

Question 1

You have a good friend from college that made a decision of not leaving Santa Barbara, even after graduating. These days, he makes his living by renting rooms in Isla Vista. Among the several houses he rents, there is this one, for which he has a 10 year lease from the true owner. By a strange set of circumstances, the annual lease he pays to the true owner is only \$1,000 a year.

From this house in particular he collected rent of \$20,000 this year. This income is expected to grow 5% every year. As a true Isla Vista landlord, he plans to keep maintenance close to zero.

He called you, because the owner asked him if he wanted to buy the house today for \$500,000. He is unsure about this, and since he knows you have solid financial expertise, wanted to know your opinion about this deal.

After giving some thought to it, you realized the accurate rate of return for the business of renting rooms in Isla Vista is 10%.

Should he accept the offer?

Question 2

In Rosario, Cho and Lang you were given a portfolio to manage. This portfolio has an expected return of 15% and a standard deviation of 30%

You are meeting with a client, which is a little weary of all that standard deviation. For that reason he wants to combine that portfolio with some Treasury Bills. The Treasury Bills have a return of 6%.

- a) He has a total amount of \$2,000,000 to invest. If he decides to have 60% of his money invested in the portfolio and the rest on the Treasury Bills, what is the expected rate of return and standard deviation this combination will have?
- b) The portfolio you were suggesting is composed of two stocks, Advanced Medicals and Backward Industries. Here is the information about the two companies

Company	Expected Return	Standard Deviation
Advanced Medicals	20%	35%
Backward Industries	5%	16%

What is the composition of the portfolio and what is the correlation between the returns of the two stocks? How much is your client investing in each of the stocks?

- c) One week later, the client comes back and said he decided to have a different combination between the stock portfolio and the Treasury Bills. He feels he can be comfortable with a standard deviation of 25%. What trade do you need to make in order to maximize his expected return for that level of standard deviation?

Question 3

One of the companies you are advising is Omega Corporation. This company is owned by the Greek entrepreneur Mr. Vassilis Papandreou. Omega has 10 million shares outstanding, which trade at a price of \$55 each. At this price, the shareholders earn a rate of return of 12%. The company's capital structure includes a \$200 million issue of long term Bonds, with a yield of 7%.

Although the company is Greek it is established in the United States and is charged a corporate tax rate of 35%.

- a) What is the weighted Average Cost of Capital of Omega?
- b) Mr. Papandreou is very upset with the corporate tax rate he pays here. He claims it hurts the stock price, because so much of the money it generates is paid as taxes. For this reason he devised a plan to move the legal base of their operations to the island of Mikonos. This greek island, apart from being his homeland, is a newly formed tax haven, where corporate taxes are zero.

If he goes ahead with the plan, what will be the new price per share of Omega?

- c) He also feels that this move will lower the risk of the shareholders. Is he right on this?

Question 4

Your next client is Mr. Robinson. He specializes in Blitzkrieg Economics. His projects consist in very short lived operations that will be shut down only a few years after they were started.

This project specifically only has a two year life span. He needs to invest \$1million now and expects to receive after tax returns of \$600,000 in year 1 and \$700,000 in year 2. The specific nature of the project has a risk accurately measured by a 12% rate of return.

In order to help finance the project, he will combine his own funds with a loan of \$300,000 at a cost of 8%. Being this a high speed project, the repayment of the loan, will be also a very quick one. The loan will have to be paid in two years like an Annuity instead of like a Bond. The tax rate in the county where the project will take place is 30%.

Should Mr. Robinson go ahead with this project? What is the Net Present Value?

(hint: remember that only the interest part of each payment is tax deductible. The re-payment of principal is not)

Question 5

Your next client at Rosario, Cho and Lang is Mr. Stevens, the owner and sole shareholder of Stevens Industrials. Mr. Stevens is an old school entrepreneur and only until recently never used Debt to help finance his projects. He currently has a capital structure with some debt, however he seems not to care much about the point of view of the Bondholders and only cares about the effects the project will have on his position in the firm.

For this reason, you already learned that, in order to keep him a happy client of the Firm, you always gives him advice using has measure the impact on the Equity and not on the firm as a whole.

- a) By doing this, do you think you might be taking a chance of giving a wrong advice to Mr. Stevens?

- b) Mr. Stevens came to you with his latest project. It's a new Mill that will expand the timber operations. The cost of building the new Mill will be \$20 million and will result in Earnings before interest and taxes of \$1.4 million. Mr. Stevens plans to maintain the target Debt/Equity ratio in Stevens Industrials of 1/5 by issuing bonds with a market value of \$4 million paying a yield of 8%.

From your past experience dealing with the timber business you already know that the risk of this activity is correctly measured by a rate of 10%. Also, the tax rate is 35%.

What advice would you give to Mr. Stevens?