	43.63
VOLIR	1210	0	1	0.80	0.48

The correlations, and variance inflation factors (VIF) of variables are presented in Table 2. According to the findings, IRQ is significantly and positively correlated with stock returns ($r=0.575$; $p<0.01$). Furthermore, VIF level is a significant indicator of multicollinearity, and normally it is expected to be less than 4 (Hair et al., 2010). Therefore, the obtained VIF levels signal no unacceptable level of multicollinearity regarding Table 2.

Table 2. Correlation Matrix, and VIF of Variables

	RET	IRQ	SIZE	LEV	AGE	VOLIR	VIF
RET	1						
IRQ	0.575**	1					3.28
SIZE	0.485**	0.517**	1				3.91
LEV	0.592**	0.449**	0.395**	1			3.62
AGE	0.045	0.023	0.381**	0.188*	1		1.35
VOLIR	0.101	0.062	0.129*	0.211**	-0.179**	1	1.17

Note(s): n=1210; ** and * denotes the significance level of Pearson's Correlation Coefficient at the level %10 and %5 respectively.

Before running the panel data analysis, Hausman (1978) test is conducted to determine whether the random effects model or fixed effects models better fits the dataset. According to the insignificant probability level (0.028) of model, fixed effects model is found to be more appropriate for the structure of our dataset. The findings from fixed effects panel regression analysis are represented in Table 3.

Table 3. The Results of Fixed Effects Panel Regression Model

Variable	β Coefficient	Standard Error	p-value
RET	29.542	5.921	0.000***
IRQ	0.711	0.286	0.007***
SIZE	0.251	0.109	0.041**
LEV	-0.054	0.205	0.089*
AGE	0.095	0.291	0.149
VOLIR	-0.038	0.443	0.229
Year2020	1.449	1548	0.192
Year2021	3.120	1.215	0.073*
Year2022	3.431	1.236	0.041**
Year2023	3.527	1.243	0.017**
	n 1210		
	Chi-Sq 3.28		
	Prob > χ^2 0.028		
	R^2 0.596		

Note(s): Dependent Variable: Annual Stock Return
***, ** and * represent statistical significance at 0.01, 0.05 and 0.1, respectively.

In the light of fixed effects model, which explains 59.60% of the variance in the dependent variable, the results indicate that there is a positive and significant relationship between stock returns (RET) and IRQ (β=.711, p<.01). In other words, it is found that the positive impact on the annual stock return is observed as a result of improved integrated reporting quality. This result complies with the expected results proposed in Hypothesis 1. Besides, control variables of *SIZE* (β=.251, p<.05), and *LEVERAGE* (β=-.054, p<.01) are found to have significant effect, whereas no significance is found for *AGE* and *VOLIR* variables. Considering the signs of coefficients, it can be supposed that investors of bigger firms with less external financing are found to reach higher returns while the firm age or type of

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IR disclosure (whether voluntary or mandatory) is irrelevant for investment decisions.

Besides, the yearly significance levels for 5-year period are addressed to answer Hypothesis 2. As Table 3 reveals, all years except 2020 are found to be significant and the coefficients are increasing year by year. In this frame, it can be suggested that investors are getting more conscious about environmental, social and economic issues and this is reflected in an increase in returns of IR publishing firms' stocks. Besides it may also be linked to the decreasing effect of the pandemic on financial markets. The grants by government during the COVID period may be thought to be converted into financial investments to an extent by the public. This may be the underlying reason behind increasing returns in firms. Whatever the reasons are, the results show that Hypothesis 2, which proposes the presence of year-specific effects embedded in each year on return, is accepted.

6. Conclusion

The increasing consciousness about environmental, social and governance issues in the market has been reflected in changing demands by investors and differing accounting practices in return. Evolving reporting practices has reached at integrated reporting level and with this study authors aim at investigating whether the investors reward the quality of integrated reports that firms publish. Besides, the effects of firm size, firm's reliance on external financing and its age on annual stock returns are involved in the analysis, together with the perceived importance by investors given to voluntarily IR publishment. The findings highlight important aspects of the subject in terms of firms, investors and literature.

Initially, a positive and significant relationship is addressed between annual stock returns and IR quality, in consistent with prior studies such as those of Lee and Yeo (2016), Zhou et al. (2017) and Priyadarshani et al. (2023). It means that annual stock returns positively react to quality of IR disclosures. Considering results, another vital finding is the significance of IIRF in IR practice. Application of framework is critical factor to meet the quality standards and expectation of users of information. Accordingly, firms that intend to disclose IR should strictly consider framework, which provide positive annual stock returns afterwards. This situation is found to be more apparent for bigger firms and the firms that less prefer debt financing. These findings are parallel to the prior literature in terms of size variable (Crisostomo et al., 2011; Busco et al., 2019), however in contrast to the findings of the studies of Chen et al. (2020) and Al-Najjar and Al-Najjar (2017) for leverage variable.

