Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Beyond the Screen: How Corporate Internet Reporting Drives Firm Performance Across Asia

Kiswanto Kiswanto
kiswanto@mail.unnes.ac.id

State University of Semarang
Rahmawati Rahmawati
Sebelas Maret University
Doddy Setiawan
Sebelas Maret University
Y Anni Aryani
Sebelas Maret University

Article

Keywords: Corporate Internet reporting, Firm Performance, Corporate Governance, Timeliness Information, Social Responsibility

Posted Date: October 29th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10804926/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License. Read Full License

Additional Declarations: No competing interests reported.

Abstract

This study aims to see the direct impact of corporate internet reporting measurement indicators on the company's financial performance. Corporate internet reporting consists of investor-related information, social responsibility disclosure, corporate governance information, contact and information provision services, social media, timeliness of information, and website convenience. The company's financial performance is measured using Tobin's Q. This study uses a saturated sampling technique, with all companies listed on the capital markets of Asian Countries in 2022 as a sample. The data analysis technique used is multiple regression analysis (MRA). The results showed that social responsibility disclosure, corporate governance information, contact and information supply services, and timeliness of information affect the company's financial performance. The findings of this study support the disclosure of corporate voluntary information in several important indicators, which will improve the company's financial performance. The novelty of this research is to test the measurement of corporate internet reporting on the company's financial performance. The measurement of corporate internet reporting used is the measurement developed by Xiang & Birt (2021).

1. Introduction

The demand for the use of websites in various countries is in line with the increase in internet users globally. Figure 1. shows in detail the number of internet users in the world. Internet users reached 5.18 billion people in January 2023 (Social, 2023). This figure is 64.4% of the world's population that has used the internet. In addition, the number of internet users in the world in January 2023 increased by 1.9% when compared to 2022. Over the past eleven years, the highest number of increases occurred in 2016 by 13.9% compared to 2015, with the number of internet users increasing from 3.004 billion to 3.423 billion.

The increasing number of internet users in the world encourages companies to provide voluntary disclosures to improve company performance. Corporate Internet Financial Reporting (CIFR) is a business bridge for companies to communicate corporate financial information to stakeholders easily, quickly, effectively, and efficiently (Sia et al., 2018). The emergence of CIFR practices was driven by a statement from the Securities and Exchange Commission (SEC) in August 2000. The SEC states that all legitimate information about company performance is recommended to be made and provided by public companies to all interested parties at the same time (Ragas & Culp, 2014). Disclosure of information on the website is a company's effort to reduce communication and information gaps that may occur between internal and external parties of the company (De Silva & Ajward, 2018).

Ashbaugh et al. (1999) corporate internet reporting (CIR) is a form of presenting the company's financial and non-financial information through the internet media in the form of reports related to the company's resources and performance. Many studies have discussed the dimensions of timeliness of financial reporting both in terms of quality and hardcopy (for example (Abdulla, 1996; 1976; Dyer & McHugh, 1975; Givoly & Palmon, 1982) including the determinants of CIR (Pirchegger & Wagenhofer, 1999; Xiao et al., 2004), little focus on the important dimension of CIR timeliness (Abdelsalam & Street, 2007; Pirchegger & Wagenhofer, 1999).

Meanwhile, there are still not many studies in developing countries such as Indonesia that see the benefits of the Internet as a means of conveying information to external parties of the company. Several studies on the determinants of internet reporting were conducted in developing countries such as Malaysia (Hamid, 2005), several Arab countries (Al-Htaybat, 2011; Ismail, 2002), and China (Xiao et al., 2004). However, until now, research on the timeliness of internet-based financial reporting is still very limited in Indonesia.
Xiang & Birt (2021) developed seven indicators for measuring corporate internet reporting based on the classification applied by (Bollen et al., 2006; Bonsón & Escobar, 2006; Marston & Polei, 2004), which consist of: 1) investor-related information; 2) social responsibility disclosure; 3) corporate governance information; 4) timeliness of information; 5) contact services and information provision; 6) social media services; and (7) website convenience and usability. This study examines the effect of measurement indicators of corporate internet reporting on the financial performance of companies in the Asian Country Region. This research is important to prove the robustness of the corporate internet reporting measurement conducted by (Xiang & Birt, 2021).

This study tests the CIR indicators developed by Xiang & Birt (2021) on company performance. Testing this CIR indicator is a research novelty that has never been done in previous studies. The results of this study are expected to provide an in-depth study of the appropriate CIR measurement for improving the company's financial performance. This research was conducted on companies in Asia that have websites and can be accessed. The motivation of this research is to contribute to the development of relevant information disclosure for companies in Asian countries.

2. Literature Review

2.1. Signaling Theory

Connelly et al. (2011) state that it is important for internal parties to know how to signal information, and the recipient must be able to interpret the signal. Companies that need new sources of funding will try to disclose more information on their websites to attract more investors and increase their confidence about the company's position (Ezat & El-Masry, 2008). Signaling theory is the theory that can best explain the importance of the Timeliness of Corporate Internet Reporting to try to report good information as a marker to potential or outside investors of the company. Corporate governance research shows how CEOs signal the quality of the company that investors cannot see directly, so the company conveys that information through the quality of financial statements that investors can directly see (Zhang & Wiersema, 2009). Diversity researchers use signal theory to explain how firms use heterogeneous boards to communicate adherence to social values to the organization's various stakeholders (Miller & Triana, 2009). Signaling theory is often used in the entrepreneurship literature, where scholars have examined the signaling value of board characteristics (Certo, 2003), top management characteristics (Lester et al., 2006), venture capitalist and investor viewpoints (Elitzur & Gavious, 2003), and founder involvement (Busenitz et al., 2005).

