

## IMPACT OF BIG DATA ANALYTICS ON AUDIT QUALITY WITH AUDIT DELAY AS MEDIATOR

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### Abstract:

This study investigates the impact of using Big Data Analytics on the quality of audits and the time it takes to complete audits in fintech companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2022. Using a purposive sampling method, data from 20 companies were analyzed to assess the impact of Big Data Analytics on these factors. The results indicate that using Big Data Analytics reduces the time it takes to complete audits but does not directly impact the quality of audits. Furthermore, research has demonstrated that audit delay has a detrimental effect on the quality of audits, suggesting that extended delays might undermine the results of audits. However, the presence of audit delay does not mediate the effect of Big Data Analytics on audit quality. This implies that the advantages of Big Data Analytics in audit quality are relatively unaffected by delays. These findings highlight the importance of utilizing Big Data Analytics to improve the efficiency of audits. However, the impact on audit quality may be restricted, offering valuable information for improving audit procedures in the fintech sector.

**Keywords:** Big Data Analytics, Audit Delay, Audit Quality

## INTRODUCTION

The development of the business world has entered the era of the Industrial Revolution 4.0, which encourages business people to implement the latest technology, such as Big Data, which is a collection of data in massive amounts, volumes, and data linkages (Natasuwarna, 2019). Big Data technology is increasingly widely used because it can optimize business targets, minimize risks (Iskandar & Mahdiana, 2022), and be used in data forecasting to reduce costs. Big Data Analytics, which studies and manages big data for optimization and decision-making, is essential in global competition and business, such as consumer profiling, Smart City development, and Tourism (Telkom Sigma, 2022). Big Data Analytics can speed up the audit process in business accounting by providing more resources to collect evidence and improve audit results (Fadila & Suryanti, 2020; Sarmadi & Pertini, 2022). One factor affecting audit quality is audit delay, which measures the timeliness of audited financial reporting. Applying Big Data Analytics in accounting can reduce audit delays due to more efficient data analysis and better resource support. With Big Data Analytics, auditors can access more extensive and detailed financial and non-financial information to perform audits more quickly and accurately, reducing the time required to finalize audit reports. It improves audit quality and compliance with financial reporting regulations, as regulated by the Indonesia Stock Exchange (Decree of the Board of Directors of PT Bursa Efek Indonesia, 2022). This study examines and analyses the effect of Big Data Analytics implementation on Audit Delay.

This research is essential for several reasons. First, by entering the era of Industrial Revolution 4.0, using Big Data technology becomes critical in optimizing business targets and minimizing risks. Big Data Analytics helps manage massive amounts of data and generate new knowledge that can improve the effectiveness and efficiency of the audit process. Using Big Data in auditing allows auditors to collect more comprehensive evidence and significantly improve audit results



(Natasuwarna, 2019; Iskandar & Mahdiana, 2022). Implementing big data can also speed up auditor reporting and reduce audit delays, positively impacting audit quality.

Second, many corporations must be more timely in releasing audited financial reports, as evidenced by the statistics on delays in report publication on the IDX from 2019 to 2022. The presence of the Audit Delay phenomenon suggests the existence of an issue that requires additional investigation. Researching the factors contributing to this delay is crucial for enhancing firm performance and audit quality. Publication delays can have a negative impact on a company's reputation and investor confidence. Remedial actions can be implemented by comprehending the elements contributing to Audit Delay. Hence, this research enhances the audit process and financial reporting (Sari & Novita, 2021).

Third, audit quality in Indonesia is still relatively low, as seen from the report of the Financial Profession Development Centre (PPPK), which shows that many Public Accounting Firms (KAP) violate regulations (Suherman & Aryati, 2022). It underscores the urgent need to improve audit quality standards. Fourth, there is an urgency to examine the implementation of Big Data Analytics in the Fintech sector, given the widespread adoption of this technology in Fintech companies in Indonesia (Afrianto & Hendrawan, 2019; Katadata, 2023). This research can provide insight into how these technologies affect the efficiency and effectiveness of the audit process. By understanding the use of Big Data in this sector, ways can be identified to improve audit quality and performance of Fintech companies. Therefore, this research significantly improves audit practices and uses technology in business.

This research considers using agency theory, which first appeared in 1976 and was developed by Jensen and Meckling (2012). This theory explains the agency relationship when one or more individuals (principals) hire others (agents) to provide services for them. The conflict of interest between the principal and the agent causes information asymmetry, where the agent knows more about the company's internal information than the principal, who only knows external information through the performance reported by management (Cahyati et al., 2021; Puspitasari et al., 2023). Independent auditors play an important role as mediators in overcoming this difference in interests to ensure transparency of financial statements, which is essential to reducing information asymmetry. Non-transparency and potential conflicts of interest between agents and principals can lead to agency costs, further emphasizing the need for independent auditors to maintain the integrity and reliability of the company's financial statements. Although appointed and paid by management, independent auditors must maintain their independence to provide objective and fair opinions, becoming a neutral third party in resolving agency problems (Kadek et al., 2023).

