JÖNKÖPING UNIVERSITY

CANDIDATE

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TEST

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Intro Information

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ℹ	*COPY_OF* Intro	Information or resources

Task 1

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Task 2

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MC 1

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MC 2

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13	*COPY_OF* IPMIA MC5 v3	Multiple Response

1 *COPY_OF* IPMIA Task1 v5

Kelli Blakely is a portfolio manager for the Miranda Fund (Miranda), a core large-cap equity fund. The market proxy and benchmark for performance measurement purposes is the S&P 500. Although the Miranda portfolio generally mirrors the asset class and sector weightings of the S&P, Blakely is allowed a significant amount of leeway in managing the fund. Her portfolio holds only stocks found in the S&P 500 and cash.

Blakely was able to produce exceptional returns last year through her market timing and security selection skills. At the outset of the year, she became extremely concerned that the combination of a weak economy and geopolitical uncertainties would negatively impact the market. Taking a bold step, she changed her market allocation. For the entire year her asset class exposures averaged 50% in stocks and 50% in cash. The S&P's allocation between stocks and cash during period was a constant 97% and 3%, respectively. The risk-free rate of return was 2%. The one-year trailing returns after her reallocation are shown below.

	One-Year Trailing Returns	
	Miranda Fund	S&P 500
Return	11.0%	-22.5%
Standrad Deviation	37%	44%
Beta	1.10	1.00

(a) What is the Sharpe ratio for the Miranda fund? (*Do not round intermediate calculations. Enter answer values in decimals. Round your answer to 3 decimal places*)

The Sharpe ratio is **0.243** **.**

(b) What is the M^2 measure for Miranda? (*Do not round intermediate calculations. Negative amount should be indicated by a minus sign. Round your answer to 2 decimal places. Omit the "%" sign in your response*)

The M^2 measure is **35.20** **%.**

(c) What is the Treynor measure for the Miranda Fund ? (*Do not round intermediate calculations. Enter answer values in decimals. Round your answer to 3 decimal place)*

The Treynor measure is **0.082** **.**

(d) What is the Jensen measure (in %) for the Miranda Fund? (*Do not round intermediate calculations. Round your answer to 2 decimal places. Negative amount should be indicated by a minus sign. Omit the "%" sign in your response*)

The Jensen measure is **35.95** **%.**

2 *COPY_OF* IPMIA Task2 v5

Download the Honda valuation sheet Honda valuation template. Recalculate the intrinsic value of Honda using the free cash flow models under the following assumptions: P/E 2016 = 15.6, beta = 0.99. In the lower part of the spreadsheet, **D. Present values,** some formulas are missing.

(a) What is the intrinsic value of Honda stock in year 2012 according to the FCFF model?

The intrinsic value per share according to FCFF is $ [ ] **.** *(round to two decimal places.)*

(b) What is the intrinsic value of Honda stock in year 2012 according to the FCFE model?

The intrinsic value per share according to FCFE is $ [ ] **.** *(round to two decimal places.)*

(c) What is the market capitalization rate (%) in year 2012?

The market capitalization rate is [ ] %. *(percent, round to two decimal places.);*

3 *COPY_OF* IPMIA Task3 v5

You currently own $100,000 worth of Wal-Mart stock. Suppose that Wal-Mart has an expected return of 14% and a volatility of 23%. The market portfolio has an expected return of 31% and a volatility of 16%. The risk-free rate is 5.0%.

(a). Assuming the CAPM assumptions hold, what alternative investment has the lowest possible volatility while having the same expected return as Wal- Mart? What is the volatility of this portfolio?

The volatility of the portfolio is [**5.54**] *% (round to two decimal places).*

(b). Assuming the CAPM assumptions hold, what alternative investment has the highest possible expected return while having the same volatility as Wal-Mart? What is the expected return of this portfolio?

The expected return of this portfolio is [***42.38***] *% (round to two decimal places).*

4 *COPY_OF* IPMIA Task4 v1

Consider a risky portfolio. The end-of-year cash flow derived from the portfolio will be either $70,000 or $200,000 with equal probabilities of 0.5. The alternative risk-free investment in T-bills pays 6% per year.

a. If you require a risk premium of 8%, how much will you be willing to pay for the portfolio?