The key elements in signal theory consist of: signaler, signal, receiver, and feedback. Signaler, At the core of signal theory is the signaler, signalers who are insiders (e.g., executives or managers) obtain information about individuals (Spence, 1973), products (Kirmani & Rao, 2000), or organizations (Ross, 1973)

that is not available to outsiders. At a broader level, insiders obtain information that is both positive and negative, which may be useful to outsiders. Simply put, this information gives the insider a privileged perspective on the underlying quality of some aspect of the individual, product, or organization. The second element is Signaling. Insiders acquire positive and negative personal information and must decide whether to communicate that information to outsiders. Signal theory focuses on communication; communication may only be done for information that is positive about organizational attributes. Issuing new shares of a company is generally considered a negative signal because executives may issue equity when they believe their company's share price is overvalued (Myers & Majluf, 1984). The third element is the receiver of the signal. In the signaling model, the receiver is an outsider who lacks information about the organization, but wants to receive that information. Simultaneously, the signaler and the receiver have conflicting interests, so successful deception will benefit the signaler and harm the receiver (BliegeBird & Smith, 2005). For signaling to take place, the signaler must benefit from some action of the receiver that the receiver would not otherwise take (i.e., signaling must have a strategic effect); this typically involves the signaler's choosing to favor some alternative. For example, the recipient may make choices about hiring, purchasing, or investing.

Finally, there is the element of feedback. As management researchers seek to apply signaling theory to organizational phenomena, many studies have uncovered the importance of receivers sending information back to signalers about the effectiveness of their signals (Gupta et al., 1999). To facilitate more efficient signaling, receivers may send feedback in the form of counter signals. The underlying assumption here is that information asymmetry works in two directions: The receiver wants information about the signaler, but the signaler also wants information about the receiver so that they can find out which signals are most reliable, which signals the receiver pays the most attention to, and how the receiver receiving the information interprets the signals. Signalers who pay attention to such return signals can adapt future signals to improve reliability (Gulati & Higgins, 2003). Thus, just as receiver attention can improve the signaling process, signaler attention to return signals can also result in more efficient signaling, particularly in the context of repeated or sequential bargaining (Srivastava, 2001).

2.2. Corporate Internet Reporting and Company Performance

Corporate Internet Financial Reporting (CIFR) is a business bridge for companies to communicate corporate financial information to stakeholders easily, quickly, effectively, and efficiently (Sia et al., 2018). The emergence of CIFR practices was driven by a statement from the Securities and Exchange Commission (SEC) in August 2000. The SEC states that all legitimate information regarding company performance is recommended to be made and provided by public companies to all interested parties at the same time (Ragas & Culp, 2014). Disclosure of information on the website is a company's effort to reduce communication and information gaps that may occur between internal and external parties of the company (De Silva & Ajward, 2018). There are no specific reporting standards in the application of corporate financial information published on the internet in each country (Faisal et al., 2021). This also means that the quality of CIFR between countries will vary. To date, regulatory authorities in several countries require public companies to publish their financial information to be posted on the company's website (Hermawan & Gunardi, 2019).

Ashbaugh et al. (1999) corporate internet reporting (CIR) is a form of presenting the company's financial and non-financial information through the internet media in the form of reports related to the company's resources and performance. Many studies have discussed the dimensions of timeliness of financial reporting both in terms of quality and hardcopy (for example (Abdulla, 1996; Dyer & McHugh, 1975; Givoly & Palmon, 1982) including the determinants of CIR (Pirchegger & Wagenhofer, 1999; Xiao et al., 2004), little focus on the important dimensions of CIR. little focus on the important dimension of CIR timeliness (Abdelsalam & Street, 2007; Pirchegger & Wagenhofer, 1999). While research in developing countries such as Indonesia has not seen many benefits of the Internet as a means of conveying information to external parties of the company. Several studies on the determinants of internet reporting were conducted in developing countries such as Malaysia (Hamid, 2005), several Arab countries (Al-Htaybat, 2011; Ismail, 2002), and China (Xiao et al., 2004). However, until now, research on the timeliness of internet-based financial reporting is still very limited in Indonesia.

Global competitiveness motivates companies to create different strategies to increase their profits by increasing market share, consolidating comparative advantages, and improving product efficiency (Goel et al., 2022). When a firm's product faces competition with similar firms in terms of price, quality, and features, it attracts more consumers (Al-Sulaiti et al., 2023; Meng et al., 2023; Shah et al., 2023). This research explores the relationship between Product Market Competitiveness (PMC) and firm performance (Abbas et al., 2023; Al-Sulaiti et al., 2023; Wang et al., 2023). From the perspective of firm market performance, internet-based corporate reporting provides financial information to principals and stakeholders related to investment decision making and market efficiency (Sia et al., 2018). Aly et al. (2010) state that internet-based corporate reporting provides financial performance and corporate branding, and market position.

The main components of the CIR consist of: 1) investor-related information; 2) social responsibility disclosure; 3) corporate governance information; 4) timeliness of information; 5) contact services and information provision; 6) social media services; and 7) website ease and usability. Investor-related information provides an overview of the fulfillment of investor information needs originating from the company. Managers have an incentive to meet the information demands of analysts and investors by providing more transparent disclosures (Cao & Narayanamoorthy, 2011; Graham et al., 2012). Increased information for foreign investors is alleged to reduce the company's cost of capital. Aly et al. (2010); Debreceny et al. (2002); and Xiao et al. (2004) state that companies that adopt financial reporting via the internet can create a higher level of transparency and compete with local listed companies to raise capital at a lower cost. Therefore, the hypothesis of this study is

H1	:	Investor-related information affects company performance

Social responsibility disclosure provides information related to CSR information in the previous year and the current year, information on the number of employees, health, social activities related to commercial and non-commercial. All social activities carried out by the company increase company performance. Khrifech & Khoufi (2021) examined internet reporting practices among developed European countries. They found that environmental factors and economic development are important factors that determine internet reporting practices.

H2 : Social responsibility disclosure affects company performance

Corporate governance information provides information about the company's share structure, the largest shareholder, the decision of the largest shareholder meeting, management information, corporate governance regulations, including transaction activities carried out by directors. This information provides an overview to investors or potential investors in making investment decisions. So that information transparency through corporate governance can encourage improved company performance. From the point of view of signal theory, companies provide quality signals by increasing corporate disclosure (Ahmed et al., 2017; Marston & Polei, 2004). Increased disclosure by the company can reduce information asymmetry, increase investor confidence, which ultimately improves the company's stock performance. This increases the liquidity and share price of the company, thereby reducing the cost of capital (Botosan, 1997; Smith & Van Der Heijden, 2017). Therefore, the hypotheses developed in this study are

H3 : Corporate governance information affects company performance

The availability of contact and information supply services as a form of implication of the rapid growth of technology, such as internal search engines and video/sound presentations on the internet reporting, can provide incentives for companies. these incentives are related to improving company performance. Xiang & Birt (2021) found consistent evidence that the use of IT increases with firm size and analyst coverage and decreases with profitability (ROE).

