The Influence of Fintech on Sustainability and Stock Return in Indonesian Banking

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Abstract

The use of fintech in Indonesia still needs to be improved for the needs of the Indonesian people. High and sufficient use of fintech is associated with sustainability and returns on company shares. The aim of this research is to see the effect of fintech on sustainability and returns on company shares. The independent variable in this study is fintech. The dependent variable is sustainability and stock returns while the control variable is company age, leverage, and Big 4. This research was conducted by collecting data from 34 companies in the banking sector in Indonesia over a period of 5 years (2017-2021) and using a panel data regression model. in testing. The results of the research conducted explained that fintech is not significant for stock returns, but has a positive effect on sustainability. Firm age and leverage are not significant, but Big 4 has a positive effect on stock returns. Firm age has a positive effect but leverage and Big 4 do not affect sustainability. The research that has been carried out implies that it is better to increase the number of ATMs to make it easier for customers to make transactions and to select auditors belonging to the Big 4 category so that stock prices can increase.

Keywords: Big 4, fintech, firm age, stock returns, sustainability

Introduction

The world is highlighting the use of financial technology (fintech), which can be a strong driver for achieving the Sustainable Development Goals (SDGs). Public financial access is still relatively low, thus presenting financial technology (fintech) to be a solution to financial access, including financing and capital. The emergence of the fourth industrial revolution with its supporting technology is rapidly developing and reshaping the global economy and market (Najaf et al., 2022). Fintech advances in the financial system are very helpful in community work. Work on the advancement of fintech requires better collaboration and synergy between the government, the private sector, and other financial actors, in utilizing fintech as a solution for the world in achieving SDGs by 2030 (Vergara & Agudo, 2021). The role of comprehensive education for the community so that the level of financial literacy and inclusion continues to increase. Indonesian people, who almost all use smartphones, will find it easier to transact money than to go to the bank. The financial sector has undergone several changes in its operating

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model, such as introducing automated teller machines (ATMs) and online banking services (M-Banking). Today's financial services are affected by new issues, especially the increasing concern of customers about environmental sustainability in goods and services purchased and consumed (Vergara & Agudo, 2021). New things in managerial terms can be expressed in corporate social responsibility (CSR) and environmental, social, and governance (ESG). Implementation of CSR within the company will protect the environment and natural preservation.

Customers, investors, and public administrations are putting pressure on companies to obtain more transparent information about the environmental impact of company activities. The growing awareness of climate change and social welfare affects the nature of consumer actors (Vergara & Agudo, 2021). Customers are demanding eco-friendly products for a more sustainable lifestyle. This product will help the public in choosing products that are environmentally friendly. Financial technology innovations that are more green-oriented will provide additional sources of finance due to green investment (Vergara & Agudo, 2021). Technological developments in generating innovation, especially in financial services, are known as financial technology (fintech). Fintech is currently one of the two most funded and fastestgrowing sectors in recent years. The emergence of fintech is expected to provide a solution to the problem of capital and financial transactions for Micro, Small or Medium Enterprises (MSMEs) (Marini et al., 2020). The fintech industry in Indonesia has great potential to develop due to the high demand for development funding needed by the community. Company-centered fintech innovates in the field of financial services with modern technology (Rizal, 2021).

The low investment rate is one of Indonesia's fundamental economic weaknesses that need to be watched out for, which is vulnerable to global economic or financial turmoil. The level of community involvement investing in the Indonesian Capital Market is still very low at 2%, this figure is calculated based on the total SID (Single Investor Identification) ownership in the capital market of 3.88 million compared to the total population of the productive age category of the 2020 Indonesian population census (Rizal, 2021). The government noted that around 45-50% of shares in the Indonesian capital market in 2019 were still controlled by foreign countries. Current technological developments are very fast and become a necessity for society. Indonesia has great growth potential in the capital market with the help of financial technology or financial technology (fintech). Efforts made by stakeholders in the capital market industry are constantly educating the importance of investment and the capital market to increase public knowledge. Increased technology capacity can respond to the potential of the capital market going forward. The use of fintech has now reached 59% in 2021. This can be seen from the people's income data. Meanwhile, based on age, it is 73% in the age range of 25-35 years. This technological advancement will have an impact on investment that will increase. According to the Ministry of Investment or the Investment Coordinating Board, investment in the first quarter of 2022 reached 284.4 trillion, which is an increase of 28.5% from 2021 (www.bkpm.go.id). With this, the impact of the progress of fintech will have encouraged the company for corporate sustainability in CSR activities.