The price is $ 118421 **.** *(Round your answer to the nearest whole dollar amount. Omit the "$" sign in your response.)*

b. Suppose that the portfolio can be purchased for the amount you found in (a). What will be the expected rate of return on the portfolio?

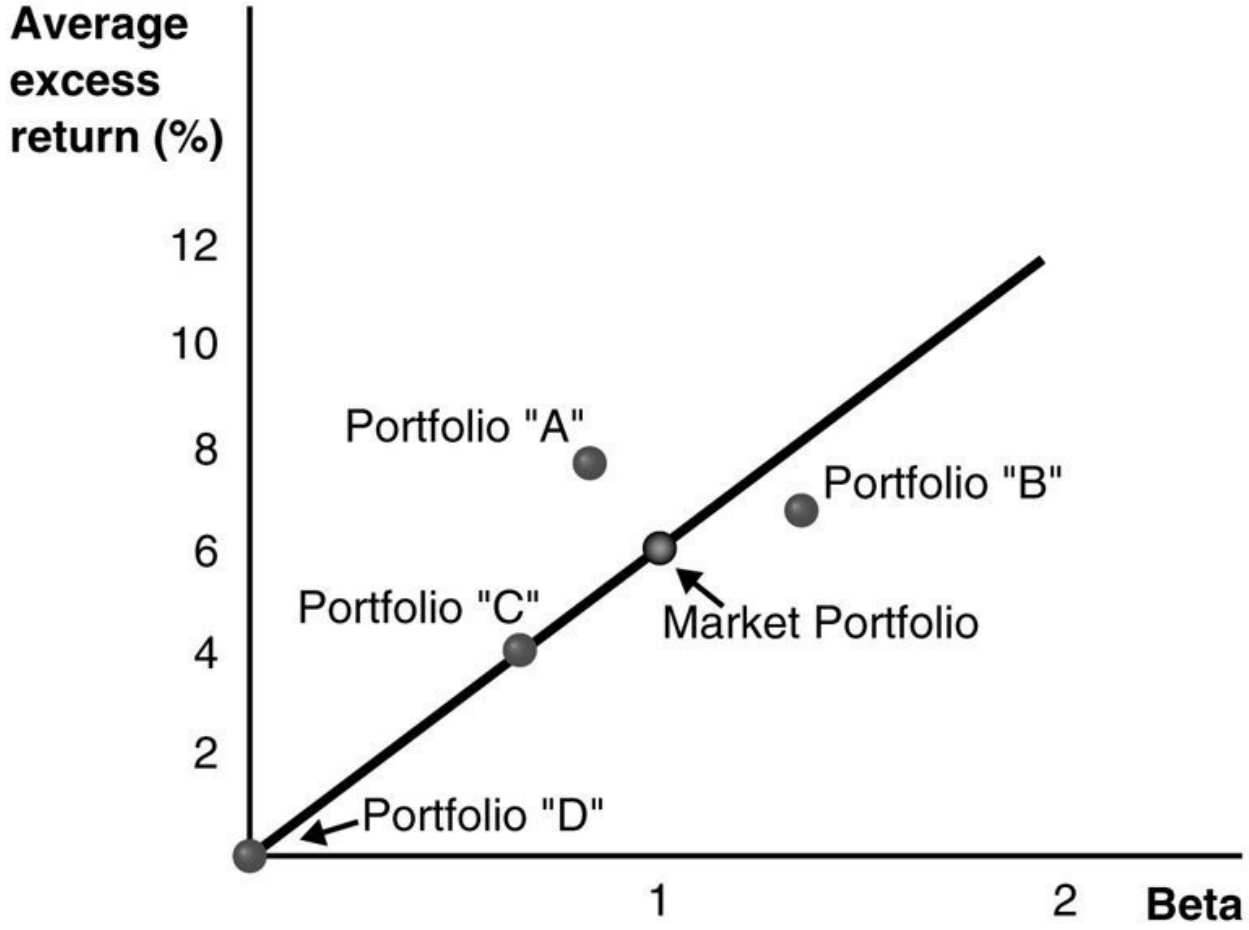
Rate of return is 14 **%**. *(Round your answer to the nearest whole number. Omit the "%" sign in your response.)*

c. Now suppose that you require a risk premium of 12%. What is the price that you will be willing to pay?

