

# IT Capability, Audit Risk And The Role Of Internal Control

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## IT Capability, Audit Risk And The Role Of Internal Control

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### ABSTRACT

Technology investment is important for a company, especially in the era of the industrial revolution 4.0 and 5.0. which both emphasize the importance of utilizing information technology and its users to increase competitive advantage. Optimum utilization of information technology will have an impact on reducing audit risk through the effectiveness of the internal control function. This study aims to analyze whether information technology capabilities affect audit risk and internal control quality in banking companies listed on the IDX during the 2019-2022 observation. The data sources used in this analysis use secondary data sourced from financial reports and annual reports of banking companies. Samples were selected based on predetermined criteria. The data analysis technique is panel data using Eviews 9. The test results show that 1) Information technology investment has a significant effect on audit risk, 2) Internal control moderates the effect of information technology investment on audit risk. 3) ROA as a control variable has no influence on audit risk.

Keywords: Audit Risk, Fee Internal Control, IT Capability, IT Investment.



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### INTRODUCTION

The rapid development of information technology today has brought major changes to human civilization. Technological developments also have an impact on the global business world. At that time Indonesian Ministry of Industry had carried out a mapping entitled "Making Indonesia 4.0". The industrial revolution 4.0 places more emphasis on automation in its implementation and the Internet of Things (IoT) will be one of the supporters of the company's success in facing existing business changes. Whereas the industrial revolution 5.0 focused on technology and its users. Therefore, companies in this case are required to utilize the capabilities of their resources, especially technology in order to increase efficiency and effectiveness both in terms of manpower, time and costs as well as increase their competitive advantage.

Information technology is basically a collection consisting of software, hardware, data storage and networking as well as other supporting infrastructure used to support the communication process and information delivery. Large-scale companies generally spend most of their capital on technology investments and the real impact of these investments can be seen in the ease of access and delivery

of information, the efficiency of production processes and fast customer service. However, broadly speaking, the benefits and impacts of technology investment must be assessed so that the intangible benefits of IT capability can be identified.

IT capability of a company is very important for the implementation of efficient management activities and for improving performance in the information technology environment (Chui Young Yoon, 2011). Companies that invest in information technology in each of the different strategic objectives (infrastructure, transactional, informational and strategic) will provide value as long as the investment in the performance dimension is consistent with their strategic objectives (Sinan Aral & Weill, 2007).

IT capability can increase internal control effectiveness, besides that alignment between information technology and business processes and human resources can further improve internal control (IC) and protect the interests of stakeholders (Cao et al., 2017). Weak IT will affect weak internal controls for companies that have operational complexity (Deng et al., 2017). IT capabilities will indirectly support the function of an efficient IC and audit process (Y. Chen et al., 2014). The latest research conducted Chalmers et al., (2019) reveals several economic consequences of IC quality, one of which is that IC quality will affect the performance of external auditors, in this case related to fees and audit report lag. IC that are detected as weak will have an impact on increasing audit risk, thus requiring more in-depth testing with a strengthening approach and expanding the scope of audit and audit efforts carried out. Clients who invest in IT can have an impact on reducing audit risk, conversely if IT utilization is not optimal it will create challenges for the auditor in auditing the effectiveness of IC and detecting accounting irregularities. On the other hand, information technology also plays a role in reducing audit risk by increasing the operation and effectiveness of internal controls which can reduce inherent and IC risks (Han et al., 2016).

Chen et al., (2014) examined the role of information technology capabilities on IC effectiveness and external audit processes after SOX. IC effectiveness is analyzed using the five components of COSO 2013, while the effectiveness of the external audit process is proxied by audit delay and audit fees. By using InformationWeek 500 (IW 500) data the results show that IT capability can reduce audit fees, but does not increase audit delay. IT capability has a significant broad impact on IC effectiveness, so that it will minimize audit fees increase and audit delays. Overall, in conclusion that the company's IT capability will indirectly support the implementation of the IC function and an efficient audit process.

The article Han et al., (2016) states that audit risk for internal auditors is influenced by information technology investment development factors. Data according to the Harte-Hanks CI Technology Database during the observation year 2000 – 2009, states that the use of it investment has a positive relationship to external audit fees and abnormal fees and has a negative relationship with the possibility of issuing a going concern opinion by the external auditor. This study also found that tenure audits are able to reduce the relationship between audit risk and information technology investment. Hoffman et al., (2018) conducted research on the effect of IT capabilities on audit fees. By using companies with superior IT obtained from InformationWeek 500 (IW 500) as a proxy for IT capabilities. From the data above, the results show that companies with better IT investments are subject to more audit fees for certain audit periods. So the results can be concluded that the decrease in audit fees is not influenced by IT capabilities. This study wants to examine the effect of investment IT on audit risk with IC as a moderating variable in banking companies listed on the IDX for 2019-2022 observations.

## METHODS

This study uses quantitative research and the type of data used is secondary data, namely financial reports and annual reports. All banking companies listed on the IDX with the observation year 2019-2022 are the study population and the sample is adjusted according to several predetermined criteria.

