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Evaluating the Predictive Power of the Fama-French Three-Factor Model in Islamic Capital Markets: Evidence from JII70 Stocks

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ABSTRACT

Introduction: Stock returns are a crucial aspect on forming portfolio investing. For investors, they serve as an indicator for measuring the level of profit or loss generated from an investment over a specific period. The purpose is to examine the applicability of the Fama-French Three-Factor Model in predicting excess returns for Jakarta Islamic Index (JII70) stocks within a Sharia-compliant equity universe.
Method: We analyze JII70 stocks for the period 2019-2023. The Factors included are market risk premium, firm size proxied by SMB, and book-to-market proxied by HML. Building a portfolio, SMB, and HML, and analyzing it with data panel regression. After the portfolio was built, the factor analysis was conducted by ordinary least squares regression using risk, size, and book-to-market factors on Fama-French Model.
Results: The results reveal that only the book-to-market factor (HML) consistently and significantly influences excess stock returns. In contrast, the market risk premium and size factor do not show meaningful effects across the sample. These findings indicate that value-related characteristics still play a role in Islamic stock pricing, whereas risk and size dimensions may behave differently due to Sharia screening.
Conclusion: The model's predictive power is weak in Islamic markets, implying the need for additional factors. Suggests refinement of Islamic asset pricing frameworks. Investors and portfolio managers in Indonesia's Islamic capital market should integrate additional factors such as momentum, liquidity, or ESG to enhance predictive accuracy. The unique characteristics of Sharia-compliant stocks necessitate tailored asset pricing models, while regulators can use these insights to refine Sharia index methodologies.

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INTRODUCTION

Sharia economics has gained global attention in recent decades, driven by the growth of the Muslim population and increasing awareness of Islamic economic principles. The Sharia financial industry, including banking, insurance, and capital markets, has experienced rapid growth and continues to show significant growth play a critical role in facilitating the attainment of SDGs (Qadeer et al., 2023). Sharia stock investors in Indonesia increased by 225% to 144,813 as of April 2024, compared to 44,536 in 2018 (IDX data). With growing awareness of investment, Sharia stock indices have gained widespread attention from investors, particularly in countries with large Muslim populations, as well as non-Muslim investors seeking more ethical investment alternatives.

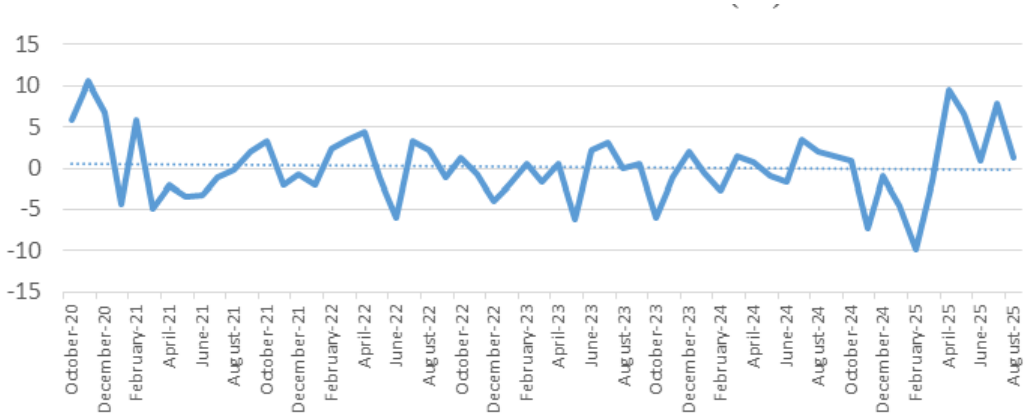

Figure 1. JII70 Stock Returns 2020-2024 (Processed Data)

The stock returns reflected in the movement of JII70 stock returns over the past five years (**Figure 1**) exhibit a reasonable fluctuation pattern despite facing various economic challenges, such as the continued impact of the COVID-19 pandemic, global inflationary pressures, and geopolitical turmoil. Although JII70 monthly returns are volatile, fluctuating according to market conditions, there is no significant long-term downward trend, even in certain periods such as early 2025, reflecting the index's resilience to market pressures. In Modjo et al., (2025) research, companies that comply with Sharia principles tend to have lower financial constraints, which may explain their better stock market performance, especially during the COVID-19 crisis. The presence of consistent positive returns in most months during the observation period reinforces the view that Sharia stocks, such as those included in the JII70 index, continue to offer competitive performance and long-term growth potential (Haryono & Atika, 2023; Modjo et al., 2025).