This research makes significant contributions both theoretically and practically. Theoretically, this study deepens the understanding of the impact of Big Data Analytics on data quality and Audit Delay and the relationship between the two in the context of accounting and auditing while strengthening and complementing previous research. Practically, this study offers insights for Fintech companies on the Indonesia Stock Exchange on utilizing Big Data Analytics to improve operational efficiency and data quality and accelerate the audit and decision-making process. For the Indonesia Stock Exchange, the results of this study can serve as a reference in formulating policies related to Big Data Analytics and auditing, which can improve the investment climate. In addition, this research provides more accurate and timely financial information for investors, which can increase public and investor confidence and open up new business opportunities that benefit all parties.

## METHODS



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This study uses a purposive sampling technique to determine the final sample size of 20 Fintech companies listed on the IDX during 2019-2022. This technique allows researchers to select samples following specific predetermined criteria. Details of the fulfillment of purposive sampling criteria explain how the sample selection was carried out based on the relevance and specific needs of the research as follows:

**Table 1. Samples Criteria**

No.	Samples Criteria	Total
1.	Fintech sub-sector companies listed on the IDX from 2019 - 2022.	23
2.	Companies that submit consecutive financial reports accompanied by independent auditor reports during 2019 - 2022.	(1)
3.	Companies that have a financial closing year of 31 December.	0
4.	Companies that use rupiah currency in presenting financial statements.	0
5.	Companies that have complete data for this study.	(2)
	Number of samples of companies	20
	Number of samples of companies in 4 years / during 2019 -2022	20 x 4 = 80

Of the 20 companies analyzed, Adira Dinamika Multi Finance Tbk (ADMF), BFI Finance Indonesia Tbk (BFIN), and Wahana Ottomitra Multiartha Tbk (WOMF) are three of them. Adira Dinamika Multi Finance Tbk (ADMF) specializes in providing financial services to purchase motor vehicles and consumer goods. BFI Finance Indonesia Tbk (BFIN) is a prominent finance company offering diverse financial services, such as automobile financing and working capital (Paradila et al., 2023). Wahana Ottomitra Multiartha Tbk (WOMF) is involved in the financing industry and focuses on automobile loans. The selection of these three firms was based on their possession of comprehensive and pertinent data suitable for researching the application of Big Data Analytics and its impact on audit quality.

**RESULT AND DISCUSSION**

This research data is tabulated and taken from official sources, namely the IDX website and random screening through the official website of the Indonesia Stock Exchange, which contains all public company financial report documents. The data tabulated is in the form of secondary data consisting of 20 Fintech companies on the IDX with observation time (time series) from 2019 - 2022 so that the total sample is 80 data. Each of these data is tabulated following the variables of this study, namely Big Data Analytics Implementation (X), Audit Delay (Z), and Audit Quality (Y). The following are the results of descriptive statistical tests using the help of SPSS 26 statistical software:

**Table 2. Descriptive Statistic Results**

Variable	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Big Implementation Data Analytics	80	0	1	.22	.420	.177
Audit Delay	80	28	147	78.69	26.467	700.496
Audit Quality	80	0	1	.30	.461	.213
Valid N (listwise)	80					

Source: Data Processed 2023

Table 2 shows that this study involved 80 samples for each variable studied. On the Big Data Analytics Implementation variable (X), the lowest value is 0, which belongs to 62 data, while the



highest value is 1, owned by 18 data. This variable's average value (mean) is 0.22, with a standard deviation of 0.420, showing significant variation. For the Audit Delay variable (Z), the lowest value is 28 days, owned by Adira Dinamika Multi Finance Tbk in 2021. The highest value is 147 days, owned by Intan Baruprana Finance Tbk in 2020, with an average of 78.69 days and a standard deviation of 26.647, which indicates that this data has no outliers. In the Audit Quality variable (Y), the lowest value is 0 for 56 data, and the highest is 1 for 24 data, with an average of 0.30 and a standard deviation of 0.461, indicating that the variation looks significant.

**Table 3.** Hypothesis Test Results (Direct Effect)

No.	Variable Relation	t/Wald	Sig.	R <sup>2</sup> / Percentage	Description
<b>Model 1 Equation (X to Z)</b>					
1	X - Z	-4,200	0,000	18,4%	Significant
<b>Model 2 Equation (X and Z to Y)</b>					
2	X - Y	1,868	0,172	76,3%	Not Significant
3	Z - Y	2,774	0,014		Significant

Source: Data Processed 2023

Based on Table 3, the results of hypothesis testing show that the Implementation of Big Data Analytics has a significant effect on Audit Delay, with a significance value of 0.000, which is smaller than 0.05, so H<sub>0</sub> is rejected, and H<sub>a</sub> is accepted. Conversely, the Implementation of Big Data Analytics has no significant effect on Audit Quality because the significance value of 0.172 is more significant than 0.05, which results in H<sub>0</sub> being accepted and H<sub>a</sub> being rejected. In addition, delays significantly affect audit quality, with a significance value of 0.014, more diminutive than 0.05, so H<sub>0</sub> is rejected, and H<sub>a</sub> is accepted.