Problem statement

Fintech initially entered the Indonesia Stock Exchange (IDX) with good reception from investors. The Financial Services Authority (OJK) will encourage fintech to develop not only in

quantity but in quality. The rapid pace of digital technology will bring a shift in the business model and behavior of financial companies to provide easy services for customers in making transactions and investing. Fintech provides solutions for sustainable finance with microfinance and crowdfunding. Fintech indirectly promotes sustainable development and green finance, so fintech encourages banks to leave the traditional banking world and accept new business models. the existence of companies that use fintech can increase community involvement as investors in the capital market.

In Indonesia, evidence has found that the use of fintech in Indonesian banking is very helpful to the public in financial transactions. Against this background is this research to actually see whether fintech has an influence on stock returns and sustainability in Indonesian banking.

Objective of the Study

The purpose of this study is to see the effect of fintech on stock returns and company sustainability.

While the specific objectives are:

- 1. To analyze the influence of fintech companies there are sustainability initiatives
- 2. To analyze the effect of fintech companies on stock returns
- 3. To analyze the effect of firm age, leverage, and big 4 control variables on sustainability initiatives
- 4. To analyze the effect of firm age, leverage, and big 4 control variables on stock returns.

LITERATURE REVIEW

Conceptual overview

Sustainability

Sustainability is the idea that natural resources are limited because there are non-renewable resources. Sustainability has grown for businesses to become a public concern and the financial sector has to finance the necessary investments to transform the economy into a more sustainable one (Vergara & Agudo, 2021). An initiative in the financial sector that aims to introduce sustainability into the decision-making process.

Sustainability means how businesses meet current consumer needs to empower society and preserve the environment. The three main pillars of sustainability are carried out in business. The first pillar of an economy in business must provide economic benefits for the continuity of its business and how profits can be contributed to the development of society and the environment. The second pillar as the environment explains that in running a business it must reduce the negative impact on the environment. The third pillar is social support for employees, communities, consumers, and surrounding stakeholders, through employee protection programs, handling complaints to consumers, and protection for daily life. The principle of sustainability is expected to drive businesses for long-term impact. (Haya, 2021).

The mainstream of sustainability in corporate social responsibility (CSR) activities are asked to voluntarily include it in the company's operations. The impact of CSR activities on society. CSR seems to provide distinction between private interests and investors as the sole driver of economic activity. Self-interest is the goal motivation in classical economics.

Stock Return

Investment is a current commitment to money and other resources for a certain period to get future benefits (Rizal, 2021). Investment is a tool to deal with economic turmoil that can result in a decline in currency values and inflation that can occur at any time. Investment attempt must be made toward sustainable goals (Puschmann et al., 2020). The goal of investing is to get a return. The return expected by investors is the return with the risk that is obtained. There are two parts to stock returns, namely dividends and capital gain. Dividends are received by investors in cash, shares, and property. Capital gain is the difference between the purchase price and the selling price (Dinia & Firnanti, 2021).

According to Ghi (2015), Return is an interesting event because in general, they want to be able to maximize the return they get. According to Istiqomah & Adhariani (2017) stock returns are profits earned by shareholders on the results of their investment in certain companies. So Stock return is the return of profits or losses from shares through trading in the secondary market. One of the reasons an investor invests in the capital market is to get a return.

Financial Technology (fintech)

The use of fintech in a banking company is increasing rapidly. The fintech industry is said to see its consistency with the main pillars of sustainability. Whereas fintech on stock returns is associated with legitimate futures and decreased returns on investment companies. Research conducted by Najaf et al., (2022) used companies registered in the United States of 193 companies studied from 2010 to 2019. The results obtained by fintech companies are less for the sustainability of the company and have lower stock returns.

Fintech and sustainability according to Moro-Visconti et al., (2020) that industrial fintech provides solutions for sustainable finance with microfinance and crowdfunding. The results of his research prove that fintech has a positive effect on sustainability. Fintech indirectly promotes friendly financial development and sustainability, so fintech encourages banks to leave the traditional banking world and accept new business models. Although the research did not examine fintech directly on stock returns, stock returns were measured to see the consistency between fintech and the stock market.

According to Rizal (2021), the use of fintech is increasing rapidly with technological advancements and innovations being carried out by the financial industry. The results of his research show that fintech has a positive effect on stock returns. This is with the existence of using fintech able to increase community involvement as investors in the company's capital market.