Stock returns are a crucial aspect of investing. For investors, they serve as an indicator for measuring the level of profit or loss generated from an investment over a specific period. The concept of stock investing is that the greater the risk, the greater the potential return. Essentially, investment decisions are based on the expected level of return, risk level, and the relationship between return and risk (Maulana et al., 2024).

Expected return is the expected return to be earned in the future. Meanwhile, risk is the possibility of an unexpected event occurring. Therefore, investors must always be aware of every possibility that could occur (Munawaroh & Sunarsih, 2020) (Faozan et al., 2023; Suryono, 2022; Viantina et al., 2022).

Accurate risk estimation will be much more important than inadequate estimation, so risk estimation is very important to reduce the formation of inefficient portfolios (Urbański & Zarzecki, 2022) (Wiharno et al., 2023). Risk estimation can be done by forming a portfolio. A portfolio is a diverse collection of assets that can generate profits (Urbański & Zarzecki, 2022). Portfolio theory suggests that portfolio risk may be eradicated through adequate diversification. However, Market risk represents the type of risk that diversification cannot remove. It is quantified by the standard deviation of returns on a broadly diversified portfolio encompassing all publicly traded stocks.

One model that can help estimate risk and return is the Fama and French model. The Fama and French model, known as a model that has three factors: market risk, company size, and book-to-market ratio (value), has become an important reference in financial analysis for predicting risk and return on stocks through portfolio formation (Fama & French, 2015). The Fama and French model is a development of the CAPM model (Tang, 2023; Mishra & O'Brien, 2019; Silvia & Griska, 2021; Maulana & Lestari, 2025).

According to Liu and Gao (2019), the CAPM model only shows the influence of market beta, while the Fama and French models add two factors: company size and the book-to-market ratio, which are equally important in estimating expected returns. By forming a portfolio of small minus big based on company size and high minus low based on the book-to-market ratio.

This research aligns with previous research by Liu and Gao (2019), which found that market risk and size negatively impact stock returns, while the book-to-market ratio positively impacts stock returns. Therefore, this study suggests that the more rapidly a company grows, the weaker its stock returns will be. However, the book-to-market ratio remains unchanged and remains positive for stock returns.

Research conducted by Chowdhury (2017) examined the Fama-French (FF) three-factor model on the Chittagong Stock Exchange (CSE). Nine portfolios were constructed using the daily closing prices of thirty selective CSE stocks. The Bangladeshi treasury rate was used as a proxy for the risk-free interest rate. The study found that stocks with small market capitalization outperformed stocks with large market capitalization. The study also observed that a higher book-to-market ratio resulted in poor returns. Although returns on the CSE were significantly influenced by rational size, they were weakly influenced by value. Due to the rumor-driven and inefficient market, the FF model had positive but weaker explanatory capacity for stock returns on the CSE. This is in line with the results of Aprillia et al. (2022) study in Indonesia. Muddasir & Kulali (2025) and Özer et al. (2021) conducted research on the Istanbul Stock Exchange (ISE). They found that portfolios containing large companies had

higher average excess returns than portfolios containing smaller companies. In general, portfolios containing companies with low book-to-market ratios outperformed those containing companies with high book-to-market ratios. The size factor had no effect on portfolios containing large companies, but could explain the variation in excess returns in portfolios containing small and medium-sized companies. The book-to-market ratio factor had an effect on portfolios containing companies with high book-to-market ratios. The Fama and French three-factor model had the power to explain the variation in excess portfolio returns, but this power was not strong during the testing period at the ISE.

However, few studies test whether the Fama-French model holds in Islamic capital markets such as JII 70. This study contributes to the asset pricing literature by extending the conventional Capital Asset Pricing Model (CAPM) through an empirical evaluation of the Fama-French Three-Factor Model within the context of the Jakarta Islamic Index (JII 70) during 2019–2023. While the CAPM explains stock returns solely through market beta, this research examines whether incorporating firm size (SMB) and value (HML) factors enhances explanatory power for Sharia-compliant equities that operate under ethical and structural restrictions. The novelty of this research lies in demonstrating the limited relevance of traditional risk factors within Islamic capital markets and highlighting the potential need for new Sharia-aligned determinants such as liquidity risk, ethical compliance, and ESG orientation to better explain asset pricing behavior.