H4 : Contact and information supply services affect company performance

Social media presented on the company's website is also alleged to improve company performance. Xiang & Birt (2021) found that larger companies or companies followed by more analysts tend to engage in Twitter [2] and LinkedIn, but not Facebook and YouTube. In contrast, companies with better environmental, social, and corporate governance (ESG) performance tend to engage in Facebook, YouTube, and Twitter. Blankespoor et al. (2014) state that the SEC has accepted and promoted these technologies as mechanisms that allow companies to disseminate information more widely to reduce information asymmetry. Therefore, the research hypothesis developed is

H5 : Social media affects company performance

Timely information relates to stock price information, the latest information from the company, the company's financial information for investors, and email registration channels to receive alerts from the company. These information channels can make it easier for investors to receive important information from the company on time. Thus, investors will have more confidence in the company and ultimately improve the company's performance.

H6 : Timeliness of information affects company performance

The convenience of a website guides investors to search for the information needed more quickly and easily. The convenience of the website provides a sitemap, search engine, video or audio recording, data in Excel format, and online services to investors. All of these types of information indicate that the company's website provides investors with the convenience of obtaining information, so that it can encourage increased company performance. (Ezat & El-Masry, 2008; Oyelere et al., 2003; Oyelere & Kuruppu, 2012) argue that a company's decision to have a web presence and engage in online reporting practices can in itself increase the company's liquidity.

H7 : The convenience of the website affects company performance

3. Method

3.1. Sample selection and research data collection

This study is a census study, meaning that the sample or unit of analysis of this study is all members of the population. The population of this study was 13,833 companies, but based on the data collection conducted, there were 6,810 analysis units from the total population, or around 49.23% of the population from 29 countries in the Asian continent. This is due to several obstacles in data collection, including: the company website is not available, financial reports are not available, and bilingual facilities are not available on the company website.

The corporate internet reporting variable is defined as the level of corporate reporting carried out via the internet media or company website (Xiang & Birt, 2021). Corporate internet reporting is measured by 7 indicators, namely: 1) investor-related information; 2) social responsibility disclosure; 3) corporate governance information; 4) timeliness of information; 5) contact and information supply services; 6) social media services; and 7) convenience and usability of the website. Details of the complete corporate internet reporting measurement are presented in Table 1. Corporate internet reporting variable data were collected from November 21, 2023, to June 31, 2024.

3.1. Data Analysis

Data analysis is intended to explain the characteristics of the research variables. The descriptive analysis used includes the average value (mean), maximum value, minimum and standard deviation. Hypothesis testing is conducted to determine the effect of corporate internet reporting indicators on the company's financial performance. The regression equation model used in this study is as follows:

$$KP = \alpha + \beta 1IRI + \beta 2SRD + \beta 3CGI + \beta 4CISS + \beta 5SM + \beta 6ToI + \beta 7CW + \beta 8TI + \beta 9Lev + \beta 10Lik + \beta 11SIZE + \beta 12AGE + \beta 13SHN + \beta 14SEN + \beta 15PI + \varepsilon$$

Note :

α	**:**	**Constanta**	**TI**	**:**	**Industry type**
β	**:**	**Regression coefficient**	**Lev**	**:**	***Leverage***
ε	:	Error	Lik	:	*Liquidity*
KP	:	Company Performance	SIZE	:	Company size
IRI	:	investor-related information	AGE	:	Company age
SRD	:	Social responsibility disclosure	SHN	:	State legal system
CGI	:	corporate governance information	SEN	:	The country's economic system
CISS	:	contact and information supply services	PI	:	Internet penetration
SM	:	social media services			
ToI	:	timeliness of information			
CW	:	convenience and usability of the website			

4. Result

Table 1 shows a picture of companies in Asia with 6,810 observations. This research observation was conducted in 29 countries in Asia, consisting of 5 regions: West, Central, East, South, and Southeast Asia.

Table 1
Statistic Descriptive

Variable	N	Min	Max	Mean	Std. Dev
KP	6810	0,001	9,925	1,306	1,114
IRI	6810	0	26	11,360	6,411
SRD	6810	0	5	1,020	1,301
CGI	6810	0	13	4,140	2,926
CISS	6810	0	5	1,990	1,369
SM	6810	0	6	1,500	1,731
ToI	6810	0	4	1,670	1,252
CW	6810	0	5	1,880	0,984

Note: KP (financial performance), IRI (investor-related information), SRD (social responsibility disclosure), CGI (corporate governance information), CISS (contact and information supply services), SM (social media), ToI (timeliness of information), CW (convenience of website)

Table 1 shows information on corporate internet reporting measurement indicators in Asian countries. Companies in the Asian region as a whole have provided voluntary information through a mechanism called corporate internet reporting. The convenience of website indicator has the lowest standard deviation value, meaning that there is no significant difference between companies in Asia. This condition reflects that the companies that are the research samples have websites that make it easier for stakeholders to receive information contained on the company's website.

Table 2 shows the relationship between research variables. In general, there is no close relationship between research variables, where the closest relationship occurs between the CGI and IRI variables. However, the correlation coefficient is relatively low, namely 0.572, meaning that there is a fairly close relationship between the CGI and IRI variables, but not too strong. While other variables do not show a close relationship so it can be concluded that the research model is free from indications of multicollinearity.