Firm Age

The age of the company (firm age) describes the length of time the company was established and running its business. The age of the company shows that the company can compete and have

good performance. Companies that have been established for a long time can be said to be more professional in conveying information that is considered more experienced (Indriyani & Yuliandhari, 2020). The public will get a lot of information about financial reporting and annual reports, so they can reveal positive information about the company (Bhatia & Tuli, 2017). The ability to do that is to overcome difficulties and obstacles that threaten the life of the company. Another ability is taking opportunities in the corporate environment to develop a business (Pradana & Suzan, 2016).

Leverage

The theoretical leverage for borrowed money allows for increased returns. Leverage is also a substitute for the proportion of debt used by the company concerned to finance its assets, namely the debt ratio. The general idea is to use the word average rather than debt ratio to describe more debt which implies more risk. The potential loss or profit will be greater for a highly leveraged company than a low leveraged company, also called the leverage effect. Leverage is defined as the proportion of all company obligations which include long-term and short-term debt and pension obligations (Andersson, 2016).

Big 4

The Big 4 in auditing are branded firms that have strong incentives to protect the company's global reputation. It claims to achieve uniformly high quality worldwide by providing standardized training to employees and applying the same audit methodology globally. The Big 4 may provide lower-quality audits in countries with relatively weak institutional environments (Ke et al., 2015).

Theoretical Framework

Empirical Review

Several studies have been conducted in relation to sustainability, stock returns, and fintech by different researchers at various times covering a certain scope to infer a justified context. Among them are written below:

According to Najaf et al., (2022) this study aims to see how financial technology (FinTech) companies comply with sustainable standards in contrast to their counterparts. The method follows the validation of the new sustainability index, this research looks at the impact of sustainability on the stock performance of FinTech companies. The sample consisted of 1,712 company annual observations during the 2010–2019 investigative period. This methodology requires ordinary least squares regression and the generalized moment panel method (GMM).

According to Moro-Visconti et al., (2020) this study goes beyond the existing literature, analyzes the differences between fintech and traditional banks in market valuation, and demonstrates the potential for digital interaction and cross-pollination of complementary business models. Empirical evidence is based on stock market trends from a sample of Fintech, compared to industry benchmarks of banks or technology companies. The assessment methodology starts from a synthetic recap of the main evaluation approaches traditionally used for start-ups, banks, and technology companies that can be adapted to Fintech. Drane et al., (2019) this study to identify fintech companies after looking at companies involved in business activities in both the

IT and financial sectors. The method used follows the arguments in the introductory session and determines several SIC codes related to the financial and IT sectors simultaneously.

According to Fadilah et al., (2022) this study aims to analyze the effect of company size and company age on sustainability reports and their effect on earnings management. Based on the purposive sampling method, the samples selected in this study were 14 companies with a total sample of 70 data. This study uses multiple linear regression analysis using SPSS v25 software. According to Ali et al., (2020) this research investigates the impact of company characteristics on the financial performance of companies listed on the Egyptian stock market. The sample selected for this study consists of the most active companies listed on the EGX 100 Index of the Egyptian stock market covering the financial period 2012-2017. Data analysis included descriptive statistics, univariate analysis, and multivariate analysis.

METHODOLOGY

The sampling method used in this study was a purposive sample, where the selected sample has several criteria so that it can be used as a data source. The sample of this research includes companies in the banking sector that are listed on the Indonesia Stock Exchange for 5 years (2017-2021). The data collection method used is a secondary data collection method where the data obtained is taken from sources that have published the data. Sources of data from this study were obtained from the website of the Indonesia Stock Exchange (https://www.idx.co.id/) and the website of each company that was sampled. The method used in this study is panel regression analysis using E-views 10 software. The results of observational data that can be used come from 34 companies in the banking sector with an observation period of 2017-2021 so the number of observations is 170.

DATA ANALYSIS

Variable	Test Summary	statistic	Prob	Decision		
SUSTAIN	Cross-section	164.832090	0.0000	Rejected H0, Fixed Effect		
	Chi-square			selected		
	Cross-section	7.154483	0.1279	Accepted H0, Random		
	Random			Effect is selected		
Stock Return	Cross-section	38.903574	0.2211	Accepted H0, Common		
	Chi-square			Effect is selected		
	Cross-section					
	Random					

Table 1: Chow Test and Hausman Test Results

Source: Data processed using E-views

Chow test and Hausman test

Based on table 1 the results of Chow test and Hausman test, the results show that the Chi-square cross-section probability value for the Sustain variable is 0.0000 < 0.05, so the decision obtained

is that H0 is rejected so the model used is the Fixed effect. If the selected model is a fixed effect model, further testing is required using the Hausman test to test whether to use a fixed effect or random effect model. The overall results of the model show that the random cross-section probability value is 0.1279 > 0.05, so the decision that can be obtained is that H0 is accepted and that the model used is the random effect model.

