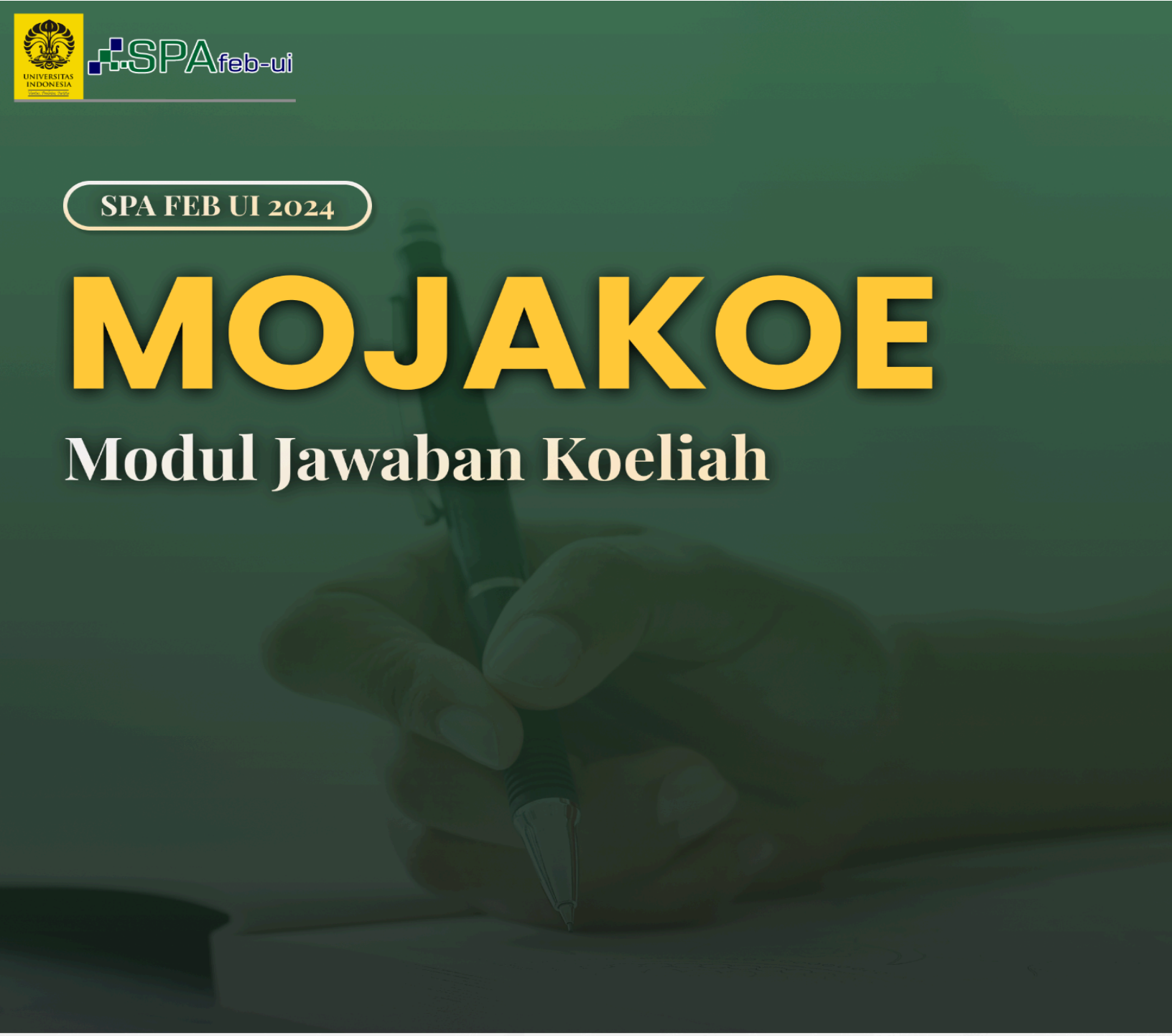
SPA FEB UI 2024

MOJAKOE

Modul Jawaban Koeliah



Investasi Pasar Modal

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progressive thinking · people transformation · passion to lead · synergy through teamwork

Problem 1 - Stock

Two stocks, namely the TEDO and TIBO, is currently under consideration for Aljendro to invest on. If both stocks are the same and Aljendro would only invest in one of them, which on is better considering:

- TEDO pays an annual dividend of $2, that is expected to grow 10% in the next three years, in which after it would continually grow 7.5% each year.
- TIBO pays an annual dividend of $1 that would grow by 15% each year perpetually

If both stock's has the same required rate of return that is 5%, which stock would prove to be better for Aljendro to invest?

Problem 2 - FCFF and FCFE

PT Velda 's performance in 2023 shows an EBITDA of Rp450,000,000, and the owners expect in the company to grow by 7% per year forever. Additionally, 2023's depreciation was Rp75,000,000, interest expense being Rp25,000,000, and the net debt of the company was Rp500,000,000. If the company is going to have Rp 60.000.000 capital expenditures and a planned NWC increase of Rp25.000.000, considering that the cost of equity is 15%, what is PT Velda's equity value?

Problem 3 - Call and Put Option

Mr. Amba bought a combination of 4 call option and 6 put option with underlying of common share issued by PT TUKAM. The price of put option is $5 per contract, while for call option is $4 per contract. Exercise price for both options is $15. You are required to calculate how much gain or loss Mr. Amba will obtain, assuming that market prices of PT TUKAM's share are as follows:

A. $12.5
B. $14
C. $16
D. $18.5
E. $21

Problem 4 - Option Valuation

A two-state put option's information is as the following:

- Current stock price is $50
- Option xercise price is $60
- the interest rate is 12%.

If the stock price fluctuates with a predicted change either increase to 70 or decrease to 30:

a) What is the hedge ratio of the put?

b) Form a portfolio of 3 shares of stocks and 4 puts. What is the payoff of this portfolio? What is the present value of the portfolio? Is the portfolio risk-neutral?

c) Given that the stock is currently selling at 100, what is the put value?

Problem 5 - Future Contract

Suppose the S&P 500 Index portfolio pays a dividend yield of 2% annually. The index currently is 3,000 (So). The T-bill rate is 3% (Risk-Free Rate), and the S&P futures price for delivery in one year is $3,045 (Actual Fo). Construct an arbitrage strategy to exploit the mispricing and show that your profits one year hence will equal the mispricing in the futures market.

Problem 6 - Performance Evaluation

The following is data given for five portfolios held by five fund managers, Debita (DEB), Chika (CHI), Dinda (DIN), Hani (HAN), and Miki (MIK).

Portofolio	Imbal Hasil Tahunan	Standar Deviasi	Beta
DEB	13.00%	20.00%	1.15
CHI	15.00%	19.00%	1.1
DIN	25.00%	29.00%	1.3
HAN	16.00%	13.00%	0.9
MIK	8.00%	11.00%	0.7
Pasar	11.00%	19.00%	1

The risk-free rate is known to be 5%

Instructions

A. Calculate the Sharpe Ratio for all five portfolios, rank them, and identify which portfolios outperformed or underperformed the market.

B. Calculate the Treynor Measure for all five portfolios, rank them, and identify which portfolios outperformed or underperformed the market.

C. Calculate the Jensen Measure (Alpha) for all five portfolios.