On the other hand, it is shown that investors do not reward voluntary disclosure of ESG information. Besides, the age of the reporting firm is not found to be an important factor to consider for investors, either. Considering the year fixed effect, starting from the year 2021, results also indicate that the significance level has improved till 2023, which can be explained by increasing level of IRQ, and its positive effect on annual stock returns. However, the year 2020 is observed as insignificant in this relationship, which can be related to negative effect of COVID-19, and it can be concluded as the IRQ has increased after COVID-19.

The sample size can be accepted as a limitation for this study, as the entire population is listed firms all over the world. However, especially in many emerging, or non-developed, capital markets, firms find it difficult to measure the non-financial information, and investors, on the other hand, are still not so familiar with the use of non-financial information in firm valuation. Therefore, non-financial reporting has not gained enough acceptance by users yet. It is also suggested that some stakeholders may define it only as a long, long-wind narrative report. This also makes IR irrelevant to decision making for those users. Because of these reasons, the sample size, which reflects the number of firms publishing IR, could not be extended to thousands in the study. Besides, even for 496 firms which are indexed on the website of IFRS, it has not been possible to reach all of their reports due to unavailability for different years. Also, except for the integrated reports that are indexed on the website of IFRS foundation, there are non-indexed integrated reports too. However, these integrated reports are not considered in this study as there is no information about whether these integrated reports follow IIRF or not.

The incremental effect of being in the index for firms on stock returns can be a prospective topic to study for future research. In addition, other variables that may affect the relationship between IR quality and stock returns can be included in the model, such as corporate governance mechanisms, policies and regulations of stock exchange markets, national culture, etc. As the sample does not distinguish the results for different markets, adding some regional/national characteristics into the model may help to reach more specific conclusions. From another perspective, the quality of IR disclosure can be related to cost of capital, too. Existing theories generally support the idea that as the level of corporate disclosure increases, the trustworthiness of firms increases too. Therefore, the quality of comprehensive content represented by IR is suggested to affect not only the firm's value, but also the cost of external financing. The findings of previous studies have generally revealed a negative relationship between the IR disclosure and cost of capital (Lang and Lundholm, 2000; Chen et al. 2010; Lee and Yeo, 2016; Nurkumalasari et al., 2019). The underlying rationale behind this is that as firms present more information with an integrated approach, they increase accountability and mitigate the information asymmetry, which in turn prevents them from expensive financing.

References

Abhayawansa, S., Elijido-Ten, E. & Dumay, J. (2018), "A Practice Theoretical Analysis of the Irrelevance of Integrated Reporting to Mainstream Sell-side Analysts". Accounting & Finance, DOI: 10.1111/acfi.12367.

Al-Najjar, B. & Al-Najjar, D. (2017), "The Impact of External Financing on Firm Value and A Corporate Governance Index: SME Evidence", Journal of Small Business and Enterprise Development, 24(2), 411–423.

Anifowose, M., Rashid, H.M.A. & Annuar, H.A. (2017), "Intellectual Capital Disclosure and Corporate Market Value: Does Board Diversity Matter?", Journal of Accounting in Emerging Economies, 7(3), 369–398.

Barth, M.E. Cahan, S.F., Chen, L. & Venter, E.R. (2017), "The Economic Consequences Associated with Integrated Report Quality: Capital Market and Real Effects", Accounting, Organizations and Society, 62, 43–64.

Barton, J, & Waymire, G. (2004), "Investor Protection under Unregulated Financial Reporting," Journal of Accounting and Economics, 38(1), 65-116.

Basnayaka, S. & Priyadarshani L.W., P. (2021). “Impact of Integrated Reporting Disclosure Level on Value Relevance of Accounting Information - Evidence from Listed Companies in Sri Lanka”. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4117004

Botosan, C.A. (2006), “Disclosure and the Cost of Capital: What Do We Know?”, Accounting and Business Research, 36(1), 31-40. doi: 10.1080/00014788.2006.9730042.

Campbell, D. & Slack, R. (2011), “Environmental Disclosure and Environmental Risk: Sceptical Attitudes of UK Sell-side Bank Analysts”, The British Accounting Review, 43(1), 54-64.

Chen, W. Chung, H., Hsu, T.L. & Wu, S. (2010), “External Financing Needs, Corporate Governance, and Firm Value”, Corporate Governance: An International Review, 18(3), 234–249

Ching, H. & Gerab, F. (2017), “Sustainability Reports in Brazil Through the Lens of Signaling, Legitimacy, and Stakeholder Theories”, Social Responsibility Journal, 13(1), 95-110.

Churet, C. & Eccles, R.G. (2014), “Integrated Reporting, Quality of Management, and Financial Performance”, Journal of Applied Corporate Finance, 26, 56-64.