METHODOLOGY, DATA, AND ANALYSIS

The research method used is descriptive and verification. In this study, the independent variables are market risk, size, and book-to-market ratio. In this study, the dependent variable is excess return.

Excess return

Excess return is the return on an asset after subtracting the risk-free interest rate. Excess return can be calculated by subtracting the risk from the return, which is proxied by the Bank Indonesia interest rate. The excess return on shares can be calculated as follows:

$$\textbf{Excess Stock Return} = R_{i(t)} - R_{f(t)} \qquad (1)$$

Information:
$R_{i(t)}$ = Stock Return for period t
$R_{f(t)}$ = Average risk-free interest rate for period t

Fama and french three-factor model

This model was proposed in 1992 by researchers Eugene Francis Fama and Kenneth Ronald French. The Fama and French model is a development of the CAPM model, which is

considered capable of providing estimates of risk and return. In this model, there are three factors that can influence stock returns: market risk, size, and value. In this model, Fama and French will build a portfolio that can track firm size and book-to-market ratio. The use of the Fama and French Three-Factor Model is highly relevant because it provides a more comprehensive estimate of risk and return than traditional models like the CAPM, which rely solely on market risk factors.

By adding factors like size (company size) and value (book-to-market ratio), this model not only explains differences in returns across stocks more accurately but also captures various market anomalies that frequently arise in emerging markets. The model's relevance is further enhanced by its ability to accommodate market structural heterogeneity, where small companies tend to exhibit different return patterns than larger companies, and stocks with value characteristics often exhibit different performance than growth stocks. This makes the Fama and French model more practically useful for investors and investment managers in designing efficient portfolios and more suited to the dynamic conditions of financial markets in emerging economies, which are generally characterized by high volatility. Fama and French will sort sectoral companies by size (market capitalization) and by book-to-market ratio. The Fama and French three-factor model is formulated in the following equation:

$$R_i - R_f = \alpha + \beta_1 (R_m - R_f) + \beta_2 (SMB) + \beta_3 (HML) + \mu \quad (2)$$

Information:

R_i : Stock returns
R_f : Risk-free rate
α : Intercept
β_1 : Market beta or market risk premium regression coefficient
R_m : Market return
β_2 : Beta or regression coefficient of SMB return
SMB : Small minus big
β_3 : Beta or HML regression coefficient
HML : High minus low
μ : Error term

Risk market

Market risk is a measure of additional stock returns above the risk-free rate (Dewi & Komara, 2024) . In other words, market risk is the difference between the actual return and the risk-free rate. The risk-free rate in this study uses the risk-free interest rate issued by Bank Indonesia Certificates, known as the BI Rate.

$$\text{Market risk} = Rm(t) - Rf(t) \quad (3)$$

Information:
Rm(t) : Stock Market Return for period t
Rf(t) : Average risk-free interest rate for period t

In an investor's market portfolio, beta represents the risk itself. Stocks with higher beta values exhibit increased responsiveness to market movements. An elevated beta signals greater volatility in a stock's performance, thereby motivating investors to demand additional risk premiums.

Size

Size is the size of a company. The value of a company's size is derived from its market cap. Market cap is determined by adjusting the price of securities for the number of securities traded on the stock market. The higher the market cap, the larger the company. The formula for calculating market cap is:

Company size = share price per year x number of shares outstanding (4)

Fama & French stated that in smaller enterprises, profits are generally directed toward growth initiatives, which increases retained earnings and reduces dividend payouts. 'Munawaroh and Sunarsih (2020) stated that there are three reasons why small companies provide greater returns than companies with large market capitalization values, namely: (1) Small-cap firms typically face higher risk levels than large-cap firms, resulting in investors setting higher return requirements, (2) Price corrections occur due to errors in determining the share price of small companies. (3) The rapid growth typical of small companies affects both their cash flow dynamics and the valuation of their shares.

Book-to-Market Ratio (BMR)

The Book-to-Market Ratio (BMR) is the ratio of a stock's market price to its book value. The BMR is calculated by dividing the equity value by the market value. The higher the BMR, the more undervalued the stock. Conversely, the lower the BMR, the more overvalued it is. The formula for calculating the book-to-market ratio is:

$$\textbf{Book-to-Market Ratio} = \frac{\textbf{Book Value}}{\textbf{Market Value}} \quad \textbf{(5)}$$

Research by Fama & French found that a high book-to-market ratio can pose risks due to low market value, and the company can be defined as troubled. Conversely, High ratio values signal market inefficiency and contribute to elevated risk exposure for investors.

