

IS FINTECH A SUSTAINABLE BUSINESS MODEL FOR THE FUTURE? EMPIRICAL STUDY IN INDONESIA

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ABSTRAK

Perkembangan pesat fintech telah mengubah tatanan keuangan, membawa peluang dan juga tantangan. Penelitian ini mengevaluasi kinerja keuangan perbankan fintech di Indonesia dibandingkan dengan bank tradisional, serta mengeksplorasi pengaruh sustainability disclosure, market capitalization, dan leverage pada perusahaan fintech dan bank konvensional. Penelitian ini menerapkan pendekatan kuantitatif dengan menggunakan stakeholder theory dan signaling theory. Data yang digunakan adalah data sekunder dari 13 perusahaan perbankan di Indonesia yang dianalisis menggunakan regresi data panel. Hasil penelitian menunjukkan bahwa bank fintech memiliki kinerja yang lebih baik daripada bank konvensional dalam hal kapitalisasi pasar, dengan pengaruh negatif yang tidak terduga dari pengungkapan keberlanjutan terhadap tingkat pertumbuhan berkelanjutan. Melalui analisis komprehensif terhadap faktor-faktor ini, penelitian ini memberikan wawasan yang berharga mengenai keberlanjutan dan prospek fintech sebagai pemain kunci dalam ekosistem keuangan Indonesia yang terus berkembang.

Kata Kunci: Fintech, Bank Konvensional, Keberlanjutan, Comparative Study, Indonesia

ABSTRACT

The rapid rise of fintech has transformed the financial landscape, presenting both opportunities and challenges. This research assesses the financial performance of fintech banks in Indonesia compared to traditional banks, exploring the influence of sustainability disclosure, market capitalization, and leverage in both fintech and conventional banks. This research applied a quantitative approach using both stakeholder theory and signaling theory. The data used is secondary data from 13 banking companies in Indonesia which is analyzed using panel data regression. Our findings show that fintech banks have a better performance than conventional banks in terms of market capitalization, with the unexpected negative influence of sustainability disclosure on sustainable growth rate. Through a comprehensive analysis of these factors, the research provides valuable insights into the sustainability and prospects of fintech as a key player in Indonesia's evolving financial ecosystem.

Fintech, Conventional Bank, Sustainability, Comparative Study, Indonesia

1. Introduction

In recent years, the financial industry has seen significant changes due to the rise of Financial Technology (Fintech) which drives digital transformations in financial institutions (Deloitte, 2019; Hassan et al., 2020; Wang et al., 2021; Rambaud & Gasquez, 2022). Legowo et al. (2021) define fintech as an emerging technological innovation with the primary objective of enhancing the automation of financial services within the banking sector. Fintech transformation encompasses a wide array of financial services delivered through technology-driven platforms, ranging from digital payments and lending to crowdfunding. This evolution has created opportunities for various businesses in Indonesia and attracted attention from the government, investors, and conventional banks (Candra et al., 2020). The boundary between fintech and conventional banks may blur as conventional banks increasingly adopt technology to enhance their efficiency and innovate their services. Nevertheless, Karsh and Abufara (2020) emphasize that the key differences between fintech and conventional banks lie in fintech's ability to collaborate with diverse lenders, create specialized products for smaller markets, and prioritize customer experience, in contrast to conventional banks that focus on their products, target broader audiences, and emphasize risk management.

PwC (2019) stated that the use of fintech to bank the unbanked could increase Indonesia's Gross Domestic Product (GDP) by 2% to 3%. However, there is a growing debate about the influence of sustainability disclosure on the sustainable growth of fintech banks in Indonesia. Sustainability disclosures encompass information related to companies' economic value and their environmental and social significance (Krueger et al., 2021; Raimo et al., 2021). Notably, fintech's substantial impact on environmental benefits has been acknowledged in various studies (Popescu & Popescu, 2019; Hoang et al., 2021). Despite some fintech companies' claims of minimal environmental impact, it's crucial to recognize that sustainability reporting extends beyond the environment (Dhiaf et al., 2022; Atayah et al., 2023). It includes social and corporate governance aspects, where fintech companies can contribute significantly.

Sustainability reports provide essential information to stakeholders like customers, investors, and employees (Toumi et al., 2023). The comprehensive disclosure of information about fintech operations is critical for providing valuable insights and long-term value. By incorporating a transparent sustainability disclosure, fintech companies can differentiate from competitors and enhance their value (Mohammad & Wasiuzzaman, 2021; Wang & Zhang, 2023). Conversely, the determinants of market capitalization and corporate leverage continue to wield considerable influence in shaping stakeholder decision-making. Effective financial risk management and capital procurement through debt instruments support sustainable growth (Alodat et al., 2022).