Table 2
Correlation Analysis

KP	KP	IRI	SRD	CGI	CISS	SM	ToI	CW	TI	LEV	LIK	SIZE
	1											
IRI	-0,014	1										
SRD	0,028**	0,369***	1									
CGI	0,015	0,572***	0,380***	1								
CISS	0,017*	0,324***	0,207***	0,268***	1							
SM	-0,002	0,156***	0,203***	0,155***	0,148***	1						
ToI	0,023	0,482***	0,299***	0,378***	0,341***	0,099***	1					
CW	-0,006	0,267***	0,292***	0,247***	0,210***	0,164***	0,388***	1				
TI	-0,014	0,052***	-0,023**	0,016	0,029***	-0,022**	0,034***	0,004	1			
Lev	0,192***	-0,007	0,019**	-0,065***	0,033***	0,053***	-0,007	-0,002	0,015	1		
Lik	0,070***	-0,023**	-0,041***	-0,072***	0,037***	-0,010	0,040***	0,018*	-0,019**	0,094***	1	
SIZE	-0,200***	0,004	0,156***	-0,027**	0,084***	0,050***	0,121***	0,124***	-0,003	0,119***	-0,123***	1
AGE	-0,143***	0,143***	0,083***	0,045***	0,052***	-0,041***	0,180***	0,081***	-0,025**	0,009	0,008	0,205***
SHN	0,032***	0,149***	0,073***	0,201***	-0,091***	0,047***	0,158***	0,095***	-0,020**	-0,078***	-0,005	-0,019**
SEN	-0,008	0,075***	-0,026**	-0,172***	0,065***	-0,212***	0,223***	-0,003	0,049***	0,007	0,155***	0,073***
PI	-0,062***	-0,076***	-0,122***	0,044***	0,061***	-0,155***	0,063***	-0,048***	0,010	-0,105***	0,058***	-0,136***
Note: significant level at *10%, **5%, and ***1% two-tailed)												

Table 3 shows the results of the research hypothesis test of the corporate internet reporting indicator variable on the company's financial performance. The results of the regression analysis show that there is no relationship between the independent variables of this study, where none of the tolerance values have a value above 1, and the VIF value is less than 10.

Table 3
Regression Analysis

Variable	Regression Result	Tolerance	VIF
Constant	3,812 (20,701)***		
IRI	-0,018 (-6,369) ***	0,512	1,954
SRD	0,045 (4,005) ***	0,741	1,350
CGI	0,022 (3,533) ***	0,495	2,019
CISS	0,023 (2,232)**	0,799	1,251
SM	-0,011 (-1,443)	0,882	1,134
ToI	0,053 (4,045) ***	0,589	1,697
CW	-0,004 (-0,295)	0,794	1,259
ToI	-0,001 (-1,892)**	0,989	1,011
Lev	0,611 (18,036) ***	0,946	1,057
Lik	0,038 (1,085)	0,933	1,072
SIZE	-0,226 (-19,126) ***	0,842	1,187
AGE	-0,005 (-9,731) ***	0,879	1,138
SHN	0,044 (2,096)**	0,733	1,364
SEN	0,103 (6,472) ***	0,508	1,968
PI	-0,010 (-7,639) ***	0,521	1,919
F-statistic = 61,286 Prob. = 0,000 R-Square = 0,119 Adjusted R-Square = 0,117			
Note: Note: significant level at *10%, **5%, and ***1% two-tailed)			

Hypothesis testing in Table 3 shows that SRD, CGI CISS, and ToI affect the company's financial performance. The results of this hypothesis testing indicate that hypotheses 2, 3, 4, and 6 are accepted. While IRI, SM, and CW do not affect the company's financial performance, meaning that Hypotheses 1, 5, and 7 are rejected.

5. Discussion

CIR is a way for companies to display overall company performance. All information is presented to provide information about the company to investors and potential investors. Information presented through internet-based company reporting is expected to increase investor confidence in the company's performance. In addition, this information is expected to attract new potential investors, which ultimately improves the company's overall performance. Companies have incentives to release information on time to a larger number of shareholders compared to disclosure through annual reports. The results showed that underperforming companies were more motivated to disclose information on their websites than better-performing companies. This result is inconsistent with the argument of signaling theory, which states that management is interested in sending signals to investors about the profitability of the company. To support their integrity and public image, underperforming Tunisian companies provide information about the reasons behind low profitability on their websites than better-performing companies.

Agyei-Mensah (2018) conducted a study on the attributes of corporate financial reporting on corporate performance in Ghana. Agyei-Mensah (2018) found that the delay in financial reporting has a statistically significant negative relationship with corporate performance. This negative sign indicates that when the company's financial performance is high (good news), the company tends to disclose this situation earlier to the public. The results of this study are in line with research conducted by Dogan et al. (2007) showing that the timeliness of reporting by companies listed on the ISE is influenced by their profitability. Dogan et al. (2007) found that companies with good news (measured by ROE and ROA) release their annual reports earlier than companies with bad news. In addition, the results show that the timing of the annual report release is significantly influenced by company size, increased financial risk, the timing policy of previous years, and company characteristics.

Corporate governance information indicators show that they affect company performance. Company performance, which is the effect of good corporate management, is reflected in the information provided by the company through the website. Increasing the value of this corporate governance information indicator reflects good corporate management, which ultimately improves company performance. These results are in line with research conducted by Ribando and Bonne (2010), which tried to analyze the relationship between the ASSET4 ESG Index from Data Stream and company performance. The study

used the information coefficient (IC) when trying to find a possible relationship between the company's ESG characteristics between 2003 and 2009 and future returns.

Contact and information supply service indicators show that they affect company performance. The larger the contact and information supply service indicator value, the more transparent the company is in providing services to investors and potential investors. This transparency further improves the provision of communication channels within the company, so that anyone who wants to invest or find out company information can do so openly at any time. Finally, the company's performance will increase.

The timeliness of information indicator shows that it affects company performance. The timeliness of delivery of information regarding company financial information is very important for investors. The information menu presented in this CIR indicator provides information to investors and potential investors regarding stock prices, a calendar for investors, and registration to receive alerts if the company issues the latest information regarding the company's finances. The presentation of this information has been proven to encourage increased company performance; this is the main evidence that the information presented in the company's CIR is utilized by investors and potential investors.

The Investor-Related Information indicator shows that it does not affect company performance. The increasing presentation of IRI information does not have an impact on improving company performance. The information contained in this indicator is not utilized properly by investors or potential investors. The low utilization of information in this CIR indicator is suspected because the information presented tends to be past information that is difficult to use to predict future company performance. Therefore, the increasing information presented by the company is unable to encourage increased company performance.

