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Determinants of the Discount for Lack of Marketability in Business Valuation: Evidence from Indonesia

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Abstract: The study intends to identify the determinants of the discount for lack of marketability or DLOM in the Indonesia Stock Exchange. Significant variables are then used to compare high, medium, and low categories of DLOM. The results of this comparison can be used as a basis for calculating this discount in a business valuation in Indonesia. The samples in this study are companies that announced seasoned equity offerings on the market between 2013-2022 through the IDX website, the Reuters database, and the issuer's prospectus. The multiple discriminant analysis shows five significant variables: the percentage of cash to the value of market capitalization, volatility, buyers type, the ratio of EBITDA to the book value of assets, and the ratio of debt to the equity. The result is obtained from the analysis using the restricted stock study. This study uses the theory of asymmetric information and strong-form efficient markets in forming stock prices, to explain the emergence of DLOM.

Keywords: Discount for Lack of Marketability, DLOM, Restricted Stock Study

INTRODUCTION

The demand for business valuation services in Indonesia is increasing, in line with the growing of business activities that necessitate fair market value information for a variety of transactions. This trend underscores the need for a comprehensive understanding of global market dynamics, evolving regulations, and technological advancements (Judijanto, 2024, p. 22). Concurrently, there is a growing necessity for enhanced comprehension of valuations, inclusive of empirical studies. A key area warranting evaluation is the implementation of discount for lack of marketabilitys or Discounts for Lack of Marketability (DLOM), which directly diminish the equity value indicated in a business valuation. In this paper, the terms "discount for lack of marketability" and "DLOM" are used interchangeably. The definition of this discount, as stipulated by the United States federal agency responsible for tax and income regulation—the Internal Revenue Service (IRS)—is an amount or percentage subtracted from the value of an ownership interest to reflect its relative lack of marketability.

Koller, Goedhart, and Wessels (2010) argue that advanced valuation techniques can bolster confidence among investors and other stakeholders. The Indonesian Society of Appraisers (MAPPI), a professional organization, has been a pioneer in advancing this field in Indonesia. The application of market liquidity discounts, regulated by the Financial Services Authority of the Republic of Indonesia, is central to this advancement. According to these

regulations, DLOM, referred to as market liquidity discounts, is typically defined as a general percentage deducted from the value of various types of ownership to account for the relative lack of marketability. For private companies with majority shareholders, the discount percentage must range from 20% to 40%, while for minority shareholders, it ranges from 30% to 50%. In the valuation of public companies, the market liquidity discount for majority shareholders must be below 20%, whereas for minority shareholders, it ranges from 10% to 30%. This paper seeks to understand the rationale behind these applications by conducting an empirical study on market liquidity discounts. It emphasizes that appraisers should apply discounts based on the unique conditions and characteristics of the asset being assessed, acknowledging that the value may fall outside the established ranges.

Preemptive Rights (HMETD) are rights attached to shares that grant their holders the opportunity to purchase shares before they are offered to other parties. This provision ensures that existing shareholders have priority rights to participate in the issuance of new shares by the issuer. If shareholders choose not to exercise their rights, these rights can be transferred to other parties. The PMTHMETD must first secure approval from the general meeting of shareholders, and its implementation is regulated in the articles of association. A study of restricted stocks on the IDX can be conducted because the PMTHMETD offering price and the post-offering stock price are obtainable. In the United States, the waiting period for resale based on SEC Regulation 144 varies depending on the type of issuer. Typically, the waiting period is one year. For public companies, this period is reduced to six months, whereas for private companies, it can extend up to two years. In Indonesia, the waiting period is one year, after which the selling restriction is lifted, allowing restricted shares to be traded directly. According to research by Hertzel and Smith (1993), restricted shares that are not listed on the stock exchange can be traded at a significant discount. They also asserted that the stock price reaction to the announcement of such transactions needs to be studied on the official stock exchange. Wruck (1989) suggested that the discount on restricted shares serves as compensation for the expert advice or monitoring services provided by private investors.

