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The effect of degree of operating leverage, degree of financial leverage and systemic risk on stock prices on the textile industry stock in indonesia stock exchange

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Abstract
This study aims to determine the effect of degree of operating leverage (DOL) on the share price of the textile industry group on the Indonesian stock exchange, the effect of the degree of financial leverage (DFL) on the share price of the textile industry group on the Indonesian stock exchange, the effect of systematic risk on the share price of the textile industry group on the Indonesian stock exchange partially, and knowing the effect of degree of operating leverage (DOL), degree of financial leverage (DFL) and systematic risk on the stock price of the share price of the textile industry group on the Indonesian stock exchange simultaneously. The study was conducted on the shares of the textile and garment industry companies as many as 18 companies and met the regression requirements. To determine whether the independent variable affects the dependent partially, the t-test and analysis are carried out simultaneously with the f-test. Based on the test data, the results obtained that the dol variable does not partially affect the stock price. The DFL variable does not affect stock prices partially. Systematic risk variables partially affect stock prices. The variables DOL, DFL, and systematic risk, affect stock prices simultaneously.

Keywords: degree of operating leverage (DOL), degree financial leverage (DFL), systematic risk

Introduction
The forces of supply and demand usually influence stock prices on the exchange, but the problem is that investors often face obstacles to determine whether the current price is low or still high. Several factors affect stock prices that investors must pay attention to. According to Rusdin (2005:68), shares are certificates that show proof of ownership of a company, and shareholders have claim rights to the company's income and assets. Stocks are one of the most popular financial market instruments. Issuing shares is one of the company's choices when deciding to fund a company. On the other hand, stocks are an investment instrument that many investors choose because they can provide an attractive profit level.

Stocks traded on the stock exchange are influenced by fundamental factors, both macro and micro factors. Macro factors are factors that affect the economy as a whole. High-interest rates, inflation, national productivity levels, politics, and so on can significantly impact its profit potential and ultimately affect its share price. Micro factors are factors that have a direct impact on the company itself. Changes in management, prices and availability of raw materials, worker productivity, and so on will affect individual companies' profit performance.

Micro fundamental factors that affect stock prices are Degree of Operating Leverage (DOL), Degree Financial Leverage (DFL), and systematic risk. Bernstein (1998: 477) states that operating leverage shows changes in sales at a certain fixed cost level compared to changes in profitability. Operating leverage utilizes fixed costs to obtain higher profitability.

The concept of operating leverage analyzes how sales revenue can cover fixed and variable costs. According to Horne (1992: 479), Operating leverage is a quantitative measure that measures the sensitivity of the company's profits to changes in company sales. Another factor that influences stock prices is the value of the Degree of Financial Leverage. Bernstein (1998: 477) states that Financial Leverage is the amount of debt expenditure used to pay a fixed return in the company's capital structure. Companies with financial leverage are said to conduct transactions in equity. Financial leverage is the use of funds accompanied by a fixed burden. Financial leverage is determined by the relationship between EBIT and earnings per share that benefits shareholders.

Systematic risk also affects stock prices. One of the factors considered in investing in stocks on the stock exchange is the amount of systematic risk. Systematic Risk or Beta is a relative measure of the systematic risk of individual stocks with the market as a whole as measured by fluctuations in income or return. In addition, each stock has a different sensitivity to market changes because a stock with a beta coefficient equal to one means that it has the same risk as to the average market risk.

While a beta coefficient of more than one indicates that the stock is susceptible to market changes or above-market risk, it is referred to as an aggressive stock. Stocks with less than one beta are called defensive stocks, meaning they are less sensitive to market changes (Jones, 1996).

The concept of risk was initially developed by Sharpe (1964), Lintner (1965), and Mossin (1966), following the suggestion of Markowitz's mean-variance optimization. This theory has provided a simple theory for more than 20 years. In its simplest form, this theory predicts that the expected return on risk-free assets is proportional to the risk that cannot be eliminated by diversification (non-diversifiable risk) as measured by the covariance of the asset return with a portfolio composed of all assets available in the market.

Companies in the textile and garment industry group have good prospects because these companies need products in people's daily lives, such as clothes and clothing or textile materials. Many factors influence systematic risk, including Degree Operating Leverage (DOL), Degree Financial Leverage (DFL), and stock prices. The research was conducted by Huda (2005). One of the variables taken is the return on assets variable against the beta of the company's shares listed on the Jakarta Islamic Index (JII) in 2002-2003.

Literature Review

Degree Operating Leverage

Companies that use debt are companies that have financial leverage. The more significant the proportion of debt used, the greater the financial leverage. The more significant the proportion of debt the company uses, the owner of his capital will bear the greater risk. Therefore, the higher the financial leverage, the higher the beta equity.