While previous research focuses more on conventional and digital banks, the emerging landscape of fintech introduces a unique set of challenges and opportunities that require dedicated examination. As the fintech industry

continues to mature, questions about its sustainability as a business model in the long term become increasingly pertinent, prompting the development of this research. The authors intend to fill this knowledge gap by investigating the influence of sustainability disclosure and conducting a comparative analysis between fintech companies and conventional banks in Indonesia. This research aims to contribute to Indonesia's more resilient and innovative financial landscape by exploring two research questions. First, it evaluates how fintech companies in Indonesia perform financially compared to conventional banks. Second, it investigates the dynamics of sustainability disclosure, market capitalization, and leverage to the performance of both fintech and conventional banks. Specifically, this research aims to offer valuable insights into the factors influencing the sustainable growth of fintech and conventional banks in Indonesia, guiding stakeholders and policymakers in strategic decision-making.

2. Literature Review and Hypothesis Development

The stakeholder theory proposed by Freeman and McVea (1984) is a theory that underscores the substantial role played by diverse entities engaged in corporate decision-making. According to this theory, companies capable of considering and fostering good relationships with stakeholders are more likely to achieve sustainable growth (Freeman et al., 2010). In this context, investors are increasingly realizing the importance of sustainability issues and demanding companies to actively contribute to them (Schaltegger et al., 2019; Freudenreich et al., 2020). Companies that disclose information about their sustainability practices tend to be more capable of maintaining positive relationships with stakeholders concerned about sustainability issues (Abeysekera et al., 2021; Bashiru et al., 2022).

The signaling theory proposed by Spence (1973) focuses on symbolic communication companies employ to convey information to the market and stakeholders. In this context, companies can use various actions, including disclosing sustainability-related information as a signal of their commitment to sustainable practices (Hassan et al., 2020; Karaman et al., 2020; López-Santamaría et al., 2021; Moktar et al., 2023). The company's market capitalization is a crucial signal influencing investor perception of the company's size, stability, and prospects. Companies with a large market capitalization may be seen as stronger advocates of sustainable growth, with good corporate performance (Bhuyan et al., 2017; Chandra & Suhendah, 2023). Additionally, this theory highlights that companies with low leverage may be considered to be more stable and have the potential for sustainable growth (Hongli et al., 2019). Conversely, companies with high leverage might be perceived as riskier due to their larger debt obligations that require effective management (Holly et al., 2022; Putri & Noor, 2022).

Companies that actively and transparently communicate their sustainable practices are more likely to receive greater stakeholder support, including investors (Fatemi et al., 2018). This is especially relevant in the context of fintech banks, where the integration of technology and financial services has reshaped the industry landscape. Research by Hastuti et al. (2018) suggests that companies with higher

sustainability disclosure exhibit enhanced corporate value and performance. This aligns with the broader understanding that investors inclined toward social and environmental issues are more likely to be attracted to companies demonstrating a strong commitment to sustainability. In the context of conventional banks, sustainability disclosure not only fosters investor relations but also plays a crucial role in gaining a competitive advantage. The studies by Alareeni & Hamdan (2020), Christensen et al. (2021), Abdi et al. (2022), and Chen et al. (2022) collectively highlight that companies with robust sustainability disclosure frameworks are more likely to outperform competitors and build stronger customer loyalty. Therefore, the authors propose the following hypotheses:

H_{1a}: Sustainability disclosure has a positive and significant influence on the sustainable growth rate of Fintech Banks.

H_{1b}: Sustainability disclosure has a positive and significant influence on the sustainable growth rate of Conventional Banks.

The relationship between market capitalization and sustainable growth is a crucial aspect for fintech banks, given the dynamic nature of the industry. Companies perceived by the market as large and stable may find it easier to garner support from investors and other stakeholders, including those committed to sustainability issues (Lee, 2020; Suresh & Thirumagal, 2020; Roosmawarni et al., 2023). Furthermore, the research by Radivojac and Krčmar (2020) suggests that the advantage of high market capitalization extends to conventional banks as well. With greater financial resources, including capital and liquidity, conventional banks can invest more substantially in sustainable projects, thereby contributing to a higher sustainable growth rate. Therefore, the authors propose the following hypotheses:

H_{2a}: Market capitalization has a positive and significant influence on the sustainable growth rate of Fintech Banks.

H_{2b}: Market capitalization has a positive and significant influence on the sustainable growth rate of Conventional Banks.