Information asymmetry in the market is a major issue contributing to various financial crises. Downing, Jaffee, and Wallace (2009) demonstrated the exploitation of official institutions in the United States through the use of asymmetric information. This assertion is further supported by Kau et al. (2012), who argued that the extensive securitization of loan products and their derivatives in the secondary market results in buyers or borrowers having restricted information about the characteristics of the loan. This creates problems of asymmetric information, as the borrower or debtor possesses hidden information, while the lender or creditor has superior access to and quality of information. They concluded that asymmetric information is the root cause of the loan product market crisis. In Indonesia, Azis (2022) highlighted the issue of hidden information in market collapses, emphasizing that this risk arises from information asymmetry. He articulated this conclusion when identifying the root causes of the three crises that significantly impacted Indonesia.

This study addresses this gap by examining the determinants of DLOM in valuations on the Indonesia Stock Exchange (IDX) and analyzing variations across low, medium, and high discount categories. The findings aim to enrich valuation literature in emerging markets while providing practical insights for regulators, investors, and professional appraisers in applying DLOM more accurately within the Indonesian context. To the best of our knowledge, this is one of the first empirical studies on DLOM in Indonesia, offering both academic and practical contributions. The key research question guiding this study is: What are the determinants of Discounts for Lack of Marketability in Indonesian companies listed on the IDX?.

METHOD

Independent variables were selected from previous studies based on their popularity in the literature and potential relevance to the study. The data analysis technique employed in this

study is multiple discriminant analysis. The variables for this analysis are then used as discriminant functions in the restricted stock study method as follows:

$$Z\,it = a + w\,1\,VOLUME\,it + w\,2\,CAP\,it + w\,3\,BMR\,it + w\,4\,SPR\,it + w\,5\,EPR\,it + w\,6\,CMCR\,it + w\,7\,VOLT\,it + w\,8\,INTENT\,it + w\,9\,BUYER\,it + w\,10\,STRESS\,it + w\,11\,ERA\,it + w\,12\,DER\,it + \varepsilon.$$

Where:

Z it	= Discriminant score Z of company i in year t
a	= Intercept
w	= Discriminant weight for each independent variable
VOLUME	= Share transaction volume
CAP	= Market capitalization value
BMR	= Ratio of book value to market capitalization value or book to market ratio
SPR	= Sales to market capitalization ratio or sale to price ratio
EPR	= Net profit ratio to market capitalization value or earning to price ratio
CMCR	= Cash to market capitalization ratio
VOLAT	= Volatility
INTENT	= Sales intention
BUYER	= Buyer type
STRESS	= Financial difficulties
ERA	= The ratio of EBITDA to book value of assets
DER	= Debt to equity ratio
ε	= Error term

Hertzel and Smith (1993) developed a model to examine stock price reactions under asymmetric information and identify determinants of DLOM. According to the information hypothesis, when a firm's value is harder to assess, investors in PMTHMETD transactions incur higher costs to evaluate the firm, leading to larger required discounts. The DLOM is calculated as the relative difference between the stock price on day *x* after the announcement and the transaction price:

$$\text{DLOM} = = \frac{(\text{Price on day+x} - \text{Price at the time of the transaction})}{\text{Price on day+x}}$$

Price on day+x is the stock price on day x after the PMTHMETD transaction, where the price is the highest during the observation period, and the price at the time of the transaction is the share price on the day the PMTHMETD transaction is executed. The observation period spans 60 days before to 60 days after the PMTHMETD transaction. Day *x* is chosen based on the point when price changes most materially reflect market reactions, capturing the effect of asymmetric information and market efficiency. This approach allows for empirical evaluation of DLOM using market-based price responses, consistent with Hertzel and Smith (1993) and Chuang (2019).