SMB and HML portfolio

Portfolio theory is a collection of assets/stocks from various types of companies. Diversification aims to maximize profits and minimize losses. Portfolio theory is known for

its basic concept of risk diversification, which is allocating investments to securities with low correlations. If several securities have a correlation coefficient ≤ 0, the benefits of diversification will be greater. As we know, assets held as part of a portfolio are less risky than the same assets held separately. One important use of the concept of portfolio risk is to select an efficient portfolio, defined as a portfolio that provides the highest expected return for a given level of risk (Urbański & Zarzecki, 2022).

Small minus big (SMB) portfolio in this study was carried out by (1) calculating the market capitalization of each company obtained by multiplying the number of outstanding shares by the share price (closing share price) of each share. (2) Determining the median of the market capitalization value. (3) Sorting the existing shares based on market capitalization into two groups, namely 50% shares with small market capitalization (S) and 50% shares with large market capitalization (B).

The HML (high, medium, low) portfolio is (1) equating the total equity units of all companies into thousands of rupiah. If there is a total company equity in dollars, it is equated using the middle exchange rate applicable in that period. (2) Calculating the book-to-market ratio value by dividing the total equity (in thousands of rupiah) by the market capitalization obtained from the financial statements. (3) Sorting stocks based on book-to-market equity value into three groups, namely 30% stocks with a low book-to-market ratio value (L), 40% stocks with a medium book-to-market equity value (M), and 30% stocks with a high book-to-market ratio value (H).

Each year, the fundamental excess risk over the risk-free asset is measured as the difference between the returns of small and large companies. This difference in returns is calculated by forming a portfolio of three equally weighted small companies and another portfolio of three equally weighted large companies, then taking the difference in returns between the two portfolios. The calculation for the Small minus Big portfolio can be formulated as follows:

$$\mathbf{SMB} = \frac{1}{3}\left(\frac{S}{L} + \frac{S}{M} + \frac{S}{H}\right) - \frac{1}{3}\left(\frac{B}{L} + \frac{B}{M} + \frac{B}{H}\right) \qquad (6)$$

Information;
S/L : Small portfolio size divided by BE/ME low
S/M : Small portfolio size divided by medium BE/ME
S/H : Small portfolio size divided by high BE/ME
B/L : Large portfolio size divided by BE/ME low
B/M : Large portfolio size divided by medium BE/ME
B/H : Large portfolio size divided by BE/ME high

Next, the HML (high minus low) is obtained by calculating the return rate of an equally weighted portfolio on a short position with a high B/M ratio and an equally weighted portfolio on a long position with a low B/M ratio. The calculation of the high, medium, low portfolio can be formulated as follows:

$$\mathbf{HML} = \frac{1}{2}\left(\frac{S}{H} + \frac{B}{H}\right) - \frac{1}{2}\left(\frac{S}{L} + \frac{B}{L}\right) \qquad (7)$$

Information:
S/H = Small portfolio size divided by high BE/ME
S/L = Small portfolio size divided by BE/ME low
B/H = Large portfolio size divided by BE/ME high
B/L = Large portfolio size divided by BE/ME low

The intersection of two size groups and three value groups will produce six company groups (S/L, S/M, S/H, B/L, B/M, B/H), which are formed each year throughout the period, resulting in 6 annual returns for the 2019-2023 period. The Fama and French three-factor model is used in this study because it provides a more comprehensive explanation of stock returns than the traditional CAPM while remaining simpler and more applicable than extended versions such as the four- or five-factor models. By including firm size (SMB) and book-to-market value (HML), this model captures additional risk factors that often influence portfolio returns, especially in emerging markets. It is particularly suitable for analyzing Sharia-compliant stocks in the Jakarta Islamic Index (JII 70), where profitability and investment data required for more complex models are limited. Thus, the three-factor model serves as an effective benchmark to evaluate whether traditional risk factors remain valid under Islamic financial principles.