High levels of debt in a company may lead to higher capital costs and greater financial risk, which, in turn, can limit the company's ability to achieve sustainable growth (Rao et al., 2020; Chen et al., 2022). For fintech banks, the relationship between leverage and sustainable growth is a critical consideration that is similar to conventional banking. Fintech and conventional banks with high leverage might face significant interest expenses and debt obligations, potentially reducing the availability of funds for investment in sustainable projects (Pandey & Sahu, 2017; Danso et al., 2019; Mishra & Dasgupta, 2019; Ali et al., 2022). However, the research result of Bae et al. (2017) shows that high leverage can prompt undesirable behaviors from customers and competitors, whereas a moderate level of leverage is linked to enhanced competitive advantage against competitors.

H_{3a}: Leverage has a negative and significant influence on the sustainable growth rate of Fintech Banks.

H_{3b}: Leverage has a negative and significant influence on the sustainable growth rate of Conventional Banks.

In both fintech and conventional banking sectors, the Sustainable Growth Rate is perceived as an outcome shaped by the interplay of sustainability disclosure, market capitalization, and leverage. Sustainability disclosure serves as a signal of commitment to sustainable practices, market capitalization depicts the ability to access capital, and leverage reflects the level of financial risk for the company (Georgiou, 2020; Maryana & Carolina, 2021; Nwaigwe et al., 2022). This intricate combination of factors introduces complexity into the decision-making processes related to sustainable growth in both fintech and conventional banking realms. The proposed hypotheses are as follows:

H_{4a}: Sustainability disclosure, market capitalization, and leverage have a significant influence on the sustainable growth rate of Fintech Banks.

H_{4b}: Sustainability disclosure, market capitalization, and leverage have a significant influence on the sustainable growth rate of Conventional Banks.

While it is essential to approach comparisons between fintech and conventional banks with a nuanced perspective, several researchers argue that fintech banks demonstrate certain advantages over their traditional counterparts (Dwivedi et al., 2021; Yudaruddin, 2022; Dasilas & Karanović, 2023). Fintech banks are frequently praised for their agility and efficiency in navigating swiftly changing technological landscapes, enabling the delivery of quicker and more innovative financial solutions (Ahmad et al., 2023). Abdullah and Ling (2023) highlight that the streamlined nature of fintech operations may result in lower overhead costs, potentially translating into more cost-effective services for customers. Furthermore, FinTech banks often leverage data analytics and similar technology to enhance customer experiences and tailor financial products to individual needs (Barroso & Laborda, 2022). These characteristics collectively position fintech banks as dynamic players capable of providing not only efficient but also tailored and technologically advanced financial services. Therefore, the proposed hypotheses are as follows:

H_{5a}: There is a significant difference in Sustainable Growth Rate between Fintech and Conventional Banks.

H_{5b}: There is a significant difference in Sustainability Disclosure between Fintech and Conventional Banks.

H_{5c}: There is a significant difference in Market Capitalization between Fintech and Conventional Banks.

H_{5d}: There is a significant difference in Leverage between Fintech and Conventional Banks.