The price is $ 114407 **.** *(Round your answer to the nearest whole dollar amount. Omit the "$" sign in your response.)*

5 *COPY_OF* IPMIA Task5 v5

Consider the following graph of the security market line:



Which of the following statements is correct?

Portfolio "B":

A) is less risky than the market portfolio.
B) is overpriced.
C) has a positive alpha.
D) falls above the SML.

Answer: B *(write here "A", "B", "C", or "D")*

Portfolio "A":

A) has a relatively lower expected return than predicted.
B) has a positive alpha.
C) falls below the SML.
D) is overpriced.

Answer: B *(write here "A", "B", "C", or "D")*

Portfolio "C":

A) is less risky than the market portfolio.
B) has a relatively lower expected return than predicted.
C) is underpriced.
D) has a negative alpha.

Answer: A *(write here "A", "B", "C", or "D")*

Portfolio "D":

A) falls below the SML.
B) has a negative alpha.
C) is overpriced.
D) offers an expected return equal to the risk-free rate.

Answer: D *(write here "A", "B", "C", or "D")*

The market portfolio:

A) is underpriced.
B) has a positive alpha.
C) is overpriced.
D) falls on the SML.

Answer: D *(write here "A", "B", "C", or "D")*

6 *COPY_OF* IPMIA Task6 v5

The market consensus is that Analog Electronic Corporation has an ROE = 9%, has a beta of 1.25, and plans to maintain indefinitely its traditional plowback ratio of 2/3. This year's earnings were $3 per share. The annual dividend was just paid. The consensus estimate of the coming year's market return is 18%, and T-bills currently offer a 10% return.

a. Find the price at which Analog stock should sell.

The price is $ 21.43 . *(Do not round intermediate calculations. Round your answer to 2 decimal places. Omit the "$" sign in your response.)*

b. Calculate the P/E ratio.

The P/E ratio is 7.14 . *(Do not round intermediate calculations. Round your answer to 2 decimal places.)*

c. Calculate the present value growth opportunities.

The present value is $ 6.43 . *(Do not round intermediate calculations. Round your answer to 2 decimal places. Omit the "$" sign in your response. Negative values should be indicated by a minus "-" sign.)*

d. Suppose your research convinces you Analog will announce momentarily that it will immediately resduce its plowback ratio to 1/3. Find the intrinsic value of the stock.

The intrinsic value is $ 103.24 . *(Do not round intermediate calculations. Round your answer to 2 decimal places. Omit the "$" sign in your response.)*

7 *COPY_OF* IPMIA Task7 v3

Assume that the CAPM is a good description of stock price returns. The market expected return is 7.75% with 10% volatility and the risk-free rate is 3.0%. New news arrives that does not change any of these numbers but it does change the expected return of the following stocks:

	Expected Return	Volatility	Beta
Green Leaf	10.5%	20%	1.50
NatSam	12%	40%	1.80
HanBel	6%	30%	0.75
Rebecca Automobile	8%	35%	1.20

At current market prices, which stocks represent buying opportunities?

Stock	*Buying opportunity?*
Green Leaf	yes
NatSam	yes
HanBel	no
Rebecca Automobile	no

(In the Table above, fill in "yes" or "no")

(Hint: you need to determine whether expected return is lower or higher than required return)

8 *COPY_OF* IPMIA Task8 v1

(a) You are working as a portfolio manager for an investment company. After having carefully analyzed the international equity markets, you formed expectations about the expected returns, expected standard deviations of returns and correlation coefficients as given in this table Excel Portfolio. The correlation between country A and C is 0.050.

Given this information, optimize the portfolio structure by maximizing the Sharpe Ratio. Short selling is not allowed and the portfolio is fully invested.

What is the maximal Sharpe ratio in part (a)?

The Sharpe ratio is 0.1926 . *(round to 4 decimals)*

What is the portfolio return when Sharpe ratio is maximized in part (a)?