The population in this study is 70 companies listed on the Jakarta Islamic Index (JII) 70 for the period 2019-2023, so the total population is 70 x 5 = 350 companies. The minimum sample size was determined using a purposive sampling technique. The sample size for this study was 37 companies that consistent indexed for the 2019-2023 period, resulting in a total sample size of 37 x 5 = 185 companies. The data used in this study is quantitative, with secondary data as the source. The data used in this study are panel data, a combination of cross-sectional and time series data. The data analysis technique used to test the research hypothesis is panel data regression analysis for each portfolio formation and OLS for the Fama-French Model, Classical assumption tests were conducted to ensure model validity.

Table 1. Portfolio Composition Size – Book-to-market ratio and its constituent stocks

S/H	S/M	S/L	B/H	B/M	B/L
BMTR	JPFA	LPPF	INDF	PTBA	MICA
PTPP	MAPI	ACES	ADRO	ISAT	MYOR
ERAA	AKRA	SIDO	UNTR	ANTM	KLBF
TINS	ITMG	SCMA		BRIS	CPIN
SMRA	EXCL	BTPS		INTP	UNVR
MNCN				INCO	TPIA
HRUM				SMGR	TLKM
CTRA				ICBP	
PWON					

(Source: Processed Data, 2024)

RESULTS AND DISCUSSION

Table 1 shows and explains that there are six portfolios formed from the results of the Fama and French models. Therefore, there are six regressions: Small - High (S/H) portfolio, Small - Medium (S/M) portfolio, Small - Low (S/L) portfolio, Big - High (B/H) portfolio, Big - Low (B/H) portfolio, and Big - High (B/H) portfolio. Medium (B/M) and Big - Low (B/L) portfolios.

Based on **Table 2**, each portfolio describes the number of stocks in the portfolio and the average return for each portfolio. The highest return is found in the BM portfolio, or large company size, with a book-to-market ratio. The medium portfolio value is 0.200564. Meanwhile, the smallest portfolio value is found in the SL portfolio, or small company size, with a low book-to-market ratio of -0.001180.

Table 2. Results of portfolio formation

Portfolio		Number of Shares	Average Return
SMB	**HML**		
Small	High	9	0.019341
Small	Medium	5	0.047851
Small	Low	5	-0.00118
Big	High	3	0.056425
Big	Medium	8	0.200564
Big	Low	7	0.005528

(Source: Processed Data, 2024)

Table 3. Panel data regression analysis on each portfolio

Portofolio	Variable	Coefficient	t-Statistic	Prob (t)	F-statistic	Prob (F-statistic)	Adj R
SH	RM	-1.25799	-0.8008	0.4279			
	SMB	4.72134	1.2341	0.2242	1.31812	0.28153	0.02123
	HML	-0.00555	-0.07431	0.9411			
SM	RM	0.98963	0.66551	0.513			
	SMB	6.77114	1.33543	0.196	2.15573	0.12354	0.12623
	HML	-0.585961	-1.44217	0.164			
SL	RM	0.72171	0.27877	0.7838			
	SMB	23.40358	1.95807	0.0668	1.01896	0.45293	0.0055
	HML	0.90896	0.64201	0.5294			
BH	RM	0.0345	0.02207	0.9829			
	SMB	16.37517	1.33475	0.2147	1.07678	0.43362	0.02669
	HML	0.02003	0.04813	0.9627			
BM	RM	-3.38694	-1.29281	0.2043			
	SMB	-20.63739	-2.96718	0.0053	6.30589	0.0015	0.28984
	HML	-2.70394	-3.47381	0.0014			

BL	RM	-0.0587	-0.04862	0.9615			
	SMB	-0.28359	-0.13319	0.8949	0.04007	0.98908	-0.0925
	HML	-0.18367	-0.29639	0.7689			

(Source: Processed Data, 2024)

Hypothesis testing requires t-test and F-test calculations. The t-test and F-test values are 1.6533 and 2.65, respectively, with a significance level of 5%. Based on **Table 3** above, regarding the panel data regression analysis for each portfolio, the test results are as follows.

Small - high portfolio

Small - High (S/H) portfolio regression shows that of the three independent variables used in the study, there is one variable that has a positive influence on excess stock return, namely SMB, amounting to 4.72134. Meanwhile, RM and HML have a negative influence on excess stock returns.