RESULTS AND DISCUSSION

Results

Asymmetric information is a condition where one party possesses superior information compared to another party. Akerlof (1970) identifies the theory of asymmetric information as problematic due to the imbalance of information between buyers and sellers, which can lead to market failure. He uses the term "lemon" to describe a used car with numerous issues that negatively affect its value. Sellers have more information about the quality of the goods they are selling, while buyers cannot ascertain the quality until after purchase. Consequently, buyers tend to be cautious and reluctant to pay high prices, as they perceive a high risk of receiving low-quality items. The primary effect of this problem is the withdrawal of high-quality goods

from the market, as sellers are unable to obtain prices that reflect the quality of their goods. Instead, the market becomes saturated with low-priced "lemons" since only these types of cars can be sold at prices acceptable to buyers. The difference of -1/4 results in no transactions, as buyers feel that 25% of their utility is unfulfilled. At equilibrium, asymmetric information in the used car market causes buyers to have different information from sellers, giving sellers a positional advantage to sell poor-quality goods without reducing prices. Conversely, buyers often lack the information to distinguish high-quality assets. Under such conditions, buyers generally value assets at the average price, preventing sellers from obtaining better market prices for high-quality products. Akerlof posited that no transactions would occur under these circumstances.

Fama (1960) developed the efficient market hypothesis by conducting a series of studies on stock price patterns. According to him, efficient markets can be categorized into three forms: weak, semi-strong, and strong efficient markets. Weak efficient markets occur when security prices reflect all past price information, rendering investors' efforts to earn excess returns using historical price data futile. Semi-strong efficient markets occur when security prices incorporate both historical price information and publicly available information, such as widely published financial reports. Strong efficient markets occur when security prices encompass all available information, including past security prices, public information, and insider information. Efficient markets are assumed to be in equilibrium, with security prices fully reflecting all publicly available information about the company and securities at all times. Consequently, stock prices react swiftly to new information.

Fama's theory can be applied to explain the pricing mechanisms in business valuations. The valuation of an entity assumes price efficiency in a perfect market, where prices reflect all available public information. This aligns with the definition of market value, which is the objective of business valuation. According to the 2018 Indonesian Valuation Standards, market value is defined as an estimate of the amount of money that can be obtained or paid for the exchange of an asset or liability on the valuation date, between an interested buyer and seller, in a free transaction conducted properly. Both parties act based on their understanding, prudence, and without coercion. The standard further clarifies that "both parties act based on their understanding, prudence," meaning that both prudent buyers and sellers will always act in accordance with the best market information available at that time. A prudent buyer, referencing the existing market, will request a discount for lack of marketability if the commodity offered does not meet their expectations.

Hypotheses Development

This study proposes hypotheses based on prior research and theories related to the determinants of DLOM. Each hypothesis reflects a potential factor influencing DLOM in companies listed on the IDX, informed by theories of market liquidity, information asymmetry, and financial performance.

1) Number of Stock Transactions. Higher stock transaction volumes enhance liquidity and reduce illiquidity discounts (Pittock & Charles, 1983; Sansing, 1999). H1: The number of stock transactions negatively affects DLOM.
2) Market Capitalization. Larger market capitalization signals greater marketability and financial stability, lowering discounts (Fama, 1960; Harris, 2009; Huson et al., 2009). H2: Market capitalization negatively affects DLOM.
3) Book-to-Market Ratio. A higher ratio indicates undervaluation and perceived risk, increasing DLOM (Hertzel & Smith, 1993; Albart et al., 2020). H3: The ratio of book value of equity to market capitalization positively affects DLOM.
4) Sales-to-Market Capitalization Ratio. Stronger sales relative to market capitalization signals better performance, reducing DLOM (Harris, 2009; Comment, 2012). *H4: The sales-to-market capitalization ratio negatively affects DLOM.*