The stock return variable in Table 1 is the result of the Chow test and the Hausman test. The results show that the Chi-square cross-section probability value for the stock return variable is 0.2211 > 0.05, so the decision obtained is that H0 is accepted, so the model used is the common effect.

The Goodness of the Fit Test (R²) and Simultaneous Test (F-test)

Based on the results of the goodness of fit test, the adjusted r-square value for the SUSTAIN variable was 0.534668. This means that the independent variables namely fintech, firm age, leverage, and big 4 can explain the variation of sustainability by 53.47% and the remaining 46.53% explaining that sustainability can be influenced by other factors that are not contained in this model. The results for the goodness of fit test for the stock return variable obtained an adjusted r-square value of 0.041779. This means that the independent variables namely fintech, firm age, leverage, and big 4 can explain the variation of the stock return of 4.18% and the remaining 95.85% explains that the stock return can be influenced by other factors that are not present in this model.

Based on the simultaneous test results for the SUSTAIN variable, it can be seen that the probability of the F-statistic yields a value of 0.000000 < 0.05. So the results of the analysis in this study indicate that there is at least one independent variable, namely fintech, firm age, leverage, and big 4 that influences sustainability so that the regression model is feasible to use in this study. Simultaneous test results for the stock return variable, it can be seen that the probability of the F-statistic produces a value of 0.025897 < 0.05. So the results of the analysis in this study indicate that there is at least 1 independent variable, namely fintech, firm age, leverage, and big 4 which influence stock returns so the regression model is feasible to use in this study.

	SUSTAIN	RETURN	FIN	FAGE	LEV	BIG_4
Mean	9.394874	0.294928	2.563548	13.75783	0.809475	0.452941
Median	9.422929	0.000000	2.352183	13.87923	0.839229	0.000000
Maximum	11.46468	8.000000	4.392416	15.23694	1.172123	1.000000
Minimum	7.164433	-0.913725	0.014100	12.31526	0.214357	0.000000
Std. Dev.	1.123823	1.258767	1.011337	0.742213	0.125656	0.510966

 Table 2: Descriptive statistics

Source: Data processed using E-views

Statistical Descriptive Analysis

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Sustainability (SUSTAIN) has an average value of 9.394874, a median of 9.422929, and a standard deviation of 1.123823. The maximum value of Sustain is 11.46468 which is owned by PT Bank Rakyat Indonesia Tbk and the minimum value is 7.164433 which is owned by PT. Bank OK Indonesia. Stock returns have an average value of 0.294928, a median of 0.000000, and a standard deviation of 1.258767. The maximum value of the stock return is 8.0000 which is owned by PT Bank JTrust Indonesia Tbk and the minimum value is -0.913725 which is owned by PT. Bank Mayapada Tbk.

Fintech (FIN) has an average value of 2.563548, a median of 2.352183, and a standard deviation of 1.011337. The maximum value of fintech is 4.392416 which is owned by PT. Bank Raya Indonesia Tbk and a minimum value of 0.014100 owned by PT Bank Maybank Indonesia Tbk. Firm age has an average value of 13.75783, a median of 13.87923, and a standard deviation of 0.742213. The maximum value of the firm age is 15.23694 which is owned by PT. Bank Mandiri Tbk and a minimum value of 12.31526 which is owned by PT Bank Oke Indonesia Tbk.

Leverage (LEV) has an average value of 0.809475, a median of 0.839229, and a standard deviation of 0.125656. The maximum value of leverage is 1.172123 PT. Bank Permata Tbk and a minimum value of 0.214357 which is owned by PT. Indonesian Sharia Bank Tbk. Big 4 (LEV) has an average value of 0.452941, a median of 0.000000, and a standard deviation of 0.510966.501986. The maximum value of leverage is 1.000000 and the minimum value is 0.000000 which is owned by Indonesian banks.

Independent	Dependent Variable							
Variable	SUSTAIN			RETURN				
	Coefficie	Probabilit	Conclusio	Coefficien	Probability	Conclusion		
	nt	У	n	t				
Constant	-6.059825			4.916023				
Fin	0.178091	0.0411	Positive	-0.082551	0.6327	No		
			effect			influence		
FAGE	1.119727	0.0000	Positive	-0.298058	0.2025	No		
			effect			influence		
Lev	-0.431089	0.3134	No	-0.654395	0.3974	No		
			influence			influence		
Big 4	-0.127825	0.2405	No	0.487654	0.0206	Positive		
			influence			effect		

 Table 3: Individual Test Results (T-test)

Source: Data processed using E-views

Model 1 Sustain = -6.059825 + 0.178091Fin + 1.119727FA - 0.431089Lev - 0.127825Big4

Model 2 Return= 4.916023 - 0.082551Fin - 0.298058FA - 0.654395Lev + 0.487654Big4

Description:

Sustain = Sustainability Return = Stock Return Fin = Fintech FAGE = Firm Age Lev = Leverage Big 4

Hypothesis test

Ho₁: There is an fintech influence on sustainability.