Hypothesis testing can be conducted by comparing the calculated t-test with the t-table and using a 5% significance level. Based on **Table 3,** the t-test results for the three variables do not meet the testing criteria. Therefore, partially, the risk market, size, and book-to-market ratio variables in the S/H portfolio have a negative and insignificant effect on excess return. Meanwhile, the F test on the S/H portfolio simultaneously has a negative and insignificant effect on excess return. The analysis result for Adj R is 0.02123, which means that the market risk, size, and book-to-market ratio variables in the S/H portfolio affect the excess by 2%.

The stocks in this portfolio tend to provide excess returns. Higher returns. This is because stocks from smaller companies are often considered undervalued (value effect) and have greater growth potential despite being riskier (size effect). Investors expect higher compensation for this risk, so returns tend to be higher.

Small - medium portfolio

Small - Medium (S/M) portfolio regression shows that of the three independent variables used in the study, there are two variables that have a positive influence on excess stock returns, namely RM of 0.98963 and SMB of 6.77114. Meanwhile, HML has a negative influence on excess stock returns.

Hypothesis testing can be conducted by comparing the calculated t-test with the t-table and using a 5% significance level. Based on **Table 3**, the results of the t-test for the three variables do not meet the testing criteria. Therefore, partially, the risk-market, size, and book-to-market ratio variables in the S/M portfolio have a negative and insignificant effect on excess return. Meanwhile, the F test on the S/M portfolio simultaneously has a negative and insignificant effect on excess return. The analysis result for Adj R is 0.12623, which means that the market risk, size, and book-to-market ratio variables in the S/M portfolio affect the excess by 12%. This portfolio can also provide excess High returns, but not as high as Small - High. Stocks in this category carry higher risk than large companies and may not be as undervalued

as Small - High, but still show better return potential than stocks from large companies.

Small - low portfolio

Small - Low (S/L) portfolio regression shows that the three independent variables used in the study have a positive influence on excess stock returns. The size variable has a partial positive and insignificant effect on excess. However, the market risk and book-to-market ratio variables did not meet the criteria. Therefore, the partial market risk and book-to-market ratio variables in the S/L portfolio had a negative and insignificant effect on excess return. Meanwhile, the F test on the S/L portfolio simultaneously has a negative and insignificant effect on excess return. The analysis result for Adj R is 0.00550, which means that the market risk, size, and book-to-market ratio variables in the S/M portfolio affect the excess by 0.5%.

Stocks in this category tend to provide excess returns. Lower returns than Small - High and Small - Medium . Although stocks from small companies often have high growth potential, a low book-to-market ratio indicates that they may be overvalued, reducing the potential for higher returns.

Big - high portfolio

Big / High (B/H) portfolio regression shows that the three independent variables used in the study have a positive influence on excess stock returns. Hypothesis testing can be conducted by comparing the calculated t-test with the t-table and using a 5% significance level. Based on **Table 3**, the results of the t-test for the three variables do not meet the testing criteria. Therefore, partially, the risk market, size, and book-to-market ratio variables in the B/H portfolio have a negative and insignificant effect on excess return. Meanwhile, the F test on the B/H portfolio simultaneously has a negative and insignificant effect on excess return. The analysis result for Adj R is 0.02699, which means that the market risk, size, and book-to-market ratio variables in the B/H portfolio affect the excess by 2%.

This portfolio usually provides excess, A fairly good return. Large companies tend to be more stable and less risky, and a high book-to-market value indicates that the stock is undervalued. However, the larger size effect tends to reduce volatility, so returns are not as aggressive as those of the Small - High portfolio.

Big - medium portfolio

Big / Medium (B/M) portfolio regression shows that the three independent variables used in the study have a negative influence on excess stock returns. Hypothesis testing can be conducted by comparing the calculated t-test with the t-table and using a 5% significance level. Based on **Table 3**, the t-test results show that two variables meet the criteria using absolute value equations: the SMB and HML variables. Therefore, the size and book-to-market ratio variables in the B/M portfolio have a positive and significant effect on excess return. The market risk variable has a negative and insignificant effect on excess return.

Meanwhile, the F test on the S/M portfolio simultaneously has a positive and significant effect on excess return. The analysis result for Adj R is 0.28984, which means that the market risk, size, and book-to-market ratio variables in the B/M portfolio affect the excess by 28%.

This portfolio provides excess Moderate returns. Large companies with moderate book-to-market values exhibit stability and moderate growth, so returns tend to be more stable but not as high as portfolios with extreme book-to-market ratios (high or low).