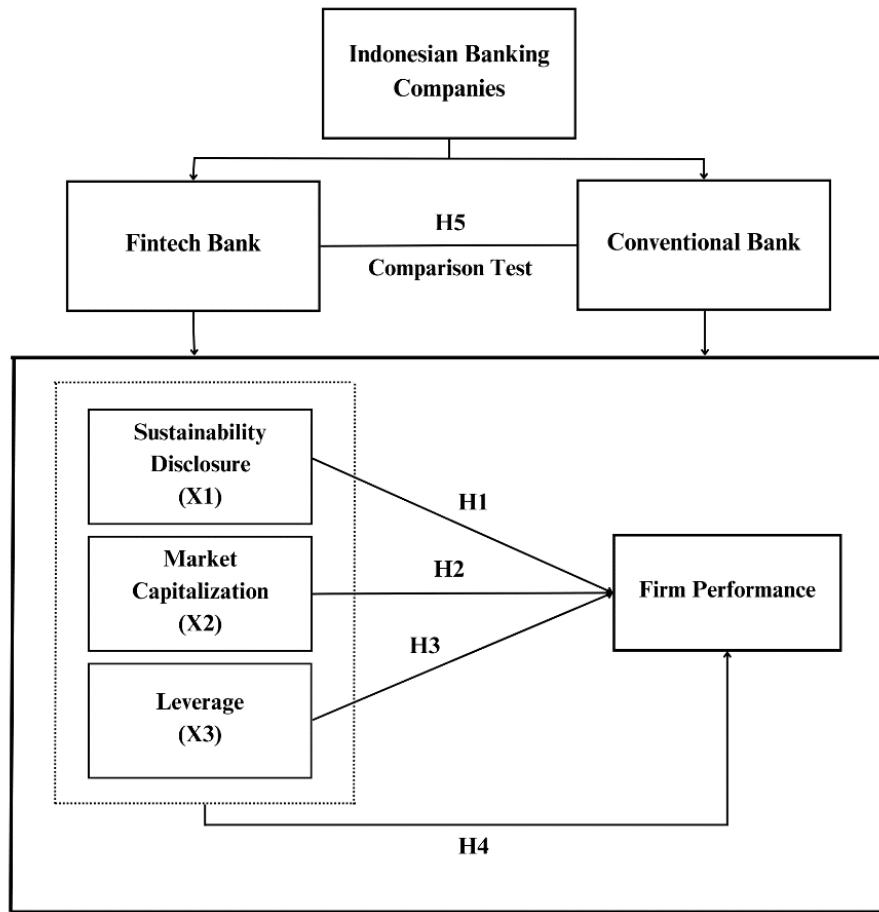


Figure 1. Research Conceptual Framework

(Source: Processed by authors, 2023)

3. Research Method

This research adopts a quantitative approach aimed at measuring and analyzing the relationships between various variables within a more structured analytical framework (Brunzel, 2021). The population of this research consists of banking companies in Indonesia, and purposive sampling was chosen as the sampling method. Purposive sampling involves the intentional selection based on specific criteria (Saunders et al., 2019). In this context, the sample selection criteria involve Indonesian banking firms that have followed POJK 51 standards for sustainability reporting and have undergone an Initial Public Offering (IPO) on the Indonesia Stock Exchange (IDX). 6 fintech banks met these criteria and were chosen as a sample of this research (Setiawati, 2023; Indrajaya, 2022).

In the selection of conventional banks, a dual set of criteria was employed. Firstly, the chosen sample is multinational banks. Secondly, the focus is on family-owned banks, albeit not of substantial scale, with a market targeting an older demographic. These specific criteria were meticulously applied to ensure the assembly of a targeted and relevant sample that closely aligns with the research objectives and mirrors the characteristics of the Indonesian banking sector (Sumarta

et al., 2021; Aba & Junior, 2022). As illustrated in Table 1, the selected sample consists of 13 banking companies. For ethical reasons, the specific names of the banks will be withheld and instead referred to as Bank A, Bank B, and so forth.

Table 1. Sample List

Bank Name	Categories	Year
Bank A, Tbk.	Fintech	2020-2022
Bank B, Tbk.	Fintech	2020-2022
Bank C, Tbk.	Fintech	2020-2022
Bank D, Tbk.	Fintech	2020-2022
Bank E, Tbk.	Fintech	2020-2022
Bank F, Tbk.	Fintech	2020-2022
Bank G, Tbk.	Conventional	2020-2022
Bank H, Tbk.	Conventional	2020-2022
Bank I, Tbk.	Conventional	2020-2022
Bank J, Tbk.	Conventional	2020-2022
Bank K, Tbk	Conventional	2020-2022
Bank L, Tbk	Conventional	2020-2022
Bank M, Tbk	Conventional	2020-2022
Total Sample		39
Outlier		(1)
Total Observations		38

Source: Processed by authors, 2023

The sample selection was meticulous to ensure relevance to the research focus. Data for this study is sourced from secondary data obtained from various outlets such as sustainability reports, annual reports, and financial statements collected from the IDX or the company's official websites. The collected data will be analyzed using panel data regression in EViews 12 to examine the influence of sustainability disclosure, market capitalization, and leverage on the sustainable growth rate while SPSS 27.0.1 software will be utilized to do a comparative test between the financial performance of fintech and conventional banks. It is important to highlight that the measurement approach for each variable is consistent across both fintech and conventional banks. This uniformity ensures that the analysis of sustainability disclosure, market capitalization, and leverage as influencers of the sustainable growth rate is meaningful and comparable across sectors.

This research tests the dependent and independent variables described in the definitions and variable measurements which are explained further. Sustainable Growth Rate (SGR) is the maximum rate of a company's future growth used to measure its performance (Ross et al., 2003). To measure the SGR of 10 selected companies, the authors utilized the Higgins Sustainable Growth Rate (HSGR) model which is applied based on the assumption that the company does not issue new equity capital and a portion of retained earnings and debt is invested in assets.