5) Net Profit-to-Market Capitalization Ratio. Higher profitability indicates robust performance, lowering discounts (Harris, 2009; Comment, 2012). *H5: Net profit-to-market capitalization ratio negatively affects DLOM.*
6) Cash-to-Market Capitalization Ratio. Higher cash reserves increase financial stability, reducing DLOM, though excessive cash may signal inefficiency (Comment, 2012). *H6: Cash-to-market capitalization ratio negatively affects DLOM.*
7) Volatility. Higher stock price volatility increases uncertainty and DLOM (Chaffe, 1993; Longstaff, 1995; McConaughy et al., 2018). *H7: Volatility positively affects DLOM.*
8) Sales Objective. Equity sales for investment are viewed positively, reducing DLOM, while debt-related sales increase perceived risk (Modigliani & Miller, 1963; Myers & Majluf, 1984). *H8: Selling for investment negatively affects DLOM.*
9) Buyer Type. Insider buyers reduce DLOM, whereas external buyers increase it due to higher information costs (Hertzel & Smith, 1993; Daryaei & Fattahi, 2022). *H9: Purchases by external parties positively affect DLOM.*
10) Financial Stress. Low EBIT or financial difficulties reduce liquidity and increase DLOM (Huson et al., 2009; Hertzel & Smith, 1993). *H10: Financial stress positively affects DLOM.*
11) EBITDA-to-Book Value Ratio. Higher profitability and asset efficiency reduce DLOM, while low ratios increase it (McConaughy, 2018; Harris, 2009). *H11: EBITDA-to-book value ratio negatively affects DLOM.*
12) Debt-to-Equity Ratio. Higher debt raises information asymmetry and risk, increasing DLOM (Akerlof, 1970; Harris, 2009; Comment, 2012). *H12: Debt-to-equity ratio positively affects DLOM.*
13) Multiple Discriminant Analysis. Wilks' Lambda tests whether DLOM differs across marketability categories (low, medium, high). *H13: Discount values vary across low, medium, and high marketability categories on the IDX.*

Research Hypothesis Testing

The F test is conducted to assess the individual discrimination ability of the variable. This test essentially relates the difference between the mean ratio values in each group and the distribution of ratio values within each group. Using multiple discriminant analysis, the results of the F Test for the restricted stock study are presented in Table 1.

Table 1. Results of the F-test of the Restricted Stock Study - Variables in Analysis

***Stepwise* Steps**			***Tolerance***	***Sig. of F to Remove***	***Wilks' Lambda***
1	*ERA*	Ratio of EBITDA to book value of assets	1,000	0.014	
2	*ERA*	Ratio of EBITDA to book value of assets	0.974	0.011	0.802
	CMCR	Cash to market capitalization ratio	0.974	0.018	0.777
3	*ERA*	Ratio of EBITDA to book value of assets	0.974	0.018	0.603
	CMCR	Cash to market capitalization ratio	0.921	0.013	0.617
	VOLAT	Volatility	0.943	0.016	0.609
4	*ERA*	Ratio of EBITDA to book value of assets	0.780	0.003	0.553
	CMCR	Cash to market capitalization ratio	0.827	0.004	0.545
	VOLAT	Volatility	0.925	0.020	0.490
	DER	Debt to equity ratio	0.754	0.038	0.470
5	*ERA*	Ratio of EBITDA to book value of assets	0.778	0.021	0.391
	CMCR	Cash to market capitalization ratio	0.768	0.002	0.455
	VOLAT	Volatility	0.787	0.007	0.420
	DER	Debt to equity ratio	0.722	0.022	0.389
	BUYER	Buyer Types	0.709	0.031	0.380

Table 1. presents the results of the F test, with the criteria for selecting the significance level of F to enter is 0.05, while F to remove is 0.10. At each step of the F value test, all

variables are tested for their level of discrimination, the variable that minimizes the overall Wilks' Lambda value will be used in the next step. In steps 1 to 4, several selected variables have a significance value of F to enter below 0.05.

From Table 1, it can be observed that in the fifth step, the variables of EBITDA ratio to book value of assets (ERA), cash ratio to market capitalization value (CMCR), volatility (VOLAT), debt to equity ratio (DER), and Buyer Type (BUYER) are all below the significance value of F to enter (0.05), which are 0.021; 0.002; 0.007; 0.022; and 0.031, respectively. This indicates that these variables show significant differences in variance between groups. Variables that do not show significant differences between groups are removed from the model. In this test, the level of discrimination is indicated by the Wilks' Lambda value. The lower this value, the higher the level of discrimination.