Big - low portfolio

Big / Low (B/L) portfolio regression shows that the three independent variables used in the study have a negative influence on excess stock returns. Hypothesis testing can be conducted by comparing the calculated t-test with the t-table and using a 5% significance level. Based on **Table 3**, the t-test results for the three variables do not meet the testing criteria. Therefore, partially, the risk market, size, and book-to-market ratio variables in the B/L portfolio have a negative and insignificant effect on excess return. Meanwhile, the F test on the B/L portfolio simultaneously has a negative and insignificant effect on excess return.

The analysis results for Adj R are -0.0925, which means that the risk market, size, and book-to-market ratio variables in the B/L portfolio affect the excess by -9%. Stocks in this category tend to provide excess returns. The lowest returns among all the portfolios mentioned. Large companies with low book-to-market ratios are often considered overvalued, resulting in lower potential returns. The stability of large companies also reduces volatility and risk, but this comes at the trade-off of lower returns.

Table 4. Summary of research results

Variable	Coefficient	t-Statistic	Prob (t)	
RM	-1.210969	-1.383381	0.1683	Insignificant
SMB	0.190861	0.160037	0.873	Insignificant
HML	-0.070295	-1.233032	0.2192	Insignificant

(Source: Processed Data, 2024)

The influence of market risk on excess return

Based on the results of the research that has been conducted, as we see in **Table 4**, the beta coefficient of market risk = -1.210969 is negative, and the t value is -1.383381 with sig-t = 0.1683. Thus, it means that market risk has a negative but not significant effect on excess stock returns.

Beta measures the sensitivity of stock returns to market returns. If a company's returns and market returns are not aligned, the company may have a low or even negative beta. A negative beta indicates that the stock tends to move in the opposite direction to the market, which can be a useful asset for portfolio diversification. Investors need to consider these factors when constructing portfolios and managing risk to achieve their investment goals.

The effect of size on excess return

Based on the results of the research that has been conducted, the size of the beta coefficient size (SMB) = 0.190861 is positive, and the t value is 0.160037 < 1.6533 (t-table) with sig-t = 0.8730. Thus, it means that size (SMB) has a negative but not significant effect on excess stock returns. The insignificance of market capitalization on stock returns suggests that investors don't use this indicator as a basis for their investment decisions, but rather consider market risk. For investors, what matters is that the investment generates a return commensurate with the risk they must bear. This behavior is often associated with short-term investors, who pursue capital gains rather than dividend yields.

The effect of book-to-market ratio on excess return

Based on the results of the research that has been conducted, the beta coefficient of the book-to-market ratio (HML) = -0.070295 is negative, and the t value is -1.233032 with a sig-t = 0.2192. Thus, it means that the book-to-market value (HML) has a negative but not significant effect on excess stock returns.

A negative coefficient value indicates that there is a negative influence of the book-to-market ratio (HML) on excess stock returns. However, this effect is not statistically significant at the 5% level. The book-to-market ratio (HML) here represents excess The return of a stock portfolio with a high book-to-market ratio and a low book-to-market ratio is proxied by the book value divided by the stock market price. The book-to-market ratio (HML) variable has a negative effect, meaning that if the book-to-market ratio (HML) decreases, the excess Stock returns will increase. If the book-to-market ratio decreases, it indicates a rise in the stock market price, indicating improved stock performance. This reflects investor optimism about the company's future.

The influence of the Fama and French three-factor models

Based on the results of the research that has been conducted, there is only one portfolio that meets the F test criteria, namely the B/M portfolio with an F-calculated value > F-table 6.30 > 2.65 and a significance value of 0.00150, so that the B/M portfolio simultaneously has a significant effect on excess return and the risk market, size and book to market ratio variables can explain excess return of 0.28984 or 28%.

Meanwhile, the five portfolios that have been formed have the same F test value, namely below the criteria that F-calculated > F-table and significance above 0.05, so that the S/H, S/L, S/M, B/H, and B/L portfolios do not have a simultaneous influence on excess return. Likewise, the Adj R value has a low value, thus, the risk market, size, and book-to-market ratio variables cannot explain excess return in full. According to Fama and French (Fama & French, 2018), the three-factor model improves upon the traditional CAPM by demonstrating that firm size (SMB) and value (HML) systematically explain variations in stock returns in addition to market beta. In conventional markets, small-cap firms generally yield higher