The increase in assets helps boost sales, ultimately increasing the company's profits (Higgins, 1977; 2001; 2007). In this model, NPAT represents net profit after tax, NPBT represents net profit before tax, and TO represents sales turnover calculated by dividing interest income by the average accounts receivable. RI represents retained earnings, NA represents the net amount of assets owned by the company, and E represents the book value of equity obtained by subtracting ending equity from beginning equity. The model is formulated as follows:

$$HSGR = \left(\left(\frac{RI}{NPAT} \right) \times \left(\frac{NPBT}{TO} \right) \times \left(\frac{TO}{NA} \right) \times \left(\frac{NA}{E} \right) \right)$$

Sustainability disclosure refers to the information and data companies provide to stakeholders about practices related to environmental, social, and corporate governance issues implemented by the company. To measure the Sustainability Disclosure Extent (SDE), we use indicators from POJK 51, totaling 25 items for the companies that use POJK.03/2017 and 50 items for companies that use SEOJK.04/2016. The rating criteria involve a dummy score of "1" if the indicator aspect is disclosed and "0" otherwise (Gnanaweera & Kunori, 2018; Hussain et al., 2018; Nwaigwe et al., 2022). The index is calculated as the ratio of the sum of disclosure scores (D) obtained from aspects disclosed by company i in year t to the maximum disclosure score (M) that can be obtained based on the number of relevant indicator aspects in POJK 51. The structure of the index is as follows:

$$SDE = \sum D_{it} / M_{it}$$

In general, the benchmark used to assess a company's value is its market capitalization. More broadly, wealth creation by a company is represented by the collective value of both the company itself and its stocks (Dama et al., 2020; Nurhayati et al., 2021). Market Capitalization (MC) is the log of a company's market value calculated by multiplying the closing stock price by the number of shares outstanding in the stock market. The calculation for MC is as follows:

$$\text{Log MC} = \text{Latest Closing Shares Price} \times \text{Number of Shares Outstanding}$$

Leverage refers to the level of debt utilized by a company in financing its operations (Arhinful and Radmehr, 2023). In this research, leverage is measured using the Debt to Asset Ratio (DAR), which assesses how well a company can manage the use of debt as a source of its funding (Lestari & Indarto, 2019). The calculation for this ratio is as follows:

$$DAR = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

This research utilizes panel data regression, with the following regression model:

$$SGR = \alpha + \beta_1 SDE + \beta_2 MC + \beta_3 LEV + \varepsilon$$

Where,

SGR : Sustainable Growth Rate

SDE : Sustainability Disclosure Extent

MC : Market Capitalization

LEV	: Leverage
α	: Constant
β	: Regression Coefficient
ε	: Error

4. Result and Discussion

Table 2 shows the descriptive statistics of the variables used in this research for both fintech and conventional banks. As observed in Table 2, the sustainable growth rate of conventional banks is found to be better than fintech banks. Fintech banks display a negative average value of SGR, suggesting a potential challenge in sustaining growth. This could be influenced by specific factors impacting their growth trajectory. This result can be seen in the minimum SGR of fintech which is -8,37541, indicating a potentially significant decline in growth. In contrast, conventional banks exhibit a positive value of SGR, indicating a more favorable growth trend on average.

Table 2. Descriptive Statistics

Fintech Bank (n = 21 Observations)					
Variables	Mean	Median	Max	Min	Std.Dev
SGR	-0,5316	-0,0202	0,63785	-8,3754	2,00488
SDE	0,61	0,63	0,96	0	0,27036
MC	13,435	13,3512	16,6146	11,9135	1,29981
LEV	0,60987	0,75064	0,91889	0,04079	0,30055

Conventional Banks (n = 21 Observations)					
Variables	Mean	Median	Max	Min	Std.Dev
SGR	0,72069	0,70047	1,25499	0,2786	0,24359
SDE	0,85524	0,92	1	0,42	0,19307
MC	13,2041	13,361	13,7139	11,9411	0,40355
LEV	0,7204	0,82979	0,89765	0,12214	0,25381

Source: Processed by authors, 2023

A similar result can be seen on SDE where fintech banks disclose sustainability information to a moderate extent, while the minimum value suggests instances where sustainability disclosure is absent, implying that some fintech banks may not prioritize comprehensive reporting on environmental, social, and governance aspects. On the other hand, conventional banks demonstrate a relatively higher extent of sustainability disclosure, showcasing a potentially more comprehensive approach to ESG practices.

Fintech banks and conventional banks share a comparable mean market capitalization, indicating a similar overall valuation in the market. This suggests that, on average, both types of banks are perceived to have similar financial worth by investors and the market. However, fintech banks demonstrate a slightly superior performance. Additionally, while the leverage for both fintech and conventional banks shows minimal differences, the data in Table 2 highlights that fintech banks

tend to rely on debt less than conventional banks. This is evident in both the mean and median values, emphasizing a relatively lower dependence on debt financing within the fintech sector.