Leverage is defined as the use of assets or funds, and as a result of using these funds, the company must incur fixed costs or pay fixed expenses. Horne (1992: 474) states that leverage indicates the use of fixed costs) to increase profits. When viewed from the income statement, there are two kinds of leverage: the part of the statement relating to financial leverage and the part of the statement relating to financial leverage.

What causes a company to have more significant cash flow uncertainty than other companies? If we hold the funding factor constant, meaning that the company uses the same funding structure or uses its capital entirely, a company with a high operating risk means that operating profit is very sensitive to changes in sales. In other words, small changes in sales will affect operating profit quite large.

The cause of this is the operating leverage factor. Operating leverage shows the use of assets that incur fixed costs. Fixed costs are costs that do not change even though the company's activities change. The opposite of fixed costs is variable costs. These costs also change when the company's activities change. To facilitate analysis, changes in variable costs are often considered proportional. Examples of fixed costs are salaries of leaders, depreciation expenses, and others. At the same time, examples of variable costs are the cost of raw materials, auxiliary materials, sales commissions, and others. The thinking used is that the costs borne by the company can be divided into fixed costs and variable costs.

Bernstein (1998: 477) states that operating leverage shows changes in sales at a certain fixed cost level compared to changes in profitability. Operating leverage utilizes fixed costs to obtain higher profitability. The concept of operating leverage analyzes how sales revenue can cover fixed and variable costs. According to Horne (1992: 479), Operating leverage is a quantitative measure that measures the sensitivity of the company's profits to changes in company sales. What does 5% DOL mean on sales of 5,000 units? This means that every 1% change in sales of 5,000 units causes a 5% change in EBIT. For example, every 3% reduction in sales results in a 15% reduction in EBIT. In comparison, every 4% increase in sales leads to a 20% increase in EBIT (Horne, 1992: 480).

Degree Financial Leverage

Bernstein (1998: 477) states that financial leverage is the amount of debt expenditure used to pay a fixed return in the company's capital structure. Companies with financial leverage are said to conduct transactions in equity. Financial leverage is the use of funds accompanied by a fixed burden. Financial leverage is determined by the relationship between EBIT and earnings per share that benefits shareholders. Horne (1992) states that Degree of Financial Leverage (DFL) is a quantitative measure that measures the sensitivity of earnings per share to changes in the company's gross profit (EBIT).

In this study, the accounting information variables that will be used are Dividend Pay Out Ratio (DPR), Degree of Operations Leverage (DOL), and Degree of Financial Leverage (DFL). On investment to get the level of profit is uncertain. Risk is the uncertainty of getting the expected benefits in the future. In this case, there is a range of returns. The higher the range, the higher the uncertainty (Reilly, 2000).

Systematic Risk

Systematic risk can affect all companies or outstanding shares, while unsystematic risk is a risk that affects one or a small group of companies (Harianto and Sudomo, 2005).

Risk is the difference between the expected investment and the actual return. In this case, the risk is divided into risks that can be reduced by diversification activities, namely efforts to invest in one investment source and non-diversifiable risks that are not reduced by diversification (Damodaran, 2002). In this case, to measure risk, the capital assets pricing model and the arbitrage pricing model are used.

In the CAPM equation model, the risk is obtained from the covariance of asset i with market portfolio divided by market portfolio variance or Cov (Ri, Rm)/var (Rm). In this case, the CAPM model can be written as E(Ri)=Rf+Bi(E(Rm)-Rf) in this case, E(Ri) is the expected return on asset i, Rf is the risk-free rate, E(Rm) is the expected return market portfolio and bi is the beta of asset i (Damodaran, 2002).

Risk is the possibility of loss (lost). Risk can also be defined as the difference between the expected return and the profit earned by the investor. In this case, because the risk is seen as the difference between the expected profit and the resulting profit, the risk is defined as the standard deviation derived from the squaring of the data variance.

These risks can be classified into business risk, namely the uncertainty of the income stream in business activities, and financial risk, the uncertainty of investment financing, and liquidity risk, the uncertainty of fulfilling obligations from investments (Reilly, 2000).

The concept of risk was initially developed by Sharpe (1964), Lintner (1965), and Mossin (1966), following the suggestion of Markowitz's mean-variance optimization. This theory has provided a simple theory for more than 20 years. In its simplest form, this theory predicts that the expected return on

risk-free assets is proportional to the risk that cannot be eliminated by diversification (non-diversiviable risk) as measured by the covariance of the asset return with a portfolio composed of all assets available in the market.