Social media indicators show that it does not affect company performance. The results of this study prove that the more social media is used by companies in presenting company information is not able to encourage increased company performance. Companies should use social media to promote products and financial prospectuses in the future, so that they will be able to improve company performance.

The convenience of the website indicator shows that it does not affect the company's performance. This result is not able to prove that the convenience of the website does not affect the company's performance. This condition allows the information presented not to provide benefits to investors or potential investors. This is shown by the value of financial information disclosure regarding the availability of data in Excel form, which can be directly processed by users, is still very low. This is evidence that the information presented has not been felt to be beneficial by users.

6. Additional Analysis

This additional analysis attempts to examine the disclosure of each CIR indicator in Asian countries. According to the United Nations, Asian countries are divided into several regions, namely Central Asia, East Asia, Southeast Asia, South Asia, and West Asia. (https://unstats.un.org/unsd/methodology/m49/).

Table 4
Description of CIR disclosure by region in Asia

Indicator	Central Asia		East Asia		Southeast Asia		South Asia		West Asia	
	N = 89 (1,31%)		N = 3.272 (48,05%)		N = 2.363 (34,70%)		N = 372 (5,46%)		N = 714 (10,48%)	
	Yes	%	Yes	%	Yes	%	Yes	%	Yes	%
IRI	63	70,79	2.859	87,38	2.154	91,16	352	94,62	603	84,45
SRD	31	34,83	1.523	46,55	1.267	53,62	155	41,67	292	40,90
CGI	61	68,54	2.526	77,20	2.259	95,60	348	93,55	596	83,47
CISS	79	88,76	2.712	82,89	1.869	79,09	228	61,29	649	90,90
SM	54	60,67	1.791	54,74	1.315	55,65	248	66,67	511	71,57
ToI	69	77,53	2.715	82,98	1.787	75,62	309	83,06	552	77,31
CW	68	76,40	3.025	92,45	2.307	97,63	365	98,12	663	92,86

Table 4 provides an overview of voluntary information disclosure by companies in countries in the Asian region. In the Central Asian region, information disclosure is located in the CISS, where as many as 88.76% of the companies observed provided good CISS information. This means that each company prioritizes service and communication channels to investors and potential investors. East Asia CW disclosure is an interesting issue, where this indicator has the highest disclosure value compared to other indicators. This means that companies in the East Asian region tend to pay more attention to the convenience of the website for website users to surf the information presented by the company.

In Southeast Asian countries, they pay more attention to the CW, CGI, and IRI indicators. These three indicators have a disclosure value above 90%. This means that companies in Southeast Asian countries prioritize website convenience for investors and potential investors to make it easier to browse the presentation of information, so that the company's message will be sent properly. The next important information, according to companies in the Southeast Asian region, is information about good corporate governance. Information about corporate governance is crucial for potential investors to trust the company's management. Another interesting indicator in the Southeast Asian region is information about investor relations. For companies in the Southeast Asian region, relations are where the attention of Southeast Asian companies is 91.16%. This means that Southeast Asian companies have good relations with investors so they pay better attention to investors to send the information needed by investors. The same thing also happens to companies in the South Asian region.

However, companies in the West Asia region pay slightly different attention. Where attention is more focused on the CW and CISS indicators. This means that companies in the West Asia region emphasize information on website convenience and information services to investors and potential investors in general. It seems that companies in the West Asia region want to attract the attention of new potential investors, so they pay more attention to website convenience and the provision of information ordering channels to make it easier for potential investors to get the information they need.

Table 5
Regression Analysis of CIR Indicators on Company Performance in Central Asia

Coefficient	B	SE	β	t	Sig.	Tolerance	VIF
(Constant)	0,676	0,351		1.926	0,058		
IRI	-0,006	0,026	-0,037	-0,228	0,820	0,455	2,196
SRD	0,001	0,107	0,001	0,006	0,995	0,583	1,714
CGI	-0,032	0,069	-0,086	-0,467	0,642	0,349	2,868
CISS	0,217	0,110	0,240	1,982	0,051**	0,801	1,248
SM	-0,032	0,064	-0,059	-0,506	0,614	0,848	1,179
TOI	0,118	0,174	0,127	0,676	0,501	0,332	3,008
CW	-0,086	0,137	-0,100	-0,629	0,531	0,464	2,156
Notes: Significant at: *0.10; **0.05 and ***0.01 levels, respectively; R = 0,227, R Square = 0,052; Adjusted R Square = -0,030, SE = 1,228							

Table 5 shows the results of the regression analysis of CIR indicators on company performance in the Central Asian region. These results indicate that company performance in the Central Asian region is only influenced by the CISS indicator. This means that the presence of CISS disclosure in companies in the Central Asian region can improve company performance as seen from market-based financial performance, namely Tobin'q. The magnitude of the impact of the CISS indicator in the context of corporate reporting is 3% (adjusted R Square 0.030). These results are of particular concern to policymakers to guide companies in providing internet-based reporting in the context of CIR. Other voluntary information delivery is likely to have a positive impact on improving company performance in the Central Asian region.

Table 6
Regression Analysis of CIR Indicators on Company Performance in East Asia

Coefficient	B	SE	β	t	Sig.	Tolerance	VIF
(Constant)	1,378	0,050		27,405	0,000		
IRI	-0,022	0,004	-0,134	-5,095	0,000***	0,436	2,292
SRD	-0,024	0,018	-0,026	-1,306	0,192	0,759	1,318
CGI	0,025	0,010	0,060	2,495	0,013***	0,532	1,880
CISS	-0,012	0,017	-0,014	-0,702	0,483	0,801	1,248
SM	0,022	0,016	0,024	1,347	0,178	0,938	1,067
TOI	0,082	0,021	0,096	3, 933	0,000***	0,512	1,954
CW	-0,016	0,023	-0,014	– .720	0,472	0,761	1,313
Notes: Significant at: *0.10; **0.05 and ***0.01 levels, respectively; R = 0,101; R Square = 0,010; Adjusted R Square = 0,008 ; SE = 1,117							

Table 6 shows the influence of IRI, CGI, and TI on company performance in the East Asia region. The shape of company performance as seen from market-based performance in the East Asia region is determined by the CIR indicator, consisting of IRI, CGI, and TI. IRI, which is an indicator of the company's relationship with investors, has an impact of -0.022. This negative coefficient indicates that IRI has a negative relationship with company performance. This means that the increasing IRI indicator will further reduce the performance of market-based companies. The coefficients of the CGI and TOI indicators are 0.025 and 0.082, respectively, meaning that the values of the two coefficients have positive values so the CGI and TOI indicators have a positive effect on company performance in the East Asia region.

