

The Determinants of Internet Financial Reporting for Investor Decision Making: Evidence from Indonesia Companies



Kurnia Rina Ariani and Gustita Arnawati Putri

Abstract This research presents the latest finding the effect of profitability, age of the company, and audit quality to Internet financial reporting with the board of commissioners as a moderating variable in manufacturing companies listed in the Indonesia Stock Exchange (IDX) for year-end 2018. Adding a moderating variable is expected to find out whether the board of commissioners could moderate the relationship between profitability, age of the company, and audit quality to IFR. Using moderated regression analysis (MRA), this research could not empirically prove that there is a correlation between profitability, age of the company, and audit quality to IFR moderated by the board of commissioners level due to lack of use of technology in developing countries.

Keywords Profitability · Companies age · Audit quality · The board of commissioners · IFR

1 Introduction

In this digital era, the rapid expansion of technology has led to some changes not only in the social mindset but also the way of how companies run their business and how their information is exchanged [1–8].

Internet usage globally for the dispersion of financial information purposes is a common practice for many publicly traded companies worldwide. The Internet can create a new reporting environment for companies to constantly give information to their shareholders and attract their future investors. It is also possible to facilitate

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access to information and to proffer cost savings associated with printing and sending physical reports for acceleration data analysis.

Nowadays, IFR is commonly used in the company's business operations cycle in providing easy access to investors' financial statements. IFR has emerged as the fastest media to inform matters related to the company and changed the reporting system to the paper-less reporting system [2, 9–11].

Prior research stated that more than half the companies sampled in their research have a Web site that presents financial reports [12]; this indicates companies consider the Internet to be a crucial medium for transferring financial information. Some prior studies found that the Internet is currently the main tool used in publishing and updating company financial information promptly [1, 4, 12–15].

There is no rule governing disclosure since financial reporting through the Internet is voluntary. Although it is not compulsory, companies can increase the level of transparency of the company with IFR. A high level of transparency will reduce the level of information asymmetry (mismatch) between managers and stakeholders. Increasing information transparency will ultimately improve corporate governance [3, 9, 10, 13, 16, 17]. Another advantage of using IFR is that companies can disclose information about company performance in real time.

This paper focused on testing the determinants of financial information reporting via Web site listed companies in Indonesia. The selection of samples based in Indonesia is intended because of Indonesia's characteristics, including developing countries so that the Web paper-based application is still relatively new, no more than a decade, so that it can predict IFR determinants in developing countries.

2 Literature Review and Hypothesis Development

One theory that supports the company's business activities is agency theory. It states the working relationship between the party that gives the authority (the principal) or the investor and the party that receives the authority (agency), or the manager, in the form of a cooperation contract. Agency theory arises because of differences in interests between interested parties; each party tries to increase profits for themselves. In this case, there is a tendency for agents to convey information about their performance in a certain way to maximize the wishes of the principals, in this case, the owner, creditor, and the government.

Prior research [18] conducted a survey of large companies in Europe. The survey was conducted on 1000 companies. The survey results show that as many as 536 companies already have Web sites and have disclosed their financial reports on the Internet [12]. Examined the correlation between IFR and stocks revealed that if a company had implemented IFR and had a high level of information disclosure, it would have a stock price whose movements tended to be high.

Khan [15] conducted a study of companies in Egypt. As many as 56% of companies in Egypt are known to have revealed most of the data information on the company's Web site. This study uses the variables of profitability, liquidity, leverage,