IT capability is the culmination of information technology investments which include infrastructure and personnel capabilities (Bharadwaj, 2000; Y. Chen et al., 2014; Masli et al., 2011). In this study, IT capability is measured using IT investment indicators adopted from research conducted by (Sari et al., 2013). Audit risk measurement was adopted from research conducted by Han et al., (2016) using audit fee indicators. Auditors are very sensitive to the possibility of control risk and detection risk when carrying out the audit process, so that the greater the risk, the wider the audit will be and then have an impact on the size of the audit fee Han et al., (2016). Audit fees are related to the risks faced by auditors, the sensitivity of audit fees is influenced by increased audit risk signals (Cassell et al., 2011). Natural logarithm of audit fees as a proxy for audit fees. IC quality in this study is measured by the internal control index (Internal Control Index) developed by Ge et al., (2020) for public companies in China. This index is adopted from the IC quality index developed by H. Chen et al., (2017) which identifies five COSO elements. This study also uses ROA as a control variable. The method of analysis uses panel data. Eviews 9 is used to perform data processing in this study.

## RESULTS AND DISCUSSION

**Table 1. Descriptive Statistic Test**

Variable	N	Min	Max	Mean	Std. Dev
IT Investment	36	0.014612	0.194631	0.057907	0.045126
IC	36	0.855900	0.959900	0.924656	0.043313
Fee	36	300.0000	15900.00	5847.722	4890.513
ROA	36	0.090000	41.30000	5.738611	11.44174

Source : Output Eviews 9

According to table 1 it can be observed that the minimum value of the IT Investment variable is 0.014 and 0.19 is the max value obtained. So that the average value is 0.057 and the std dev is 0.0451. The IC variable obtains a min value of 0.855 and 0.959 is the highest score result. So that the average obtained is 0.9246 and the standard deviation value is 0.0433. The Audit Cost variable has a min value of 300 and has a max value of 15900, so that it gets an average value of 5847 and std dev of 4890. The ROA calculation has a min value of 0.09 and has a max value of 41.3. The mean obtained from ROA is 5.73, and the std dev is 11.44.

The next thing to do is to determine the best model between the common effect, fixed effect and random effect with several checks, namely the Chow, Hausman and LM test. From the tests that have been carried out above, a random model can be selected as the best model. Assessment of model selection can be seen in table 2.

**Table 2. Model Selection Results**

	Chow Test	Hausman Test	LM Test	Conclusion
Model	0.0000	0.8676	0.0000	REM

Source : Output Eviews 9 by researcher

**Table 3. Hypothesis Testing**

Variable	T	Sig	Conclusion
Constant	3.353410	0.0021	
IT Investment	-3.031796	0.0049	Significant
IT Investment –IC	3.070428	0.0044	Significant
ROA	0.614275	0.5435	Not Significant

Source : Output Eviews 9 by researcher

The results of hypothesis testing 1, namely the effect of IT capability on audit risk which is proxied through audit fees, shows that technology investment has a significant effect on audit risk with a significance level of  $<0.05$ , namely 0.0049. The relationship between IT capability and audit risk is found for several reasons (Han et al., 2016). First, IT has an opportunity to create business value inherent in the company. So it can be concluded that companies with higher business risks are more likely to report their financial statements incorrectly or there are material misstatements in their financial statements and cause audit risk. Second, the use of IT can trigger an increase in control risk. One of the reasons is because control risk is usually associated with inadequate integration of information technology systems and less transparent data flow. Third, the use of sophisticated information technology increases the risk of detection. Auditors who do not have adequate understanding of the client's IT will tend to fail in detecting risks of material misstatement in the financial statements. Such failure will increase detection risk and have the effect of increasing overall audit risk. Han et al., (2016) had results consistent with this study which stated that external audit fees were positively influenced by information technology investment. However, research belonging to Hoffman et al., (2018) is inversely proportional to the results which state that IT capabilities have no effect on reducing audit fees.

While the results of hypothesis 2 are testing the relationship between IT investment and audit risk as measured by audit fees as a measure of IC which functions as a moderator. The results show that IC has a moderating function in influencing the relationship between IT investment and audit risk as seen from the calculation with a significance of 0.0044 ( $<0.05$ ). Management capabilities in developing and maintaining control systems are directly influenced by IT capabilities (Y. Chen et al., 2014). An entity that invests in technology extensively in all of its business operations, starting from company management from the operational level to decision making, will affect the effectiveness of IC. Chen et al., (2014) is consistent with the results of this study which states that investment in technology can produce relevant controls in the audit process. PCAOB provisions regarding the auditor's understanding of IC components and evaluating the effectiveness of IC functions with respect to the client's audit risk assessment.

## CONCLUSION

According to tests and discussions from banking companies listed on the IDX during 2019-2022, obtaining results regarding IT investment has a significant influence on audit risk. In addition, the IC Variable has a moderating function on the relationship between IT investment and audit risk. However, the control variable ROA has no significant effect on audit risk. From the conclusions of the research results, there are several suggestions for further research, namely 1) further research can use larger company objects such as manufacturing. 2) future research may add IT personnel proxies to measure IT capabilities in addition to technology investment. For companies, the results of this study are expected to be used as material for consideration regarding the important role of technology in business processes. So that through investment in technology and optimal user capabilities can create IT value and IT intangible benefits for the entity.

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