Table 7
Regression Analysis of CIR Indicators on Company Performance in Southeast Asia

Coefficient	B	SE	β	t	Sig.	Tolerance	VIF
(Constant)	1,257	0,078		16,090	0,000		
IRI	0,007	0,005	0,032	1,289	0,197	0,676	1,478
SRD	0,074	0,021	0,081	3,466	0,001***	0,768	1,302
CGI	-0,015	0,011	-0,034	-1,374	0,170	0,686	1,459
CISS	0,007	0,018	0,009	0,395	0,693	0,802	1,247
SM	0,005	0,014	0,008	0,376	0,707	0,902	1,109
ToI	-0,007	0,025	-0,007	-0,293	0,769	0,649	1,542
CW	-0,004	0,027	-0,004	-0,162	0,872	0,842	1,188
Notes: Significant at: *0.10; **0.05 and ***0.01 levels, respectively; R = 0,094; R Square = 0,009; Adjusted R Square = 0,006; SE = 1,159							

Table 7 shows that the SRD indicator affects the performance of companies in the Southeast Asia region. The SRD indicator reflects the disclosure of corporate social responsibility information. This means that companies in the Southeast Asia region focus on the indicator of disclosure of social responsibility information and have been proven to be able to improve company performance. The SRD coefficient is 0.074, meaning that this SRD has an impact on increasing financial performance by 7.4% according to the research model developed.

Table 8
Regression Analysis of CIR Indicators on Company Performance in South Asia

Coefficient	B	SE	β	t	Sig.	Tolerance	VIF
(Constant)	1,565	0,151		10,362	0,000		
IRI	-0,047	0,011	-0,267	-4,479	0,000***	0,729	1,372
SRD	0,012	0,029	0,022	0,412	0,680	0,883	1,133
CGI	0,036	0,024	0,090	1,492	0,137	0,706	1,416
CISS	0,038	0,033	0,063	1,144	0,253	0,848	1,179
SM	-0,011	0,021	-0,028	-0,535	0,593	0,945	1,058
ToI	0,000	0,050	0,000	-0,008	0,994	0,874	1,144
CW	-0,028	0,052	-0,028	-0,527	0,599	0,940	1,064
Notes: Significant at: *0.10; **0.05 and ***0.01 levels, respectively; R = 0,235; R Square = 0,055; Adjusted R Square = 0,037; SE = 0,758							

In the South Asia region, companies focus on CIR information disclosure on CW, CGI, and IRI indicators. However, the results of the regression analysis shown in Table 8 show that only the IRI indicator is able to influence improving company performance in the South Asia region. These results indicate that disclosure of information related to investors is an important issue for market players in the South Asia region.

Table 9
Regression Analysis of CIR Indicators on Company Performance in West Asia

Coefficient	B	SE	β	t	Sig.	Tolerance	VIF
(Constant)	1,163	0,107		10,893	0,000		
IRI	0,006	0,007	0,036	0,784	0,433	0,633	1,581
SRD	0,054	0,031	0,081	1,782	0,075*	0,658	1,520
CGI	0,009	0,017	0,028	0,543	0,587	0,516	1,938
CISS	0,076	0,029	0,106	2,627	0,009***	0,830	1,205
SM	-0,008	0,019	-0,017	-0,429	0,668	0,869	1,151
ToI	0,013	0,041	0,015	0,307	0,759	0,548	1,824
CW	-0,176	0,041	-0,181	-4,270	0,000***	0,751	1,331
Notes: Significant at: *0.10; **0.05 and ***0.01 levels, respectively; R = 0,206; R Square = 0,043; Adjusted R Square = 0,033; SE = 1,003							

The performance of companies in the West Asia region is influenced by the SRD, CISS, and CW indicators, as shown in Table 9. In line with the disclosure of information made by companies in the West Asia region, where the attention of companies in the West Asia region is more focused on the CISS and CW

indicators. This means that companies in the West Asia region emphasize information on the convenience of the website and information services to investors and potential investors in general. It seems that companies in the West Asia region want to attract the attention of new potential investors so they pay more attention to the convenience of the website and the provision of information ordering channels to make it easier for potential investors to get the information they need.

7. Conclusion and Implications

This study examines the influence of CIR indicators on company performance in Asian countries. CIR disclosure consists of investor-related information, social responsibility disclosure, corporate governance information, contact and information supply services, social media, timeliness of information, and convenience of the website. This study provides an expansion of the literature review on CIR, which specifically looks at the influence of each CIR indicator on company performance. This study takes CIR presentation data from each company website of 6,810 companies spread across Asian countries.

The results of this study indicate that the CIR indicators, consisting of social responsibility disclosure, corporate governance information, contact and information supply services, and timeliness of information, have an impact on the company's financial performance. Disclosure of information in the context of CIR developed by Xiang & Birt (2021) has an impact on improving performance. However, the investor-related information, social media, and convenience of the website indicators do not affect company performance. Company performance measured using the Tobin's q approach reflects market-based financial performance. Therefore, the disclosure of information developed by Xiang & Birt (2021) can improve the company's market performance. Following the study of signal theory, the disclosure of information in CIR provides a signal to market players, which ultimately increases market reactions in the form of the company's financial performance. However, the disclosure of information, seen from the investor-related information, social media, and convenience of website indicators, has not shown a significant impact. In general, the information contained in these indicators is still relatively low in disclosure by companies. The development of measurements of these CIR indicators still needs to be studied in depth so that more useful information disclosure is possible in future CIR measurements.