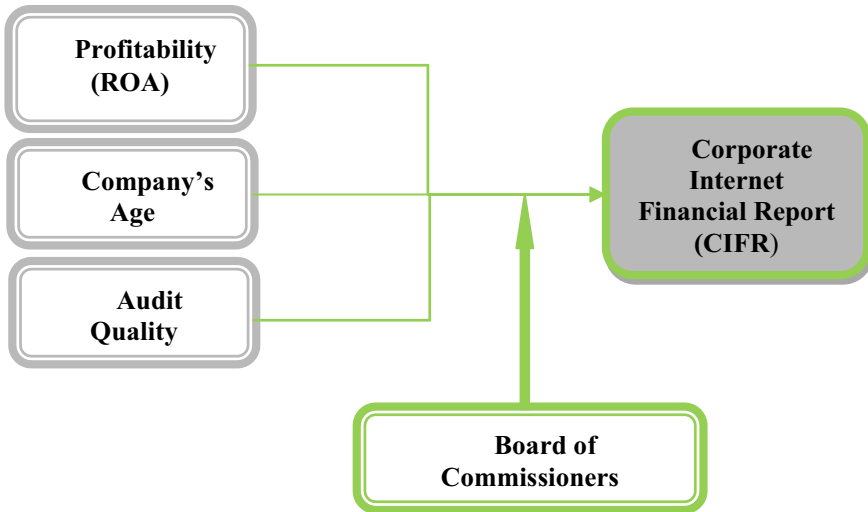


Fig. 1 Hypothesis framework

type of industry, public share ownership, company age, foreign share ownership, and auditor size. The research of [2] shows that company size variables significantly affect the delivery of financial information on the Internet of companies in France (Fig. 1) [19].

3 Research Methods

3.1 Population and Sample

Manufacturing companies listed in IDX for year-end 2018 was used as the population in this research. The sampling technique in this study was determined using a purposive sampling technique.

3.2 Operational Definition and Variable Measurement

Dependent Variable

IFR measurement using the index of reporting via the Web site [10]. Measurement of this variable is also divided into several criteria, as follows:

Criteria	Assessment (%)	Measurement
Content	40	If financial information is disclosed in HTML format, the score obtained is 2 If financial information is disclosed in PDF format, the score obtained is 1
Timeliness	20	The assessment of this criterion uses a scale of 0–3. The existence of disclosure of press releases, stock prices, the latest quarterly audit report will add a score for the company
Technology index	20	The availability of items that cannot be provided by printed paper reports include download plug-ins, online feedback, presentation slides, uses of multimedia technology (audio and video), analysis tools, and advanced features such as XBRL
User support	20	Availability of navigation (FAQ, links to the main page, links to the top, site maps, search sites) and the number of clicks to get financial information (scale 0–3)

$$IFR-DS = \left(\frac{\text{Score}}{\text{Max}} \%CONT \right) + \left(\frac{\text{Score}}{\text{Max}} \%TIME \right) + \left(\frac{\text{Score}}{\text{Max}} \%TECH \right) + \left(\frac{\text{Score}}{\text{Max}} \%SUPP \right)$$

where:

- Score Total score for each disclosure component
- Max Maximum score of each disclosure component
- % CONT Proportion of criteria for evaluating the contents of financial statements by 40%
- % TIME Proportion of financial time reporting criteria by 20%
- % TECH Proportion of technology assessment criteria of 20%
- % SUPP Proportion of user support assessment criteria by 20%.

Independent variable

1. Profitability	$(ROA) = \frac{\text{Earning after Tax}}{\text{Total Asset}} \times 100\%$
2. Company's age	Year of observation—year established
3. Audit quality	“0” if the company does not use the Big4 Affiliated Public Accounting Firm “1” if the company uses Big4 Affiliate Public Accounting Firm

Moderating variable

Board of commissioners	Total of board commissioners [2]
------------------------	----------------------------------

4 Results and Discussion

There are 154 manufacturing companies listed on the IDX in 2018 that will be sampled in this study, by eliminating the following predetermined sample criteria, so that in the final process. Table 1 shows the results of regression tests with an adjusted R square value of 0.056 or 5.6%. It shows that a 5.6% internet financial reporting can be explained by variables of profitability, age of the company, audit quality and the variable moderating the board of commissioners, while 94.4% is explained by other factors outside the research model. Judging from the significance value of the *t*-test shows that there is no supported hypothesis.

The results of testing hypothesis in this research cannot prove that there is an interaction between profitability, age of the company, and audit quality that is moderated by good corporate governance to CIFR [1, 2, 4, 10, 12, 13, 17, 20, 21].