Risk in Risk Management

Risk hazard factors - factors that affect the consequences of an event. Hazard creates conditions conducive to disasters that cause losses. And losses are unexpected deviations. Although there is some overlap between these categories, the sources of loss and risk can be classified as social, physical, and economic risks. Determining the source of risk is important because it affects how it is handled.

Financial risk is the risk suffered by investors as a result of the inability of the issuer of shares and bonds to fulfill the obligation to pay dividends or interest or interest and loan principal. Strategic risk is the risk of a series of unforeseen conditions that can significantly reduce the ability of managers to implement their strategies.

Understanding risk management allows management to be effectively involved in Systematic or Beta, which measures the volatility of a security's return or portfolio return to market returns. Where the beta of the i-th security measures the return volatility of the i-th security with market returns and portfolio beta measures the volatility of the return of the portfolio with market returns. Therefore, beta measures the systematic risk of a security or portfolio relative to the market (Jogiyanto, 1998).

Systematic Risk or Beta is a relative measure of the systematic risk of individual stocks concerning the market as a whole as measured by fluctuations in income or return. In addition, each stock has a different sensitivity to market changes. A stock with a beta coefficient equal to one means it has the same risk as to the market average risk. While a beta coefficient of more than one indicates that the stock is susceptible to market changes or above-market risk, it is referred to as an aggressive stock. Stocks with less than one beta are called defensive stocks, meaning they are less sensitive to market changes (Jones, 1996).

Research methods

This research was conducted on shares of textile and garment industry group companies on the Indonesia Stock Exchange. The companies include 18 companies in the industry group. These companies can be seen in the following table.

Table 1: Garment and textile industry group companies

NO	CODE	COMPANY
1	ADMG	PT. Polychem Indonesia Tbk
2	ARGO	Argo Pantes Tbk
3	CNTB	Century Textile Industry Tbk (B)
4	CNTX	Century Textile Industry Tbk (PS)
5	ERTX	Eratex Djaya Tbk
6	ESTI	Ever Shine Textile Industry
7	HDTX	Panasia Indo Resources
8	INDR	Indo Rama Synthetics
9	MYTX	Apac Citra Centertex
10	PBRX	Pan Brother Tbk
11	POLY	Asia Pasific Fibers
12	RICY	Ricky Putra Globalindo
13	SRIL	Sri Rejeki Isman Tbk
14	SSTM	Sunson Textile Manufacturer Tbk
15	STAR	Star Petrochem Tbk
16	TFCO	Tifico Fiber Indonesia Tbk
17	TRIS	Trisula International Tbk
18	UNIT	Nusantara Inti Corpora

Population and Sample

The population is a generalization area consisting of objects/subjects with certain quantities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiyono, 2005). The sample is a part of the population to represent the entire population (Surakhmad, 1990). In this case, the company is a textile and garment industry group with 18 companies. This sampling technique is a purposive sample.

Data Analysis Technique

To analyze the problems raised and test the three hypotheses, in general, they will be analyzed through narrative and analytical-qualitative approaches. However, to analyze and test the relationship and influence between the independent or exogenous variables on the endogenous or dependent variable.

Research Result

1. The effect of the degree of operating leverage (DOL) on the share price of the textile industry group on the Indonesia Stock Exchange partially

Table 2: The results of the analysis of the first regression equation

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1083,835	834,516		1,299	,212
	DOL	,398	27,520	,004	,014	,989
a. Dependent Variable: STOCK_PRICE						

Based on the table of analysis results above, it is known that the DOL coefficient is 0.398. The t value is 0.014. The significance value is 0.989. This significance value is more significant than 0.05. This means that the DOL variable does not partially affect the stock price. The magnitude of the effect of DOL on stock prices can be seen in the following table.

Table 3: Value of r squared first equation

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,004[a]	,000	-,062	3477,19111
a. Predictors: (Constant), DOL				

Based on the table above, it can be seen that the value of r squared is 0.004. This means that the effect of the DOL variable on stock prices is 0.4%, and the rest is influenced by other variables not included in the equation model.

2. Partial effect of Degree of Financial Leverage (DFL) on share prices of textile industry groups on the Indonesia Stock Exchange

The results of the analysis of the influence of the Effect of Degree of Financial Leverage (DFL) on the share price of the textile industry group on the Indonesia Stock Exchange can be seen in the following table.

Table 4: Results of the second regression equation analysis

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	1130,399	883,754		1,279	,219
	DFL	-39,665	297,103	-,033	-,134	,895
a. Dependent Variable: STOCK_PRICE						

Based on the table of analysis results above, it is known that the DFL coefficient is -39.665. The t value is -0.134. The significance value is 0.895. This significance value is greater than 0.05. This means that the DFL variable does not partially affect the stock price. The magnitude of the effect of DFL on stock prices can be seen in the following table.