This can be seen in Table 2, where in the fifth step, the Wilks' Lambda values for the variables ERA, CMCR, VOLAT, DER, and BUYER are 0.391; 0.455; 0.420; 0.389; and 0.380, respectively, which are lower than those in the fourth step. Therefore, it can be concluded that in the results of the fifth step stepwise test, the F test values show that these variables significantly affect the discount for lack of marketability, and the discrimination level is optimal according to the Wilks' Lambda values.

Table 2 presents the results of multiple discriminant analysis tests. From the table, it can be concluded that the variables ERA, CMCR, VOLAT, DER, and BUYER exhibit an increasingly good level of discrimination, as indicated by the gradual decrease in the Wilks' Lambda statistic value from 0.777 to 0.302, with a significance level below 0.05. In Part B, the eigenvalue indicates the significance test of the created function, and the results are used to reject or accept Hypothesis 13. Of the two equation functions created, both are significant, with significance levels of 0.00 and 0.014, respectively. The first function is considered superior because it explains 72.1% of the variance observed in the model, while the remaining 27.9% is explained by the second function. Therefore, the first function is chosen, and the discriminant analysis is performed using the canonical discriminant coefficient in Table 2 Part C.

Table 2. Results of Multiple Discriminant Analysis Test

A. Discriminant Significance Level

Stepwise	Number of variables	Added variables	Wilks' Lambda	Sig.
1	1	ERA	0,777	0,014
2	2	CMCR	0,609	0,002
3	3	VOLAT	0,470	0,000
4	4	DER	0,380	0,000
5	5	BUYER	0,302	0,000

B. Eigenvalue and Wilks' Lambda

Function	Eigenvalues				Wilks' Lambda				
	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation	Function test	Wilks' Lambda	Chi-square	df	Sig.
1	**1,241**	**72,1**	**72,1**	**0,744**	1 through 2	**0,302**	**38,359**	**10**	**0,000**
2	0,480	27,9	100,1	0,569	2	0,676	12,544	4	0,014

C. Discriminant Coefficient: Canonical and Centroids

Function	Canonical discriminant coefficient						Centroids		
	CMCR	VOLAT	BUYER	ERA	DER	(Constant)	Group 1	Group 2	Group 3
1	**3,475**	**3,023**	**-1,531**	**3,790**	**0,986**	**-2,484**	**-0,648**	**1,667**	**1,948**
2	4,738	-4,962	0,249	0,377	0,585	1,881	-0,025	0,903	-1,879

Table 2 Part A shows the level of significance of the discriminant value, when the selected variables are added, namely ERA in the first step, CMCR in the second step, VOLAT in the third step, DER in the fourth step, and BUYER in the fifth step, the Wilks' Lambda statistic value decreases gradually from 0.777 to 0.302 which indicates that the discriminant

value is getting higher, with a significance level below 0.05. Part B represents the discriminant model according to the goodness-of-fit criterion, statistically significant. Both functions have statistical significance because their values are below 0.05, which are 0.000 and 0.014, respectively. Part C states the canonical discriminant coefficients to make predictions of discount for lack of marketability values and the centroids values to make discriminant separation values between groups.

From Table 2 Part C, the discriminant coefficients of the first function are selected, and the model is as follows:

D = -2.484 + 3.475 CMCR + 3.023 VOLAT -1.531 BUYER + 3.790 ERA + 0.986 DER

Where:

D	= Discriminant value
CMCR	= Cash ratio to market capitalization value
VOLAT	= Volatility
BUYER	= Type of buyer
ERA	= Ratio of EBITDA to book value of assets
DER	= Debt to equity ratio

Discussion

The function equation derived from the multiple discriminant analysis test identifies five variables that can predict the level of discount for lack of marketability: CMCR, VOLAT, BUYER, ERA, and DER. Considering the variance level of 72.1% and a significance level of 0.000 in Table 2 Part B, it is evident that the observation of the discount for lack of marketability value from the restricted stock study method on the IDX arises from different sample variants, thereby accepting hypothesis 13. Consequently, it can be concluded that the sample variants of low, medium, and high discount for lack of marketability value categories in the population using the restricted stock study method on the Indonesia Stock Exchange are not the same.