Cohen, J., Holder-Webb, L.L., Nath, L. & Wood, D. (2012), “Corporate Reporting on Nonfinancial Leading Indicators of Economic Performance and Sustainability”, Accounting Horizons, 26, 65-90.

Cohen, L. & Lou, D. (2012), “Complicated Firms”, Journal of Financial Economics, 104(2), 383–400.

Cosma, S., Soana, M.G. and Venturelli, A. (2018), “Does the Market Reward Integrated Report Quality?”, African Journal of Business Management, 12(4), 78-91, doi: 10.5897/AJBM2017.8469

Crisostomo, V.L., Freire, F.S. & Vasconcellos, F.C. (2011), “Corporate Social Responsibility, Firm Value, and Financial Performance in Brazil”, Social Responsibility Journal, 7(2), 295-309.

de Villiers, C., Rinaldi, R. and Unerman, J. (2014), “Integrated Reporting: Insights, Gaps and An Agenda For Future Research”, Accounting, Auditing & Accountability Journal, 27(7), 1042-1067, doi: https://doi.org/10.1108/AAAJ-06-2014-1736

Delegkos, A.E., Skordoulis, M., Kalantonis, P. and Xanthopoulou A. (2022), “Integrated Reporting and Value Relevance in the Energy Sector: The Case of European Listed Firms”, Energies, 15(22), 8435. https://doi.org/10.3390/en15228435

Dey, P.K. (2020), “Value Relevance of Integrated Reporting: A Study of the Bangladesh Banking Sector”, International Journal of Disclosure and Governance, 17(4), 1-13, doi: 10.1057/s41310- 020-00084-z

Dowling, J. & Pfeffer, J. (1975), “Organizational Legitimacy: Social Values and Organizational Behavior”, The Pacific Sociological Review, 18(1), 122-136. doi: 10.2307/1388226.

Eccles, R.G. & Saltzman, D. (2011), “Achieving Sustainability Through Integrated Reporting”, Stanford Social Innovation Review, 9(3), 56–61.

Eccles, R.G., Cheng, B. & Saltzman, D. (2010), “The Landscape of Integrated Reporting: Reflections and Next Steps”, Harvard Business School Press, Boston.

Fernando, K., & A. Hermawan, A. (2019). Relative and Incremental Value Relevance of Accounting Information under the Integrated Reporting Approach: Evidence from South Africa. Proceedings of the Asia Pacific Business and Economics Conference (APBEC 2018). https://doi.org/10.2991/apbec-18.2019.59

García-Sánchez, I. & Noguera-Gámez, L. (2017), “Integrated Information and The Cost of Capital”. International Business Review, 26(5), 959–975.

García-Sánchez, I., Rodrıguez-Ariza, L. & Frıas-Aceituno, J. (2013), “The Cultural System and Integrated Reporting”. International Business Review, 22(5), 828–838.

Giorgino, M., Supino, E. & Barnabè, F. (2017),“Corporate Disclosure, Materiality, and Integrated Report: An Event Study Analysis”, Sustainability, 9(12), 2182. doi: 10.3390/su9122182

Hair, J.F., Black, W.C., Babin, B.J., and Anderson, R.E, (2010), Multivariate Data Analysis, Pearson, New York, NY.

Hausman, J.A. (1978), “Specification Tests in Econometrics”. Econometrica, 46(6), 1251–1271. https://doi.org/10.2307/1913827

Hoque, M. (2017), “Why Company Should Adopt Integrated Reporting?”, International Journal of Economics and Financial Issues, 7(1), 241-248.

Hsiao, P.K. & Kelly, M. (2018), “Investment Considerations and Impressions of Integrated Reporting: Evidence from Taiwan”. Sustainability Accounting, Management and Policy Journal, 9(1), 2-28.

Hughen, L., Lulseged, A., & Upton, D. R. (2014), “Improving Stakeholder Value through Sustainability and Integrated Reporting”, The CPA journal, 84(3), 57.

International Integrated Reporting Council (IIRC). (2011). Towards Integrated Reporting: Communicating Value in the 21st Century. Retrieved March 12, 2023 from http://integratedreporting.org/wp-content/uploads/2011/09/IR-Discussion-Paper-2011_spreads.pdf

International Integrated Reporting Council (IIRC). (2021), "International IR Framework". Retrieved March 12, 2023 from https://integratedreporting.ifrs.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf

Kilic, M. & Kuzey, C. (2018), "Assessing Current Company Reports According to the IIRC Integrated Reporting Framework". Meditari Accountancy Research, 26(2), 305–333.

Krasodomska, J. & Cho, C.H. (2017), "Corporate Social Responsibility Disclosure: Perspectives from Sell-side and Buy-side Financial Analysts". Sustainability Accounting, Management and Policy Journal, 8(1), 2-19.