Selecting the best panel data regression model involves conducting the Chow test, Hausman test, and Lagrange Multiplier test (Baltagi, 2005). These tests collectively ensure the reliability and validity of regression analyses by assessing potential differences between groups or periods, determining the appropriate model specification, and addressing issues of varying error term variance across observations.

Table 3. Summary of Model Selection

Fintech Banks		Conventional Banks	
Criteria	Selection Model	Criteria	Selection Model
Chow Test	Prob. Chi Square 0,000 <0,05	FEM	Prob. Chi Square 0,000 <0,05
Hausman Test	Prob. Chi Square 0,000 <0,05	FEM	Prob. Cross-section random 0,1172 >0,05
LM Test	No further testing is required.		Prob. Breusch-Pagan 0,0004 <0,05

Source: Secondary data (processed)

The Chow test reveals that both fintech and conventional banks are more suitable with the Fixed Effect Model (FEM) over the Common Effect Model (CEM), with probability chi-square values of 0.000, underscoring FEM's superiority. However, while the Hausman test for fintech banks reinforces this preference for FEM (probability of 0.000), indicating its suitability without the need for further testing, conventional banks exhibit a different pattern. Despite initially showing a preference for the Random Effects Model (REM) over FEM in the Hausman test (probability of 0.1172), subsequent examination using the Lagrange Multiplier test confirms REM's superiority over both FEM and CEM (probability of 0.0004). Thus, REM emerges as the optimal regression model for conventional banks, as supported by the combined outcomes of the Hausman and Lagrange Multiplier tests.

As the Fixed Effect Model (FEM) has been selected for the fintech banks data, the need for normality tests and autocorrelation tests is alleviated, given that the FEM inherently accommodates individual-specific effects which resulted in reducing the significance of normality assumptions and mitigating concerns about autocorrelation (Agung, 2014). With the focus narrowed to FEM, attention can be directed towards multicollinearity and heteroscedasticity tests. Meanwhile, there is no need to do a classical assumption test for conventional bank data because the selected panel data regression model was Random Effects Model (REM).

Table 4. Classical Assumption Test of Fintech Bank

Classical Assumption Test	Test Result			Conclusion
	SDE	MC	LEV	
Multicollinearity Test	SDE	1.000000	0.252638	-0.108766
	MC	0.252638	1.000000	0.066868
	LEV	-0.108766	0.066868	1.000000
Heteroskedasticity	The chi-square probability value is 0.4849 >0.05			No heteroskedasticity

Source: Secondary Data (Processed)

Based on the tests conducted on the fintech bank, it was concluded that multicollinearity does not occur in the data, as indicated by correlation test results showing that all independent variables have correlations below the threshold of 0.9. This finding underscores the reliability of the analytical model utilized. Additionally, the White test yielded a chi-square probability value of 0.4849 (>0.05), indicating the absence of heteroskedasticity issues within the fintech bank data.

Table 5 displays the outcomes of the goodness of fit test, encompassing the adjusted R squared and the F-statistic test for both conventional and fintech banks.

Table 5. Goodness of Fit Models

	Adjusted R-Squared	Prob (F Statistics)
Conventional	0.769307	0.002357
Fintech	0.380853	0.010647

Source: Secondary Data (Processed)

The determination coefficient test results for conventional banks reveal that independent variables, such as sustainable disclosure, market capitalization, and leverage, collectively account for 38% of the explanatory power of the dependent variable—sustainable growth rate. The remaining 62% is attributed to factors beyond the scope of the regression model. In contrast, for fintech banks, the adjusted R-squared value stands at 0.769307, indicating that 77% of the variability in the sustainable growth rate variable is elucidated by its independent variables, leaving 23% to be accounted for by other factors.

Table 6 below shows the panel data regression analysis of fintech banks using FEM. The result was used to estimate hypotheses 1, 2, 3, and 4.

Table 6. Regression Analysis of Fintech Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22.47026	4.171617	-5.386464	0.0004
SDE	-1.997523	0.952934	-2.096182	0.0655
MC	1.621643	0.280701	5.777125	0.0003
LEV	2.247035	2.688450	0.835811	0.4249

Source: Secondary Data (Processed)

Table 7 below shows the panel data regression analysis of conventional banks using REM. The result was used to estimate hypotheses 1, 2, 3, and 4.