returns due to higher risk exposure, and high book-to-market (value) stocks outperform low book-to-market (growth) stocks due to their perceived undervaluation. However, the empirical results of this study contradict the Fama–French theoretical expectations within the context of Islamic capital markets. The regression results on JII70 portfolios show that market risk, size, and book-to-market factors generally exhibit weak or insignificant effects on excess returns, with only the B/M portfolio showing partial significance. This divergence implies that the size and value premiums predicted by Fama–French may not manifest in Sharia-compliant equities as we see in **Figure 1**, likely due to the absence of leverage, speculative trading, and high-risk financial instruments restricted under Islamic law. Consequently, while Fama–French theory suggests that multifactor risk models enhance return predictability, the findings from the JII 70 indicate that such factors lose explanatory power in markets governed by ethical investment screens and low-risk capital structures. This comparison highlights the contextual limitation of the Fama–French framework and suggests the need for modified asset pricing models that integrate Sharia-specific and sustainability-based risk factors.

(Sutrisno & Ekaputra, 2016) Stated that Indonesia, as an emerging market, has a stock market with low trading activity (thin trading) compared to other countries. A market experiencing thin trading is likely to experience nonsynchronous trading. Nonsynchronous trading, as an implication of thin trading, causes individual stock levels to influence portfolio levels. As a result, standard errors will be overestimated or underestimated, resulting in many significant or insignificant coefficients. This empirical finding in Indonesia is not surprising, as the effects of thin and nonsynchronous trading make the Fama-French asset pricing model unsuitable for application in some regions.

The weak explanatory power of Fama-French factors in Islamic stocks may stem from Shariah screening criteria that limit high-leverage or high-risk firms, thereby reducing variation in size and value factors. Furthermore, the risk-free rate reference in Indonesia no longer aligns with the risk-free rate concept in asset pricing literature. The Fama-French model refers to the CAPM, APT, and Merton, where the risk-free rate uses treasury bills, which represent fiscal authority, while Indonesia uses SBI, which represents monetary authority. Fiscal authority will contribute more than monetary authority. A monetary authority may also have liquidity issues. Therefore, the effects of thin trading and nonsynchronous trading, as well as the risk-free rate not using fiscal authority, cause persistent bias in research results (Sutrisno & Ekaputra, 2016).

CONCLUSION AND SUGGESTION

Based on the results of research that has been conducted regarding the influence of the three-factor Fama-French model on excess returns, the author concludes as follows: Market risk has a negative and insignificant effect on all stock portfolios. Furthermore, the S/M, S/L, and B/H portfolios have positive excess returns, while the S/H, B/M, and B/L portfolios

have negative excess returns. Therefore, the systematic risk used in the CAPM model cannot adequately explain the effect of excess stock returns. Size (Small Minus Big) has a positive and significant effect on the S/L and B/M portfolios on excess returns. Meanwhile, the S/H, S/M, B/H, and B/L portfolios have a negative and insignificant effect on the portfolio. The S/H, S/L, S/M, and B/H portfolios have a positive direction with excess returns, while the B/M and B/L portfolios have a negative direction with excess returns. Therefore, size cannot explain the effect of excess stock returns well. The book-to-market ratio (high minus low) has a positive and insignificant effect on the B/M portfolio on excess returns. Meanwhile, the S/H, S/M, S/L, B/H, and B/L portfolios have a negative and insignificant effect on the portfolio. The S/L and B/H portfolios have a positive direction with excess returns, while the S/H, S/M, B/M, and B/L portfolios have a negative direction with excess returns. Therefore, the book-to-market ratio cannot explain the effect of excess stock returns well.

This study demonstrates that the Fama–French three-factor model fails to consistently explain excess returns in JII 70 stocks during 2019–2023, as market risk, size, and book-to-market factors generally show weak or insignificant effects. These results suggest that investors and portfolio managers in Indonesia's Islamic capital market should integrate additional factors—such as momentum, liquidity, or ESG—to enhance predictive accuracy. The unique characteristics of Sharia-compliant stocks necessitate tailored asset pricing models, while regulators such as the OJK and IDX can use these insights to refine Sharia index methodologies and improve market data transparency. Academics are encouraged to expand this research by incorporating broader multifactor frameworks, alternative time horizons, and macroeconomic variables to capture the true drivers of excess returns in Islamic equity markets. This study is limited by a relatively short observation period (2019–2023) and a small sample size. Future research should incorporate macroeconomic and behavioral variables to improve model robustness.

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