Landau, A., Rochell, J., Klein, C. & Zwergel, B. (2020), "Integrated Reporting of Environmental, Social, and Governance and Financial Data: Does the Market Value Integrated Reports?", Business Strategy and the Environment, 29(4), 1750-1763. doi: 10.1002/bse.2467

Lang, M.H. & Lundholm, R.J. (2000), "Voluntary Disclosure and Equity Offerings: Reducing Information Asymmetry or Hyping the Stock?". Contemporary Accounting Research Conference, 17(4), 623–662.

Lee, K. & Yeo, G.H. (2016), "The Association Between Integrated Reporting and Firm Valuation", Review of Quantitative Finance and Accounting, 47(4), 1221-1250.

Lundholm, R. & Van Winkle, M. (2006), "Motives for Disclosure and Non-disclosure: A Framework and Review of The Evidence", Accounting and Business Research, 36 (1), 43-48, doi: 10.1080/00014788.2006.9730044.

Magnaghi, E. & Aprile, R. (2014), "Integrated Reporting: A Theoretical Perspective on This Critical Issue". Journal of Business and Economics, 5(8), 1320-1337.

Mervelskemper, L. & Streit, D. (2016), "Enhancing Market Valuation of ESG Performance: Is Integrated Reporting Keeping Its Promise?", Business Strategy and the Environment, 26(4), 536-549 doi: 10.1002/bse.1935.

Mousa, G.A. & Hassan, N.T. (2015), "Legitimacy Theory and Environmental Practices: Short Notes", International Journal of Business and Statistical Analysis, 2 (1), 41-53, doi: 10.12785/ijbsa/020104.

Nakajima, Y. & Inaba, Y. (2022), "Stock Market Reactions to Voluntary Integrated Reporting", Journal of Financial Reporting and Accounting, 20 (3/4), 516-541.

Nurkumalasari, I.S., Restuningdiah, N. & Sidharta, E.A. (2019), "Integrated Reporting Disclosure and Its Impact on Firm Value: Evidence in Asia", International Journal of Business, Economics and Law, 18(5), 99–108.

Pistoni, A., Songini, L. and Bavagnoli, F. (2018), "Integrated reporting quality: An empirical analysis", Corporate Social Responsibility and Environmental Management, 25(4), 489–507, doi: 10.1002/csr.1474.

Priyadarshani, W.A.N., Yusoff, S.K.B.M & Azam, F. (2023), "Impact of Integrated Reporting on the Value Relevance of Corporate Disclosures", International. Journal of Professional Business Review, 8(7), 1 – 20.

Sarıoğlu, M., Dalkılıç, A.F., & Durak, M.G. (2019), "The Future of Corporate Reporting: Integrated Reporting", International Journal of Contemporary Economics and Administrative Sciences, 9(2), 327–347. https://doi.org/10.5281/zenodo.3596090

Singh, J., Wei, S.S. & Kaur, K. (2012), "Integrated Reporting – A Comparison Between Developed and Developing Countries". South East Asian Journal of Contemporary Business, Economic, and Law, 1(-), 81-84.

Songini, L., Pistoni, A., Tettamanzi, P., Fratini, F. and Minutiello, V. (2022), "Integrated Reporting Quality and BoD Characteristics: An Empirical Analysis", Journal of Management & Governance, 26(2), 579–620, doi: 10.1007/s10997-021-09568-8.

Villiers, C., Venter, E.R. & Hsiao, P.K. (2017), "Integrated Reporting: Background, Measurement Issues, Approaches and An Agenda for Future Research", Accounting and Finance, 57(4), 937-959.

Vitolla, F., Raimo, N., Rubino, M. and Garzoni, A. (2020), "The Determinants of Integrated Reporting Quality in Financial Institutions", Corporate Governance, 20(3), 429-444, doi: 10.1108/ CG-07-2019-0202

Watson, A., Shrives, P. & Marston, C. (2002), "Voluntary Disclosure of Accounting Ratios in The UK", British Accounting Review, 34(4), 289–313.

Watts, R.L. & Zimmerman, J.L. (1986), "Positive Accounting Theory", Prentice-Hall. New York, NY City.

Willows, G.D. & Rockey, J.A. (2018), "Share Price Reaction to Financial and Integrated Reports", South African Journal of Accounting Research, 32(2/3), 174-188, doi: 10.1080/10291954.2018.1514141

Zhou, S., Simnett, R. & Green, W. (2017), "Does Integrated Reporting Matter to the Capital Market?", Abacus, 53(1), 94-132, doi: 10.1111/abac.12104

Zúñiga, F., Pincheira, R., Walker, J. & Turner, M. (2020), "The Effect of Integrated Reporting Quality on Market Liquidity and Analyst Forecast Error". Accounting Research Journal, 33(4/5), 635-650.