Table 7. Regression Analysis of Conventional Banks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.582505	0.973636	0.598278	0.5575
SDE	-1.250580	0.332394	-3.762346	0.0016
MC	0.028236	0.070129	0.402630	0.6922
LEV	1.158935	0.311776	3.717202	0.0017

Source: Secondary Data (Processed)

Based on Table 6 denotes that the probability value associated with the independent variable SDE in fintech banks is 0.03275 (>0.025), and it comes with a negative coefficient that suggests that the variable SDE does not exert a significant influence on the sustainable growth rate. The same result can be seen in the probability value associated with the independent variable SDE in conventional banks which is 0.0008 (<0.025), and it comes with a negative coefficient. This value shows that the variable SDE has a significant influence on the sustainable growth rate. Consequently, the rejection of H1a and H1b is warranted, signifying that there is no significant positive influence of sustainability disclosure on the sustainable growth rate. This suggests an unexpected relationship where higher sustainability disclosure is associated with a lower sustainable growth rate in both fintech and conventional banks. These results follow the previous research by Buallay et al. (2020), Radhouane et al. (2020), and Lubis et al. (2021) which stated that sustainability disclosure has a negative influence on firm performance. On the other hand, Worokinah and Zaini (2020) and Xue et al. (2020) find that sustainability disclosure does not have a significant influence on firm performance.

The research results diverge from the established literature, which typically indicates a positive relationship between sustainability disclosure and a company's sustainable growth rate. While it is conventionally expected that higher sustainability disclosure positively influences a company's sustainable growth rate by fostering stakeholder trust and reducing uncertainty, this study surprisingly finds no significant positive influence, suggesting a more intricate relationship. This complexity may be influenced by unaccounted factors affecting how stakeholders interpret and respond to sustainability disclosures. The unexpected finding underscores the need for a nuanced exploration, considering variations in the effectiveness of sustainability disclosure strategies, stakeholders' perceptions, regulatory environments, and industry-specific nuances that may shape this intricate relationship. The Stakeholder Theory highlights the dual importance of open communication about a company's sustainable practices and reducing expectation disparities among stakeholders (Nontji et al., 2022; Toumi et al., 2023). The theory emphasizes that stakeholder pressure significantly influences the extent of management's sustainability disclosure (Ruhiyat et al., 2022; Majdi et al., 2023). Additionally, Radhouane et al. (2020) found that shareholders express concerns

about the substantial costs incurred by companies in the process of making sustainability disclosures.

The probability value for the independent variable MC in fintech banks is 0.00015 (<0.025) with a positive coefficient. This value indicates that market capitalization has a positive and significant influence on the sustainable growth rate of fintech banks. However, the probability value associated with the independent variable MC in conventional banks is 0.3461 (>0.025), and it comes with a positive coefficient. This value shows that market capitalization has no significant influence on the sustainable growth rate of conventional banks. In other words, as market capitalization increases, the sustainable growth rate tends to increase as well with a more pronounced influence in the fintech banks compared to conventional banks. Consequently, H2a is accepted and H2b is rejected as market capitalization significantly and positively affects the sustainable growth rate of the fintech banks and does not significantly influence the sustainable growth rate in conventional banks. Larger market capitalization may provide companies with increased access to capital, enabling them to pursue growth opportunities (Lee, 2020; Suresh & Thirumagal, 2020; Radivojac & Krčmar 2020; Roosmawarni et al., 2023). This aligns with the perspective from signaling theory and existing literature, where a higher market capitalization may signal greater investor confidence and attractiveness, potentially leading to favorable conditions for sustainable growth (Bhuyan et al., 2017; Chandra & Suhendah, 2023).

The probability value for the independent variable LEV in fintech banks is 0.21245 (>0.025) with a positive coefficient. This value indicates that the leverage does not have a significant influence on the sustainable growth rate of fintech banks. Similarly, the probability value for the independent variable LEV in conventional banks is 0,00085 (<0.025) with a positive coefficient. This shows that leverage has a positive and significant influence on the sustainable growth rate of conventional banks. Therefore, H3a and H3b are rejected as leverage does not significantly and negatively affect the sustainable growth rate of both fintech and conventional banks. This result signifies that, in fintech banks, changes in leverage levels do not yield a statistically significant influence on the sustainable growth rate and correlates with the result of research conducted by (Hongli et al., 2019; Bui, 2020; Tripathy & Shaik, 2019). According to the signaling theory, companies may use certain financial decisions, such as the level of debt, to convey information about their underlying strength and prospects to external stakeholders (Malik et al., 2023). While the stakeholders might not interpret higher leverage as a positive indicator of the firm's prospects, this positive relationship suggests that the use of leverage contributes to a firm's capacity to expand operations, invest in new opportunities, and generate higher returns on equity (Hongli et al., 2019; Kijkasiwat et al., 2022). Nevertheless, the positive influence of leverage on sustainable growth rate aligns with the research results of Iqbal and Usman (2018) and Lian (2022).