The coefficient of the cash ratio to market capitalization value (CMCR) in the equation is 3.475. This positive coefficient is inconsistent with the initial assumption that this ratio is negatively related to the DLOM level. This positive relationship indicates that when this ratio increases, the DLOM also increases, suggesting that excessive cash relative to market capitalization is viewed negatively. A higher cash ratio than similar companies in the same industry can be interpreted negatively by investors for several reasons. First, excessive cash should only be used for working capital operational needs and reserves to pay short-term debt interest. According to Opler et al. (1999) in the trade-off theory, maintaining the appropriate amount of cash is crucial to achieving a balance point that maximizes company value in line with changes in the ratio of assets to debt. Secondly, cash can change form quickly. From the perspective of asymmetric information theory, excessive cash can be seen as unproductive and may indicate that management is preparing for numerous problems the company might face. From the perspective of agency theory, Jensen (1986) argued that too much cash can increase selfish management behavior, interpreted as resulting from management manipulation. Consequently, more cash implies higher risk. This could explain why, when the amount of cash relative to market capitalization is large, investors perceive hidden risks, leading to a higher discount for lack of marketability. Thus, the relationship between the cash ratio to market capitalization value and DLOM becomes positive.

The volatility coefficient (VOLAT) of the equation is 3.023. This positive sign aligns with the initial assumption that predicts a positive relationship between volatility and the DLOM level. This is consistent with the findings of Bruner and Palacios (2004), who stated that DLOM increases when volatility rises. They further explained that this phenomenon occurs

when investors are not in control and cannot determine the company's strategic direction. Additionally, high volatility can result from significant changes in market prices due to the effects of both good and bad news, leading to a higher DLOM value.

The coefficient of the type of buyer (BUYER) in the equation is -1.531. This negative sign aligns with the initial assumption that the type of outside buyer negatively affects the level of discount for lack of marketability. According to the theory of asymmetric information, sales to management, employees, and affiliate buyers are associated with lower discounts because they incur lower, or even zero, information costs. Conversely, the discount is greater if the offering transaction involves outsiders, both individuals and institutions, due to the buyer considering a substantial amount of hidden information. This aligns with the research of Hertzel and Smith (1993). Daryaei and Fattahi (2022) state that in the context of information asymmetry, buyers from outside shareholders negatively affect the discount for lack of marketability, supporting the adverse selection hypothesis and agency cost theory. This hypothesis is supported because institutional shareholders with higher ownership levels have an information advantage, allowing them to leverage existing information asymmetry gaps, leading these shareholders to demand a larger illiquidity discount. According to agency cost theory, institutional shareholders, due to their substantial invested capital, manage their investments more actively, while management buyers aim to reduce transaction costs, resulting in a decrease in the discount for lack of marketability.

The coefficient of the ratio of EBITDA to book value of assets (ERA) in the equation is 3.790. This positive sign contradicts the initial assumption that this ratio is negatively related to the DLOM level. Instead, it suggests that the greater the EBITDA relative to the book value of assets, the higher the DLOM. This finding aligns with Stewart (2019), who stated that EBITDA explains only 9% of the variation in a company's value creation. Essentially, EBITDA has no logical mathematical relationship with value. Yosso and Taylor (2022) noted that EBITDA is derived from accrual-based financial statements and therefore does not reflect cash flow generation. This is further supported by the debt level component in the data sample, where the mean debt to equity ratio is 51%. This finding reverses the direction of the hypothesis, indicating that most companies engaging in PMTHMETD have high debt compared to their equity and consequently pay high interest within the EBITDA component. An increasing ratio could imply that EBITDA is growing while assets remain stagnant. Alternatively, it could mean that the companies are generating returns from sources other than their core business, utilizing substantial outsourcing, or acquiring large new assets with aggressive estimates of depreciation and amortization by management. These factors help explain why the relationship between this ratio and DLOM is positive..