**Table 4.** Mediation Test Results (Indirect Effect)

No.	Variable	Direct	Indirect	Criteria	Conclusion
1	X - Z - Y	-0,942	0,013	<i>direct effect &gt; indirect effect</i>	Unable to mediate

Source: Data Processed 2023

Based on Table 4, the hypothesis test results show that the direct effect value  $|-0.942|$  exceeds 0.013, which indicates an indirect effect. It indicates that the Audit Delay variable (Z) cannot mediate the relationship between Big Data Analytics Implementation (X) and Audit Quality (Y). In other words, Audit Delay does not act as a mediator in the influence of Big Data Analytics on Audit Quality.

This study aims to examine and assess the impact of implementing Big Data Analytics on the quality and timeliness of audits and to analyze the mediating function of audit delay in this relationship (Dinarjito, 2024). The findings of testing the first hypothesis (H<sub>1</sub>) indicate that the significant value for the impact of implementing Big Data Analytics on Audit Quality is 0.172, which is above the significance level of 0.05. This implies that the null hypothesis (H<sub>0</sub>) is upheld and the alternative hypothesis (H<sub>a</sub>) is dismissed, indicating that the implementation of Big Data Analytics does not significantly impact audit quality in Fintech companies on the IDX throughout 2019 - 2022. This discovery affirms that although Big Data Analytics technology holds significant promise, its influence on audit quality must be thoroughly examined within the specific context of the Fintech sector. The distinctive attributes of transactions and data volumes in this sector may have varying effects on audit outcomes.



After evaluating the second hypothesis (H2), the analysis shows that the significant value for the impact of implementing Big Data Analytics on Audit Delay is 0.000, which is lower than the threshold of 0.05. The outcome of this study indicates that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted, providing evidence that Big Data Analytics substantially impacts Audit Delay in fintech companies listed on the IDX from 2019 to 2022. The results suggest that implementing Big Data Analytics impacts the duration of an audit. Although it impacts the audit process, it does not substantially decrease audit delays. It implies that although Big Data Analytics technology can accelerate some parts of the audit process, other factors beyond technology also influence the length of the audit. In summary, the research indicates that while Big Data Analytics does affect the timing of audits, its capacity to resolve delays is restricted by other operational or procedural variables.

Testing the third hypothesis (H3) indicates a significance value of 0.014 for the impact of Audit Delay on Audit Quality, which is lower than the threshold of 0.05. The outcome of this study supports the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (Ha), suggesting that Audit Delay has a significant impact on Audit Quality in fintech companies listed on the IDX from 2019 to 2022. The results indicate that any delays in the audit process can harm the quality of the audit outcomes (Gustiani et al., 2023). Delays in the audit process can be caused by multiple variables, such as the intricacy of financial statements and sophisticated audit methods, which can impact the precision and significance of the audit information. Hence, it is imperative to manage audit time to uphold high-quality audit results effectively. Enhancing time management in audits can assist in reducing the negative impacts of delays and assure more dependable and precise audit outcomes.

In examining the fourth hypothesis (H4), the study indicates that Audit Delay does not mediate the connection between Big Data Analytics Implementation and Audit Quality. Consequently, the fourth hypothesis (H4) is invalidated, indicating that the degree of audit delay does not have a substantial moderating impact on the influence of Big Data Analytics Implementation on Audit Quality in Fintech businesses on the IDX from 2019 to 2022. The rejection of the hypothesis suggests that while the introduction of Big Data Analytics has a favorable effect on audit quality, the effect is not magnified or affected by delays in the audit process. These findings indicate that the positive effects of implementing Big Data Analytics on audit quality are not affected by the time it takes to complete an audit. It emphasizes optimizing the usage of Big Data Analytics without overly relying on the time it takes to conduct an audit.

## CONCLUSION

According to the research findings, utilizing Big Data Analytics does not substantially impact the quality of audits in Fintech companies listed on the IDX from 2019 to 2022. Nevertheless, the implementation of Big Data Analytics has a substantial impact on the delay of audits, and the delay of audits, in turn, significantly influences the quality of audits. Furthermore, it is essential to note that Audit Delay does not mediate the correlation between the implementation of Big Data Analytics and the quality of audits. These findings validate the necessity for additional investigation to comprehend the correlation between Big Data Analytics technology and the quality of audits and the impact of time in the audit process on audit results.

Future research should broaden data coverage by including companies from stock exchanges in other countries. It would enhance the relevance and scientific impact of the findings. Additionally, incorporating more independent variables, such as Audit Data Analytics, Firm Size, Firm Age, and Intellectual Capital, could offer more comprehensive insights into the factors influencing audit



outcomes. Employing various proxies or measurement techniques, particularly those that use ratio data types, is also recommended to ensure consistency across data sets. Utilizing panel data regression analysis can be beneficial for considering the effects of time in pooled data, potentially providing a more nuanced understanding of the variables involved. These approaches can help refine and extend the knowledge base in audit research, leading to more robust and applicable conclusions.

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