It gives a signal even though companies in Indonesia have high profits, sound control systems, and reliable auditors, but instead not to overly utilize technology to attract potential investors to invest in their companies. It is understandable because investors themselves are more confident to visit the local authority's Web site such as the Indonesian Stock Exchange to obtain information about the financial statements of an audited company, thereby reducing the company's efforts to optimize the current technology to facilitate access to the availability of financial reports on their Web site.

Table 1 Hypothesis test

Variables	Regression coefficients	<i>t</i> -values
ROA	0.184	0.508
CA	0.001	0.576
AQ	-0.128	-1.801
AC	-0.015	-0.701
ROA * AC	0.006	0.091
CA * AC	0.0001	-0.587
AQ * AC	0.025	1.658
Adj <i>R</i> square = 0.056		
<i>F</i> statistic = 0.039		

5 Conclusion

IFR is a tool used for companies to share financial and non-financial information with their stakeholders. This study failed to find evidence that there is a relationship between profitability, company age, and audit quality that is moderated by good corporate governance on IFR. This research has limitations on the sample and research period used, i.e., only manufacturing companies and uses a year period 2018, so the results only represent conditions in that period. However, this was chosen based on relevant considerations; manufacturing companies are the majority of Indonesia, and the company's Web site is always changing. Based on these limitations, future research can use all companies listed on IDX and use more recent periods to examine the effect of corporate governance mechanisms on IFR levels and to understand the development of IFR practices from period to period, especially in an Indonesian context company.

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and Innovation (SMARTCYBER 2020)

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Preface

The 1st International Conference on Smart Computing and Cyber Security—Strategic Foresight, Security Challenges and Innovation (SMARTCYBER 2020), took place in Kyungdong University Global Campus, Gosung, Gangwondo, South Korea, during July 7–8, 2020. It was hosted by the Department of Smart Computing, Kyungdong University, Global Campus, South Korea.

The SMARTCYBER is a premier international open forum for scientists, researchers and technocrats in academia as well as in industries from different parts of the world to present, interact and exchange the state of the art of concepts, prototypes, innovative research ideas in several diversified fields. The primary focus of the conference is to foster new and original research ideas and results in the five board tracks: smart computing concepts, models, algorithms, and applications, smart embedded systems, bio-Inspired models in information processing, technology, and security. This is an exciting and emerging interdisciplinary area in which a wide range of theory and methodologies are being investigated and developed to tackle complex and challenging real-world problems. The conference includes invited keynote talks and oral paper presentations from both academia and industry to initiate and ignite our young minds in the meadow of momentous research and thereby enrich their existing knowledge.

SMARTCYBER 2020 received a total of 143 submissions. Each submission was reviewed by at least three Program Committee members. The committee decided to accept 37 full papers. Papers were accepted on the basis of technical merit, presentation and relevance to the conference. SMARTCYBER 2020 was enriched by the lectures and insights given by the following seven distinguished invited speakers: Prof. Prasant Kumar Pattnaik, School of Computer Engineering, Kalinga Institute of Industrial Technology; Professor Ana Hol, Western Sydney University, Australia; Professor Aninda Bose, Senior Editor Springer India; Prof. Evizal Abdul Kadir, UIR, Indonesia; Dr. James Aich S, CEO Terenz Co. Ltd, South Korea; Prof. Mangal Sain, Dongseo University, South Korea; and Prof. Ahmed A. Al-Absi, Kyungdong University Global Campus, South Korea. We thank the invited speakers for sharing the enthusiasm for research and accepting our invitation to share their expertise as well as contributing papers for inclusion in the proceedings.

SMARTCYBER 2020 has been able to maintain standards in terms of the quality of papers due to the contribution made by many stakeholders.

We are thankful to the General Chairs, Prasant Kumar Pattnaik, KIIT Deemed to be University, India; Ahmed A. Al-Absi, Kyungdong University, South Korea; Mangal Sain, Dongseo University. We further thank the Program Chairs, Baseem Al-athwari, Kyungdong University Global Campus, South Korea; Pardeep Kumar, Swansea University, UK; Deepanjali Mishra, KIIT Deemed to be University, India, for their guidance and valuable inputs.