The coefficient of the debt to equity ratio (DER) in the equation is 0.986. This positive sign aligns with the initial assumption that this ratio is positively related to the DLOM level. This positive relationship indicates that the greater the debt relative to equity, the higher the DLOM. This finding is consistent with the theory of asymmetric information, as stated by Akerlof (1970) and Myers and Majluf (1984). Companies with significant asymmetric information should issue debt to avoid selling securities at a discount. This finding is also consistent with the writings of Comment (2012) and Harris (2009). According to Comment, a high debt-to-equity ratio can weaken a company's bargaining position when negotiating the selling price, leading to a higher discount for lack of marketability. Harris also stated that the debt-to-equity ratio is positively related to the discount for lack of marketability, especially in restricted stock research.

These five variables collectively can predict a company's DLOM level into a specific category. The determinant of each group is determined by the separator value that distinguishes the low, medium, and high categories, using the centroids value.

CONCLUSION

This study applies asymmetric information theory and the strong-form efficient market hypothesis to explain the formation of stock prices and the emergence of DLOM. Consistent with theory, buyers in markets with incomplete information demand DLOM to compensate for uncertainty, ensuring transactions occur without compromising expected value.

On the Indonesia Stock Exchange, the restricted stock study method is the most suitable for estimating DLOM, as pre-IPO, option-based, and acquisition methods are constrained by data unavailability. The analysis identifies five variables that significantly discriminate DLOM levels: cash-to-market capitalization ratio, volatility, sales intention, EBITDA-to-book value of assets, and debt-to-equity ratio. Eight parameters including cash, market capitalization, volatility, buyer type, EBITDA, book value, debt, and equity, can be used to predict the DLOM.

REFERENCES

Akerlof, G. A., 1970. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism." The Quarterly Journal of Economics, Volume 84, Issue 3, August 1970, Pages 488–500.

Albart, N., Sinaga, B. M., Santosa, P. W., dan Andati T. 2020. "The Effect of Corporate Characteristics on Capital Structure in Indonesia." Journal of Economics, Business, and Accountancy Ventura 23(1), pp.46-56.

Azis, I. J. 2022. "Indonesia, a Tale of Three Crises." Diakses pada 20 Oktober 2022. http://iwanazis.com/papers-2022.

Bruner, R. F., dan Palacios, M. 2004. "Valuing Control and Marketability." Batten Institute. Diakses pada 18 Agustus 2023. https://ssrn.com/abstract=553562.

Chaffe III, D. B. 1993. "Option Pricing as a Proxy for Discount for Lack of Marketability in Private Company Valuations." Business Valuation Review 12 (4), pp. 182–188.

Chuang, K. S. 2019. "Private Placements, Market Discounts and Firm Performance: The Perspective of Corporate Life Cycle Analysis." Review of Quantitative Finance and Accounting, 54(2), pp.541-564.

Comment, R. 2012. "Revisiting the Illiquidity Discount for Private Companies: A New (and "Skeptical") Restricted-Stock Study." Journal of Applied Corporate Finance, 24(1), pp. 80-91.

Daryaei, A. A., dan Fattahi, Y. 2022, "Stock Liquidity and Stock Return: An Asymmetric Impact of Institutional Ownership Approach." Corporate Governance: The International Journal of Business in Society, 22(4), pp.781-797.

Downing, C., Jaffee, D., dan Wallace, N. 2009. "Is the Market for Mortgage–Backed Securities a Market for Lemons?" Review of Financial Studies, 22(7), 2457–2494.

Fama, E. F. 1960. "Efficient market hypothesis." Disertasi doktoral. University of Chicago, Graduate School of Business.

