Final Exam

Management V-Financial Management (5077)
SS 2005

There are five (5) (including this page)pages for the Exam. Make sure you have five consecutively numbered pages.

You will have 2 hours and 20 minutes (140 minutes) to work the examination.

You may use the lecture script together with your individual notes and any textbook as reference. Calculators and any other electronic equipment are only permitted in accordance with the regulations enacted by the Board of Examiners (Prüfungsausschuss).

To receive full credit for an answer that requires computations YOU MUST show your work/calculations—do not extensively label them. To be clear: If you only write down the answer—EVEN IF IT IS CORRECT, you will receive NO CREDIT for that answer.

There are three (3) major sections to the exam. Each major section begins at the top of a page.

When there is an explanation called for there will also be noted the approximate number of words that should be necessary to express the idea completely. This is a general GUIDE for you. If you write more that is OK. DO NOT COUNT THE WORDS.

Also if you want to correct something—you may simply strike it out and continue. DO NOT TAKE VALUABLE TIME TO ERRASE or WHITE-OUT, BLOW-DRY and THEN CAREFULLY RE-WRITE WHAT YOU WANT TO SAY.

If you think something is "tricky" you are probably reading too much into the question. The exam is a straightforward attempt to cover the important aspects generally considered as part of Finance.

Good Luck

Question Set A [45 points]

Some argue that the only important project evaluation criterion is NPV. Using the following data show why this maybe accurate. The following information is drawn from a real case; you will need to select from the information below that which you deem relevant to answer the questions asked. Also, you may need to make assumptions. When this is the case, briefly justify the assumption—i.e. less than 25 words for each assumption.

The management of the ABC Corporation—a manufacturer of frozen pizzas—is considering two projects: A SAP integrated Forecasting Decision Support System (FDSS) to better forecast demand for its products and a Production Monitoring System [PMDSS] to reduce the percentage of pizzas that do not meet production specifications and must be discarded—called spoilage i.e., these discarded pizzas have no resale value. The initial cost outlay of the SAP forecasting DSS system is 87.500£—British pounds sterling. In the first year, ABC estimates that implementation costs including training will be 175.000€. In the second year, the training costs will be half of the first year costs of 175.000€. You may assume that such implementation and training costs are outsourced and are paid for at the end of the year in question. In the third year, there will be a software upgrade of 59.000£ payable 25% at the beginning of the year and the remaining at the end of the year. The initial cost outlay of the SAP FDSS will be Straight-Line depreciated over seven years. The cost savings of the SAP forecasting DSS is expected to be 78.000€ in the first year, to double in the second year, to increase from that second year value by 25% for the third year, and then to be constant for the remaining years in the planning horizon of seven years. Assume that all savings are realised at the end of the years in question.

For the production monitoring decision support system [PMDSS], the contract price is 155.000€ payable in equal instalments to be made at the beginning of the first four years. The PMDSS has a lifespan of four years. The cost savings, realised at the end of the year in question, due to the reduction of the percentage of spoiled pizzas, is expected to be 65.000€ for year 1, 55.000€ for year 2, 45.000€ for year 3 and 10.000€ for the fourth year. The PMDSS is depreciated on a Double Declining Balance basis over its productive life. There is a guaranteed salvage value of 10% of the contract price for the PMDSS.

Additional information: The exchange rate for the € relative to the £ is 1,76€ = 1,0£. The US T-Bill Composite for 90-days T-Bills is 2,04% and for three-year T-Bills 4,01%. The interest rate for both currencies is the same as the respective US T-Bill Composite rate. Management has a payback cut-off or hurdle of 3 years for investments. The tax effects have been figured into the above computations.

Required:

A1. Discuss the economic the logic of the decision that ABC's management will make given the above information regarding the FDSS and PMDSS investment possibilities. Support your answer with detailed computations. [35 pts, 150 Words]

A2. For a different corporation, the DEF Corporation, the CFO uses IRR to evaluate projects. For Project Q, he finds that the roots of the IRR equation are not real—i.e. imaginary. He says this means that the NPV will be negative and so by both criteria NPV and IRR one should not do Project Q. Comment. [10 Pts, 50 Words]

This is the end of Question A. Question B follows on the next page.