The implications of this research result guide countries in Asia and users of information presented on company websites. Countries as regulators of corporate reporting can use the results of this study to guide companies in standard corporate reporting. The signals given by companies in information become standards that can be easily understood by users of information. Therefore, regulators can consider imposing additional mandatory requirements to ensure users of transparent and non-misleading information; to encourage companies to disclose relevant information and the right value; and to create a better information environment for users. Since CIR is currently still voluntary and not audited by external auditors, CIR users may prefer to get external assurance by external auditors on the accuracy and credibility of information provided through company websites, including social media. Finally, this study highlights that researchers need to pay attention not only to disclosure in the context of CIR but also to incorporate more complex data analysis to understand corporate disclosure practices.

Declarations

Competing interests

The authors declare no competing interests.

Ethical approval

This article does not contain any studies with human participants performed by any of the authors.

Informed consent

This article does not contain any studies with human participants performed by any of the authors.

References

1. Abbas J, Rehman S, Aldereai O, Al-Sulaiti KI, Shah SAR (2023) Tourism management in financial crisis and industry 4.0 effects: Managers traits for technology adoption in reshaping, and reinventing human management systems. *Human Systems Management*, *Preprint*, 1–18
2. Abdelsalam OH, Street DL (2007) Corporate governance and the timeliness of corporate internet reporting by UK listed companies. J Int Acc Auditing Taxation 16(2):111–130
3. Abdulla JYA (1996) The timeliness of Bahraini annual reports. *Advances in International Accounting*, *9*, 73–88
4. Agyei-Mensah BK (2018) Impact of corporate governance attributes and financial reporting lag on corporate financial performance. Afr J Economic Manage Stud 9(3):349–366
5. Ahmed AH, Burton BM, Dunne TM (2017) The determinants of corporate internet reporting in Egypt: an exploratory analysis. J Acc Emerg Economies 7(1):35–60. https://doi.org/https://doi.org/10.1108/JAEE-04-2015-0024
6. Al-Sulaiti K, Abbas J, Al-Sulaiti I (2023) *Tourists' online information influences their dine-out behaviour: Country-of-origin effects as a moderator*
7. Al-Htaybat K (2011) Corporate online reporting in 2010: a case study in Jordan. J Financial Report Acc 9(1):5–26
8. Aly D, Simon J, Hussainey K (2010) Determinants of corporate internet reporting: evidence from Egypt. Managerial Auditing J 25(2):182–202
9. Ashbaugh H, Johnstone KM, Warfield TD (1999) Corporate reporting on the Internet. Acc Horizons 13(3):241–257
10. Blankespoor E, Miller GS, White HD (2014) The role of dissemination in market liquidity: Evidence from firms' use of Twitter™. Acc Rev 89(1):79–112

11. BliegeBird R, Smith E (2005) Signaling theory, strategic interaction, and symbolic capital. Curr Anthropol 46(2):221–248
12. Bollen L, Hassink H, Bozic G (2006) Measuring and explaining the quality of Internet investor relations activities: a multinational empirical analysis. Int J Acc Inform Syst 7(4):273–298
13. Bonsón E, Escobar T (2006) Digital reporting in Eastern Europe: An empirical study. Int J Acc Inform Syst 7(4):299–318
14. Botosan CA (1997) Disclosure level and the cost of equity capital. Account Rev, 323–349
15. Busenitz LW, Fiet JO, Moesel DD (2005) Signaling in venture capitalist—New venture team funding decisions: Does it indicate long–term venture outcomes? Entrepreneurship Theory Pract 29(1):1–12
16. Cao Z, Narayanamoorthy GS (2011) The effect of litigation risk on management earnings forecasts. Contemp Acc Res 28(1):125–173
17. Certo ST (2003) Influencing initial public offering investors with prestige: Signaling with board structures. Acad Manage Rev 28(3):432–446
18. Connelly BL, Certo ST, Ireland RD, Reutzel CR (2011) Signaling theory: A review and assessment. J Manag 37(1):39–67
19. De Silva C, Ajward R (2018) The Impact of Firm Characteristics on Corporate Internet Reporting: Evidence from Sri Lankan Listed Companies. CA J Appl Res 2(1):6–24
20. Debreceny R, Gray GL, Rahman A (2002) The determinants of Internet financial reporting. J Account Public Policy 21(4–5):371–394
21. Dogan M, Coskun E, Celik O (2007) *Is Timing of Financial Reporting Related to Firm Performance? An Examination on Ise Listed Company*
22. Dyer JC, McHugh AJ (1975) The timeliness of the Australian annual report. *Journal of Accounting Research*, 204–219
23. Elitzur R, Gavious A (2003) Contracting, signaling, and moral hazard: a model of entrepreneurs,'angels,'and venture capitalists. J Bus Ventur 18(6):709–725
24. Ezat A, El-Masry A (2008) The impact of corporate governance on the timeliness of corporate internet reporting by Egyptian listed companies. Managerial Finance 34(12):848–867
25. Faisal CN, Diantimala Y, Dinaroe D (2021) Determinants of Corporate Internet Financial Reporting in Asia-Pacific Countries: A Cross Country Analysis. Jurnal Dinamika Akuntansi Dan Bisnis 8(1):27–46
26. Givoly D, Palmon D (1982) Timeliness of annual earnings announcements: Some empirical evidence. Account Rev, 486–508
27. Goel RK, Mazhar U, Ram R (2022) Informal competition and firm performance: Impacts on input-versus output performance. Manag Decis Econ 43(2):418–430
28. Graham JR, Raedy JS, Shackelford DA (2012) Research in accounting for income taxes. J Account Econ 53(1–2):412–434
29. Gulati R, Higgins MC (2003) Which ties matter when? The contingent effects of interorganizational partnerships on IPO success. Strateg Manag J 24(2):127–144
30. Gupta AK, Govindarajan V, Malhotra A (1999) Feedback-seeking behavior within multinational corporations. Strateg Manag J 20(3):205–222
31. Hamid AZF (2005) Malaysian companies' use of the internet for investor relations. Corp Governance: Int J Bus Soc 5(1):5–14
32. Hermawan A, Gunardi A (2019) Motivation for disclosure of corporate social responsibility: Evidence from banking industry in Indonesia. Entrepreneurship Sustain Issues 6(3):1297
33. Ismail TH (2002) An empirical investigation of factors influencing voluntary disclosure of financial information on the internet in the GCC countries. *Available at SSRN 420700*
34. Khrifech D, Khoufi W (2021) Corporate governance information disclosure on the websites. Int J Acc Auditing Perform Evaluation 17(3–4):232–275
35. Kirmani A, Rao AR (2000) No pain, no gain: A critical review of the literature on signaling unobservable product quality. J Mark 64(2):66–79
36. Lester RH, Certo ST, Dalton CM, Dalton DR, Cannella AA Jr (2006) Initial public offering investor valuations: An examination of top management team prestige and environmental uncertainty. J Small Bus Manage 44(1):1–26
37. Marston C, Polei A (2004) Corporate reporting on the Internet by German companies. Int J Acc Inform Syst 5(3):285–311
38. Meng Q, Yan Z, Abbas J, Shankar A, Subramanian M (2023) Human–computer interaction and digital literacy promote educational learning in pre-school children: Mediating role of psychological resilience for kids' mental well-being and school readiness. Int J Human–Computer Interact, 1–15
39. Miller T, del Triana M C (2009) Demographic diversity in the boardroom: Mediators of the board diversity–firm performance relationship. J Manage Stud 46(5):755–786
40. Myers SC, Majluf NS (1984) Corporate financing and investment decisions when firms have information that investors do not have. J Financ Econ 13(2):187–221
41. Oyelere P, Kuruppu N (2012) Voluntary internet financial reporting practices of listed companies in the United Arab Emirates. J Appl Acc Res 13(3):298–315. https://doi.org/https://doi.org/10.1108/09675421211281353
42. Oyelere P, Laswad F, Fisher R (2003) Determinants of internet financial reporting by New Zealand companies. J Int Financial Manage Acc 14(1):26–63
43. Pirchegger B, Wagenhofer A (1999) Financial information on the Internet: a survey of the homepages of Austrian companies. Eur Acc Rev 8(2):383–395
44. Ragas MW, Culp R (2014) Business essentials for strategic communicators: Creating shared value for the organization and its stakeholders. Springer
45. Ribando JM, Bonne G (2010) A new quality factor: Finding alpha with ASSET4 ESG data. *Starmine Research Note, Thomson Reuters*, *31*
46. Ross SA (1973) The economic theory of agency: The principal's problem. Am Econ Rev 63(2):134–139
47. Shah SHA, Fahlevi M, Rahman EZ, Akram M, Jamshed K, Aljuaid M, Abbas J (2023) Impact of Green Servant Leadership in Pakistani Small and Medium Enterprises: Bridging Pro-Environmental Behaviour through Environmental Passion and Climate for Green Creativity. Sustainability 15(20):14747
48. Sia CJ, Brahmana RK, Memarista G (2018) Corporate internet reporting and firm performance: Evidence from Malaysia. Contemp Econ 12(2):153–164