The F probability value for fintech banks, 0.002537 (<0.05), indicates a significant influence of the independent variables on the dependent variable.

Similarly, in conventional banks, the F probability value of 0.010647 (<0.05) underscores the significant influence of the independent variables on the dependent variable. This result affirms that sustainability disclosure, market capitalization, and leverage collectively exert a significant influence on firm performance, leading to the acceptance of hypotheses H4a and H4b. The significant influence aligns with previous findings in the existing literature. This consistency underscores the robustness of these factors as key determinants of firm performance across diverse financial contexts.

Table 8. Independent T-test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
SGR	Equal variances assumed	3.100	.087	-6.954	36	.000
	Equal variances not assumed			-6.558	23.551	.000
SDE	Equal variances assumed	3.461	.071	-3.586	36	.001
	Equal variances not assumed			-3.471	28.589	.002
MC	Equal variances assumed	9.621	.004	.837	36	.408
	Equal variances not assumed			.764	18.374	.454
LEV	Equal variances assumed	3.116	.086	-1.309	36	.199
	Equal variances not assumed			-1.282	30.977	.209

Source: Secondary Data (Processed)

Levene's test results reveal the F-test significance of 0.087 for SGR, 0.071 for SDE, 0.004 for MC, and 0.086 for LEV. The results for SGR, SDE, and LEV variables exceed the 0.05 threshold, indicating homogeneous variances between the two populations. Consequently, the t-test is carried out with the significance value for equal variances assumed. While the result for the MC variable is less than 0.05 indicates that the t-test is carried out using the significance value for equal variances not assumed.

Table 8 displays a significance value of 0.000 (<0.05) for SGR, concluding a substantial difference between fintech and conventional banks. Therefore H5a is accepted as there is a significant difference in sustainable growth rate between fintech and conventional banks. This finding aligns with the result of previous research that the financial performance and growth trajectories of fintech banks deviate significantly from their conventional counterparts (Dwivedi et al., 2021; Dasilas & Karanović, 2023).

Based on the output of Table 8, there is a substantial difference in the extent of sustainability disclosure between fintech and conventional banks. This resulted from the significance value of 0.001 (<0.05) for SDE. Consequently, H5b is accepted as there is a significant difference in sustainability disclosure between fintech and conventional banks. This result implies that fintech and conventional

banks differ significantly in the extent of their sustainability disclosures. Mainardes and Freitas (2023) highlight that customer loyalty appears to be stronger in traditional banks compared to fintechs. This may be attributed to the heightened level of sustainability disclosure prevalent in conventional banks.

Table 8 indicates a significant value of 0.454, which is greater than the 0.05 threshold for the MC variable, leading to the conclusion that there is no significant difference between fintech and conventional banks in terms of market capitalization. As a result, hypothesis H5c is rejected. Similarly, for the LEV variable, the significance value of 0.199 exceeds the 0.05 threshold, suggesting no significant difference in leverage between fintech and conventional banks. Consequently, hypothesis H5d is rejected. Stakeholders may perceive the lack of significant differences in market capitalization and leverage as an indication that fintech and conventional banks share similar financial structures and risk profiles (Kharrat et al., 2023). The rejection of the hypotheses aligns with the idea that these banking sectors may signal comparable financial health and risk management strategies to stakeholders.

5. Conclusions, Implications, and Limitations

In conclusion, this empirical study delved into the sustainability of fintech as a business model in Indonesia, scrutinizing key factors such as sustainability disclosure, market capitalization, and leverage. Surprisingly the result showed that sustainability disclosure had a negative impact on the sustainable growth rate, contrary to expectations. Additionally, the authors found that conventional banks outperformed their fintech counterparts in sustainable growth rates and sustainability disclosure, highlighting their strength in financial performance and transparency. Despite this, fintech banks had a slight advantage in market capitalization and demonstrated a tendency to use less debt compared to conventional banks.

The authors encounter some limitations that impact the findings of the study. The limitations include a potentially constrained sample size, a restricted time frame that may not capture evolving market conditions, and a limited geographic scope that affects generalizability. To advance future research, it is recommended to explore differences across banking industry sectors and consider using alternative measures such as sustainable disclosure quality rather than the extent of sustainable disclosure. Additionally, other variables like ownership structure and managerial ability could offer a more comprehensive analysis. A cross-country comparison beyond conventional and fintech banks would further enhance insights into the broader dynamics of sustainability disclosure and its impact on sustainable growth rates. Addressing these aspects would contribute to a more nuanced and applicable understanding of the relationship between sustainability disclosure and financial performance in the banking sector.

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