We are grateful to Prof. John Lee, President of Kyungdong University (KDU) Global Campus, South Korea, and Honorary General Chair, SMARTCYBER 2020, for his constant support and for providing the infrastructure and resources to organize the conference. We are thankful to Prof. Sasmita Rani Samanta, Pro-Vice-Chancellor, KIIT Deemed to be University, India, Honorary General Chair, SMARTCYBER 2020, for providing all the support for the conference.

Thanks are due to the Program and Technical committee members for their guidance related to the conference. We would also like to thank the Session Management Chairs, Publications Chairs, Publicity Chairs, Organizing Chairs, Finance Chairs and Web Management Chair who have made an invaluable contribution to the conference. We acknowledge the contribution of EasyChair in enabling an efficient and effective way in the management of paper submissions, reviews and preparation of proceedings. Finally, we thank all the authors and participants for their enthusiastic support. We are very much thankful to entire team of Springer Nature for timely support and help. We sincerely hope that you find the book to be of value in the pursuit of academic and professional excellence.

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Prasant Kumar Pattnaik
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Editors and Contributors

About the Editors

Prasant Kumar Pattnaik Ph.D. (Computer Science), Fellow IETE, Senior Member IEEE, is a Professor at the School of Computer Engineering, KIIT Deemed University, Bhubaneswar. He has more than a decade of teaching and research experience and awarded half dozen of Ph.D. Dr. Pattnaik has published numbers of research papers in peer-reviewed international journals and conferences and filed many patents. He also edited book volumes in Springer and IGI Global Publication. His areas of interest include mobile computing, cloud computing, cyber security, intelligent systems, and brain-computer interface. He is one of the Associate Editors of Journal of Intelligent & Fuzzy Systems, IOS Press, and Intelligent Systems Book Series Editor of CRC Press, Taylor Francis Group.

Mangal Sain received the Master of Application degree from India in 2003 and the Ph.D. degree in Computer Science from Dongseo University, Busan, South Korea, in 2011. Since 2011, he has been an Assistant Professor with the Department of Information and Communication Engineering, Dongseo University, Busan, South Korea. He has published over 40 international publications. His current research interests include wireless sensor network, middleware, cloud computing, embedded system, and the Internet of Things. He is a member of TIS and has participated as a TPC member in several international conferences.

Ahmed A. Al-Absi Ph.D (Computer Science), is an Associate Professor at the Smart Computing Department, Kyungdong University Global Campus, South Korea. He is currently Dean of International Faculty and Director of Global Academic Collaboration Centers at Kyungdong University Global. He has more than ten years of experience in teaching and university lecturing in the areas of database design and computer algorithms. Dr. Al-Absi has published numbers of research papers in peer-reviewed international journals and conferences. His research areas are Big Data, Large Scale Data Process Systems, Cloud Computing,

IoT, VANET, Deep Learning, Parallel Computing, Security, and Bioinformatics. His professional experience includes being a speaker at a number of renowned research conferences and technical meetings such as IEEE, Korea ICT leaders forum, and reviewer for refereed journals and conferences on data-intensive computing as well as an examiner for postgraduate scholars in his research areas.

Pardeep Kumar received the B.E. degree in Computer Science from Maharishi Dayanand University, Haryana (India), in 2002, the M.Tech. degree in Computer Science from Chaudhary Devi Lal University, Haryana (India), in 2006, and the Ph.D. degree in Ubiquitous Computing from Dongseo University, Busan (South Korea) in 2012. He is currently a Lecturer/Assistant Professor with the Department of Computer Science, Swansea University, Swansea, UK. From 2012 to 2018, he had held postdoc positions at the Department of Computer Science, Oxford University, Oxford UK (08/2016–09/2018), at the Department of Computer Science, The Arctic University of Norway, Tromso, Norway (08/2015–08/2016), and at Centre for Wireless Communications and the Department of Communications Engineering, University of Oulu, Finland (04/2012 to 08/2015).

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