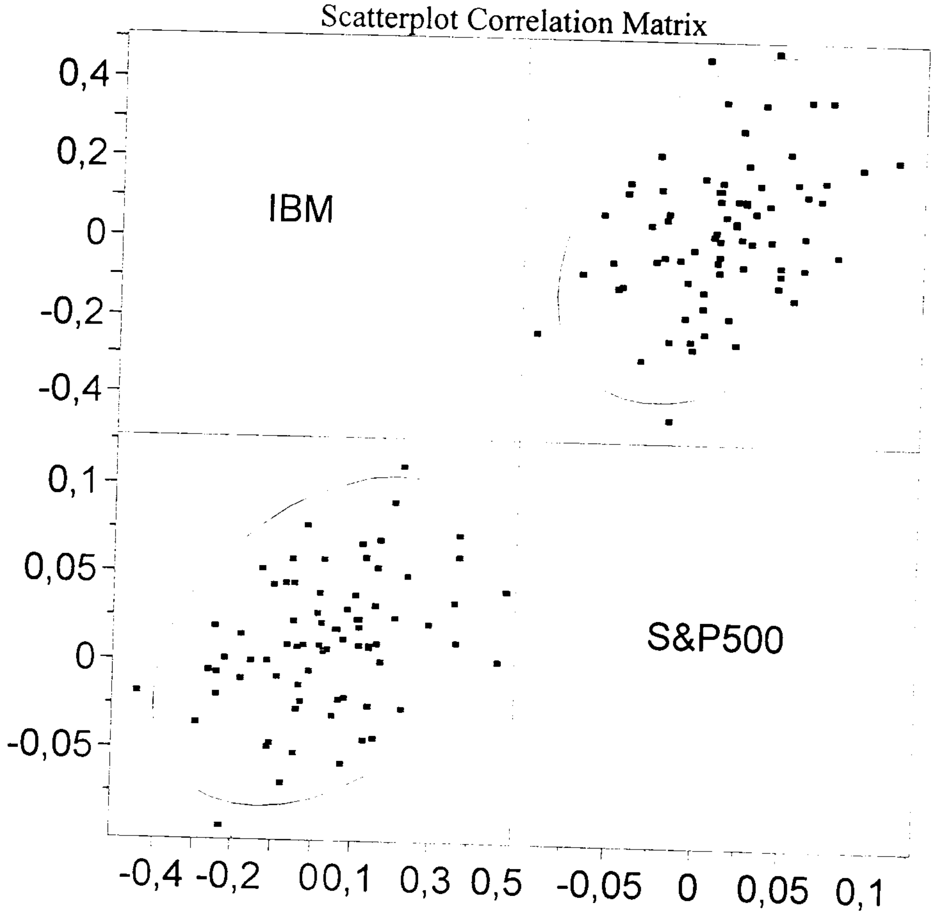
Question Set B [30 points]

Following is information for the IBM Corporation.
This is monthly return information for the IBM Corporation as traded on the NYSE and the matched Standard and Poors 500 [S&P500] as reported by the CRSP data service. The T-Bill Composite average for the period for which the return data was collected was 3,4%.

Correlations

	IBM	S&P500
IBM	1,0000	0,3826
S&P500	0,3826	1,0000

Scatterplot Correlation Matrix



Variance & Covariance Matrix

	IBM	S&P500
IBM	0,03246	0,00265
S&P500	0,00265	0,00147

Required:
Using the above information in Question set B answer the following questions:

B1. If possible, compute the statistical estimate of *Jensen's alpha*. If it is not possible to do so with the information given above, state precisely why this is not possible. (6 Pts, 25 Words).

B2. If possible, compute the estimate of *Beta*. If it is not possible to do so with the information given above, state precisely why this is not possible. (6 Pts, 25 Words)

B3. Given the above information, do you think that the confidence intervals for *Jensen's alpha* and *Beta* will be precise? Defend your position. (4 Pts, 25 Words)

New data set: The Sanyo Corporation
Assume that you have generated the following CAPM regression information for the Excess Returns for the Sanyo Corporation relative to the Excess Returns for the S&P500:

Regression Parameter Estimates

Term	Estimate	Std Error
Intercept	0,39	0,34
Slope	1,42	0,545

Required:
B4. Explain the information in the above Regression Parameter Estimates Table to the Sanyo's senior management—i.e. using relatively non-technical language. (10 Pts, 150 Words)

B5. Sanyo is interested in adopting EVA. They have decided to use the CAPM information in computing The Cost of Equity Capital Employed that is a part of the weighted average cost of capital (WACC) computation used in calculating EVA. Advise Sanyo's CFO on what information they need to have to calculate the cost of equity rate that they will apply to the Capital Employed to arrive at the Cost of Equity Capital Employed. (4 Pts, 50 Words)

This is the end of Question B. Question C follows on the next page

Question Set C [25 points]

Assume that you are working for a M&A firm and you are examining The AFF Corporation which is traded on the NASDAQ as a possible acquisition for your client—the UNICOL Oil Collective. AFF has been authorised to issue150.000 shares of common stock. To date, AFF has issued 137.500 of these authorised shares. Of the shares issued, 23.000 shares are owned by employees as part of the AFF's stock-option plans and 12.233 shares are held by AFF as Treasury Shares. The current market price of AFF's shares is 125,32€. The 90 day T-Bill composite is 2,76%. AFF is being considered by UNICOL because AFF has recently upgraded its oil refining technology for oil reclamation from mountain strip-mining. This is now currently a possibility given the Bush administration's recent success in opening up Alaska for oil exploration. The market value of AFF's patented oil reclamation process is estimated to be in the range of 12.000.000€ to 14.000.000€. These estimates are Uniformly distributed. UNICOL only undertakes possible acquisitions if the one year abandonment—i.e. PUT option value for a one-period model/computation—is greater than 1.000.000€. The variance of the AFF's annual return in the recent relevant past has been 0,03543.

Required:

C1. How do you recommend treating the shares of AFF's common stock held as part of the employee stock option plans and those in the treasury in calculating the market value of AFF? Defend your position for each? (5 pts, 25 words in total)

C2. Advise the CFO of the UNICOL Collective and her technical staff regarding the possibilities for the AFF acquisition. Support your answer with detailed computations. Here, **for purposes of the computations**—i.e. this has no bearing on your answer in C1 above—use as the number of shares outstanding 137.500. (20 Pts,150 Words)

This is the end of Question C and the end of the exam.