Harris, A., dan Raviv. 1991. "The Theory of Capital Structure." The Journal of Finance, 46 (1) (1991), pp. 297-355.

Harris, W. 2009. 'Trugman Valuation Associates, Inc. Restricted Stock Study." Business Valuation Review, Fall 2009: 128-139.

Hertzel, M., dan Smith, R. L. 1993. "Market Discounts and Shareholder Gains for Placing Equity Privately." The Journal of Finance 48, p. 459-485.

Huson, M. R., Malatesta, P. H., dan Parrino, R. 2009. "The Decline in the Cost of Private Placements." In AFA 2010 Atlanta Meetings Paper.

IDX Monthly Statistics, Oktober 2020. Diakses pada 2 Februari 2023. https://www.idx.co.id/id/data-pasar/laporan-statistik/statistik.

Institutional Investor Study Report of the Securities and Exchange Commission. 1971. Discounts involved in purchases of common stock. H.R. Doc. No. 64 Part 5, 92 nd Congree, 1st Session, 1971, pp. 2444-56.

Jensen, M. C. 1986. “Agency Costs of Free Cash Flow, Corporate Finance and Takeovers.” American Economic Review, 76(1986), p. 323-329.

Judijanto, Loso. 2024. “Menilai Evolusi Teknik Penilaian Bisnis: Analisis Bibliometrik” Sanskara Manajemen dan Bisnis, Vol. 3, No. 01, November, pp. 21-32.

Kau, J. B., Keenan, D. C., Lyubimov, C., dan Slawson V.C., 2012. “Asymmetric Information in the Subprime Mortgage Market.” J Real Estate Finan Econ 44, p. 67–89.

Koller, T., Goedhart, M., dan Wessels, D., 2010. “Valuation: Measuring and Managing the Value of Companies.” John Wiley & Sons.

Longstaff F.A. 1995. “How Much can Marketability Affect Security Values?” The Journal of Finance, 50(5), pp.1767-1774.

McConaughy D. L. dan Covrig V. 2015. “Public Versus Private Market Participants and the Prices Paid for Private Companies.” De Gruyter, Journal of Business Valuation and Economic Loss Analysis, 10(1), p. 77–97.

McConaughy, D. L., Hussein, M., dan Dow Jr, J. P. 2018. “Restricted Stock Discounts: An Empirical Analysis.” Journal of Business Valuation and Economic Loss Analysis, 14(1), p. 20170008.

Miller, M. H. dan Modigliani, F. 1961. “Dividend Policy, Growth and the Valuation of Shares.” Journal of Business, 34, p. 411-33.

Modigliani F. dan Miller M. 1963. “Corporate Income Taxes and the Cost of Capital: A Correction.” American Economic Review, 53, p. 433-443.

Modigliani, F. dan Miller, M. 1958. “The Cost of Capital, Corporation Finance, and the Theory of Investment.” American Economic Review 53.

Myers, S. C., dan Majluf, N. S. 1984. “Corporate Financing and Investment Decisions When Firms Have Information that Investors Do Not Have.” Journal of Financial Economics 13(2), pp. 187-221.

Opler, T., Pinkowitz, L., Stulz, R., dan Williamson, R. 1999. “The Determinants and Implications of Corporate Cash Holding.” Journal of Financial Economics. 52(1999), p. 3-46.

Pittock, William F., dan Charles H. S. 1983. “Revenue Ruling 77·276 Revisited.” SRC Quarterly Reports, Spring 1983, pp. 1-3.

Sansing, R. C. 1999. “Economic Foundations of Valuation Discounts.” The Journal of the American Taxation Association, 21 (Supplement), 28-37.

Stewart, B. 2019. “EVA, not EBITDA: A New Financial Paradigm for Private Equity Firms.” Journal of Applied Corporate Finance, 31(3), pp.103-115.

Wruck, K. H. 1989. “Equity Ownership Concentration and Firm Value: Evidence from Private Equity Financings.” Journal of Financial Economics 23, 3p. -28.