Table 5: Value of r squared second equation

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,033[a]	,001	-,061	3475,27874
a. Predictors: (Constant), DFL				

Based on the table above, it can be seen that the value of r squared is 0.033. This means that the effect of the DFL variable on stock prices is 3.3% and the rest is influenced by other variables not included in the equation model.

3. The effect of systematic risk on the share price of the textile industry group on the Indonesia Stock Exchange partially.

The results of the analysis of the influence of systematic risk on the share price of the textile industry group on the Indonesia Stock Exchange can partially be seen in the following table.

Table 6: Results of the third regression equation analysis

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	255,376	680,197		,375	,712
	RISK	-77,782	23,550	-,637	-3,303	,004
a. Dependent Variable: STOCK_PRICE						

Based on the table of analysis results above, it is known that the systematic risk coefficient is 255.376. The t value is -3.303. The significance value is 0.004. This significance value is smaller than 0.05. This means that the systematic risk variable affects the stock price partially. The magnitude of the effect of systematic risk on stock prices can be seen in the following table.

Table 7: Value of r squared third equation

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,637[a]	,405	,368	2681,28800
a. Predictors: (Constant), RISK				

Based on the table above, it can be seen that the value of r squared is 0.637. This means that the effect of the systematic risk variable on stock prices is 63.7% and the rest is influenced by other variables not included in the equation model.

4. The effect of DOL, DFL and systematic risk on the share price of textile industry groups on the Indonesia Stock Exchange simultaneously.

The results of the analysis of the influence of DOL, DFL and systematic risk on the share price of the textile industry group on the Indonesia Stock Exchange simultaneously the textile industry group on the Indonesia Stock Exchange partially can be seen in the following table.

Table 8: Results of the fourth regression equation analysis

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	285,244	789,122		,361	,723
	DOL	-4,357	22,713	-,040	-,192	,851
	DFL	-7,264	245,024	-,006	-,030	,977
	RISK	-78,075	25,223	-,639	-3,095	,008
a. Dependent Variable: STOCK_PRICE						

Table 9: Calculate F Value

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78734205,073	3	26244735,024	3,203	,056[b]
	Residual	114722058,705	14	8194432,765		
	Total	193456263,778	17			
a. Dependent Variable: STOCK_PRICE						
b. Predictors: (Constant), RISK, DFL, DOL						

Based on the table of analysis results above, it is known that the F value is 3.203. The significance value is 0.056. This significance value is smaller than 0.05. This means that the DOL, DFL and systematic risk variables affect stock prices simultaneously. The magnitude of the effect of DOL, DFL and systematic risk on stock prices can be seen in the following table.

Table 10: Value of r quadratic fourth equation

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,638[a]	,407	,280	2862,59197
a. Predictors: (Constant), RISK, DFL, DOL				

Based on the table above, it can be seen that the value of r squared is 0.638. This means that the effect of DOL, DFL and systematic risk variables on stock prices is 63.8% and the rest is influenced by other variables not included in the equation model.

Discussion

The degree of Operating Leverage does not significantly affect the share price of textile industry group companies. Another variable, namely Degree of Financial Leverage, also does not significantly affect the share price of textile industry group companies. However, the systematic risk of shares significantly affects the share price of textile industry group companies.

The study results of DOL, DFL, and systematic risk on stock prices simultaneously showed a significant effect. All variables have a negative effect, meaning that the higher the DOL, DFL, and systematic risk, the lower the stock price.

Conclusion

DOL variable does not affect stock prices partially. DOL coefficient of 0.398. The t value is 0.014. The significance value is 0.989. This significance value is greater than 0.05. The DFL variable does not affect stock prices partially. The DFL coefficient is -39.665. The t value is -0.134. The significance value is 0.895. Systematic risk variables partially affect stock prices—systematic risk coefficient of 255.376. The t value is -3.303. The significance value is 0.004. This significance value is smaller than 0.05. Variables DOL, DFL and systematic risk, affect stock prices simultaneously. The F value is 3,203. The significance value is 0.056. This significance value is smaller than 0.05**.**

Suggestion

Investors need to pay attention to the variables DOL, DFL and stock beta in investing in shares of textile and garment companies circulating on the Indonesia Stock Exchange. These variables affect the stock risk of textile and garment industry group companies simultaneously. The variable that needs to be emphasized is the systematic risk variable. These variables have a significant effect on stock prices. Other research also needs to be carried out by incorporating economic and financial variables that affect systematic risk. These variables include inflation, consumer price index, and economic growth.

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