Fintech has a probability value of 0.0411 < 0.05 which shows a significant effect. The magnitude of the coefficient is 0.178091. The results of this study conclude that there is a positive and significant influence between fintech on sustainability.

Ho₂: There is an fintech influence on stock returns.

Fintech has a probability value of 0.6327 > 0.05 which indicates no effect. The results of this study conclude that there is no significant influence between fintech and stock returns.

Ho₃: There is influence of firm age, leverage, and big 4 control variables on sustainability.

Firm age has a probability value of 0.0000 < 0.05 which indicates a significant effect. The magnitude of the coefficient is 1.119727. The results of this study conclude that there is a positive and significant influence of firm age on sustainability. Leverage has a probability value of 0.3134 > 0.05 which indicates no effect. The results of this study conclude that there is no influence between leverage and sustainability. Big 4 has a probability value of 0.2405 > 0.05 which indicates no effect. The results of this study conclude that there is no influence between leverage and sustainability. Big 4 has a probability value of 0.2405 > 0.05 which indicates no effect. The results of this study conclude that there is no influence between the big 4 on sustainability.

Ho₄: There is influence of firm age, leverage, and big 4 stock return control variables

Firm age has a probability value of 0.6327 > 0.05 which indicates no effect. The results of this study concluded that there is no effect of firm age on stock returns. Leverage has a probability value of 0.3974 > 0.05 which indicates no effect. The results of this study concluded that the absence of Big 4 influence has a probability value of 0.0206 < 0.05 which indicates a significant effect. The magnitude of the coefficient is 0.487654.

Discussion of Findings

The results of the analysis carried out, there is a positive relationship between fintech and sustainability. This research is in line with the research of Moro-Visconti et al., (2020) which obtained a positive effect of fintech on sustainability. It can be said that the use of fintech in companies provides sustainable financial solutions. However, there is no effect of fintech on stock returns. This research is in line with Asmarani & Wijaya (2020), this is due to the not high number of loan applications and the fintech lending period which is not as high as the minimum rate set by the bank.

The results found for the control variable, there is a positive relationship between firm age and sustainability. These results are in line with the research of Fadilah et al., (2022) which obtained a positive effect of firm age on sustainability. Firm age can show the company can compete and

have good performance. The longer the company exists, the company will be able to exist in the environment and gain legitimacy from the public Fadilah et al., (2022). But for leverage and the big 4, there is no effect on sustainability. These results are in line with the research of Najaf et al., (2022) which obtained the results that there is no influence of leverage & big 4 on sustainability.

The results found for the control variables, there is a positive big 4 relationship to stock returns. These results are in line with Najaf et al., (2022) who obtained a positive big 4 effect on stock returns. However, there is no effect of firm age and leverage on stock returns. These results are in line with the research of Najaf et al., (2022) which obtained results that there was no effect of firm age and leverage on stock returns. This is due to the company's poor performance. Higher or lower leverage does not affect stock return conditions.

Conclusion

Researchers found fintech had a positive effect on sustainability but had no effect on stock returns. The firm age control variable has a positive effect, but leverage and the big 4 have no effect on sustainability. In addition, the big 4 control variable, has a positive effect, but firm age and leverage have no effect on stock returns.

Implications

Based on the results of the research that has been done, there are benefits to be gained as implications for financial managers and investors that can be taken into consideration in making decisions. Some of the implications obtained are as follows:

Financial managers should improve fintech so that the company's sustainability can continue to be improved by increasing the number of ATMs so that it is easier for customers to make transactions. In addition, companies should choose auditors who are included in the big 4 categories so that share prices can increase. Investors should have companies that use sophisticated fintech, companies that have been established for a long time and have been audited in the Big 4 category

Recommendation

Future research is expected to add variables in order to show other factors that can affect the sustainability and stock returns of the company. Variables that can be added include protection on sustainability (Vergara & Agudo, 2021), Financial Inclusion (Marini et al., 2020), and ROA (Najaf et al., 2022).

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