The portfolio return is 1.089 %. *(round to 3 decimals)*

(b) Your fund's investment committee discusses your proposal. Although the management shares your views on the international markets, they are unhappy with the portfolio weight assigned to Country B. Among the fund's investors are many residents of Country B and management fears that they will withdraw their funds if the Country B's weight is such low. Therefore, you are asked to optimize the portfolio structure again as in (a), but you shall ensure a minimum weight of 10% for Country B this time.

What is the maximal Sharpe ratio in part (b)?

The Sharpe ratio is 0.1777 . *(round to 4 decimals)*

What is the portfolio return when Sharpe ratio is maximized in part (b)?

The portfolio return is 1.049 %. *(round to 3 decimals)*

9 *COPY_OF* IPMIA MC1 v2

Which two of the following five statements are correct?

Select two alternatives:

- [x] Treynor ratio considers systematic risk.
- [ ] Risk-averse investors judge investments only by their riskiness.
- [x] Semi-strong efficient markets are weak efficient.
- [ ] Weak efficient markets are semi-strong efficient.
- [ ] Sharpe ratio considers systematic risk.

10 *COPY_OF* IPMIA MC2 v1

Which two of the following five statements are correct?

Select two alternatives:

- [ ] The measure of risk in a Markowitz efficient frontier is beta.
- [ ] Consider two perfectly negatively correlated risky securities A and B. A has an expected rate of return of 10% and a standard deviation of 16%. B has an expected rate of return of 8% and a standard deviation of 12%. The risk-free portfolio that can be formed with the two securities will earn 9.9% rate of return.
- [x] The unsystematic risk of a specific security results from factors unique to the firm.
- [x] The correlation coefficient of -1.00 provides the greatest diversification benefits.
- [ ] Portfolio theory as described by Markowitz is most concerned with the elimination of systematic risk.

11 *COPY_OF* IPMIA MC3 v1

Which two of the following five statements are correct?

Select two alternatives:

- [x] The following factors might affect stock returns: (1) the business cycle, (2) interest rate fluctuations, (3) inflation rates.
- [ ] The APT differs from the CAPM because the APT minimizes the importance of diversification.
- [x] In a multifactor APT model, the coefficients on the macro factors are often called factor betas.
- [ ] The term "arbitrage" refers to buying low and selling high.
- [ ] The exploitation of security mispricing in such a way that risk-free economic profits may be earned is called technical analysis.

12 *COPY_OF* IPMIA MC4 v4

Which two of the following five statements are correct?

Select two alternatives:

- [ ] If information processing was perfect, many studies conclude that individuals would tend to make less than fully rational decisions using that information due to fundamental risk.
- [ ] Fundamental analysts focus more on past price movements of a firm's stock than on the underlying determinants of future profitability.
- [ ] An example of overconfidence is that a person may reject an investment when it is posed in terms of risk surrounding potential gains, but may accept the same investment if it is posed in terms of risk surrounding potential losses.
- [x] Behavioral finance argues that even if security prices are wrong, it may be difficult to exploit them and the failure to uncover successful trading rules or traders cannot be taken as proof of market efficiency.
- [x] If information processing was perfect, many studies conclude that individuals would tend to make less than fully rational decisions using that information due to behavioral biases

13 *COPY_OF* IPMIA MC5 v3

Which two of the following five statements are correct?

Select two alternatives:

- [x] FOX Company has a ratio of (total debt/total assets) that is above the industry average, and a ratio of (long term debt/equity) that is below the industry average. These ratios suggest that the firm has relatively high current liabilities.
- [ ] A firm that has a lower asset turnover ratio than the industry average, implies that the firm is less profitable than other firms in the industry.
- [ ] If a firm has a positive tax rate, a positive ROA, and the interest rate on debt is the same as ROA, then ROA will be greater than zero, but it is impossible to determine how ROA will compare to ROE.
- [ ] Over a period of 30 years or so, in managing investment funds, Benjamin Graham used the approach of investing in the stocks of companies where the stocks were trading at less than their tangible assets value.
- [x] A firm has a (net profit/pretax profit) ratio of 0.6, a leverage ratio of 2, a (pretax profit/EBIT) of 0.6, an asset turnover ratio of 2.5, a current ratio of 1.5, and a return on sales ratio of 4%. The firm's ROE is 7.2%.