49. Smith S, Van Der Heijden H (2017) Analysts' evaluation of KPI usefulness, standardisation and assurance. J Appl Acc Res 18(1):63–86. https://doi.org/10.1108/JAAR-06-2015-0058
50. Social Ware (2023) *SPECIAL REPORT DIGITAL 2023 Your ultimate guide to the evolving digital world*. https://wearesocial.com/uk/blog/2023/01/digital-2023/ (diakses 05 Januari 2024)
51. Spence M (1973) Job market signaling the quarterly journal of economics, vol 87. MIT Press, p 374. 3
52. Srivastava J (2001) The role of inferences in sequential bargaining with one-sided incomplete information: Some experimental evidence. Organ Behav Hum Decis Process 85(1):166–187
53. Wang N, Cui D, Dong Y (2023) Study on the impact of business environment on private enterprises' technological innovation from the perspective of transaction cost. Innov Green Dev 2(1):100034
54. Xiang Y, Birt JL (2021) Internet reporting, social media strategy and firm characteristics–an Australian study. Acc Res J 34(1):43–75
55. Xiao JZ, Yang H, Chow CW (2004) The determinants and characteristics of voluntary Internet-based disclosures by listed Chinese companies. J Account Public Policy 23(3):191–225
56. Zhang Y, Wiersema MF (2009) Stock market reaction to CEO certification: The signaling role of CEO background. Strateg Manag J 30(7):693–710

Figures

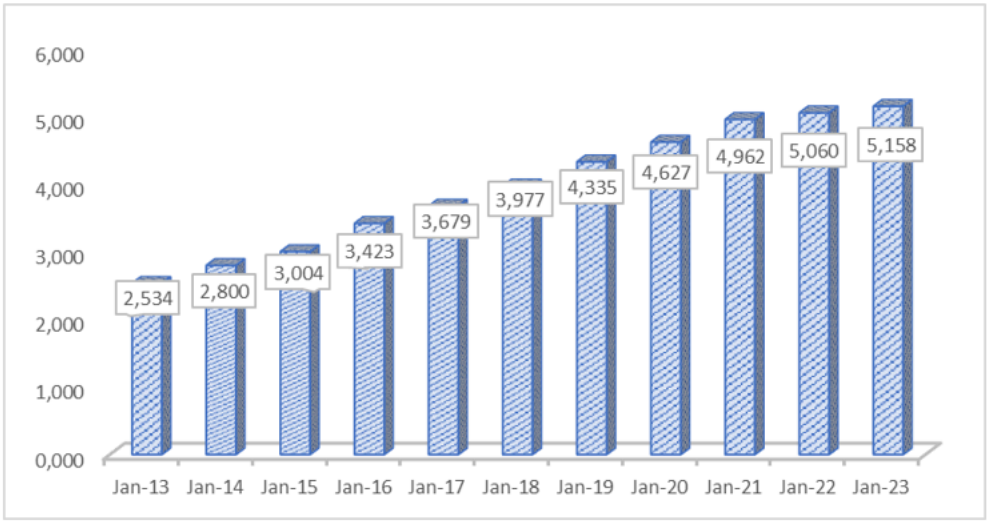


Figure 1

Trend of Internet Users

Source: Social (2023)

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- datasetkiswanto.xlsx