

Assignment 1 (5% of total grade)

Due date: Saturday 17th September 2011, 1.15 p.m. in class

Instructions:

1. Attempt the assignment in a group of two students
2. Provide the details of your calculation and explanation, only 2 decimal points is required for the currency number.
3. Any question regarding this assignment, please contact teacher assistance
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Questions: Answer all questions.

1. Find the future value of the following ordinary annuities; assuming there are 365 days for 1 year
 - a) FV of \$360 each 40 days for 3 years, nominal rate of 12% per annum (p.a.), compounded every 40 days.
 - b) FV of \$10 each 1 day for 3 years, nominal of 10% p.a., compounded daily.
 - c) Between choice a) and b), which one would you prefer and why? Give the reasons behind the process.

2. Theerapat plans to buy the condominium unit in next two years with the expected price around 1,500,000 baht. The down payment is 20% of the unit price. And the remaining amount will be financed by 5-year mortgage loan with interest 6% p.a. and annual repayment condition. Currently, he has 240,000 baht in equity portfolio as the saving for down payment. This portfolio is quarterly compounded
 - a) What is the nominal required rate of return of his equity portfolio in order to pay the down payment in 2 years?
 - b) Calculate the annual repayment of 5-year mortgage loan.
 - c) Construct the amortization schedule.
 - d) If he has ability to pay the loan installment at 20,000 baht per month on 5-year loan, 6% p.a.; what is the maximum amount of loan that he could borrow?

3. A and B are the fund managers but they have different philosophies of investment.

A is the value investor type. When he invests stocks, he would buy and hold it for 8 months. After 8 months, he would sell stocks and reinvest again. During 12 years as a fund manager, his portfolio worth 800,000,000 Baht while the beginning amount was 10,000,000 baht.

On the other hands, B manages the hedge fund which looking for high return with high-risk acceptance. So his style is the day trader. He always has the short-term investment by trading securities and foreign currency. His holding period on security is 1 week only. With starting amount of 1,000,000 baht 9 years ago, now his portfolio worth 50,000,000 baht.

 - a) Based on the effective annual rate (rate of return), who has better investing performance? Provide the reason and calculation.

- b) If you are looking for the fund manager to invest with, there are other factors besides the rate of return. Specify what factors that you should concern before investing in any fund according to the question (only short paragraph is needed).
4. Jack is going to apply master degree program in finance in next 5 years. This program is 3-year program with the current tuition fee of 4,000,000 baht for whole program; however, the fee will rise up 2% per year due to inflation. The tuition fee payment can be made annually.
- Find the tuition fee of this program in next five year
 - Since the fee can be paid annually i.e. the average of tuition fee of the program, what is minimum amount of money that Jack should have in next five year. Let the discount rate is 3% per year.
 - Suppose at 1 year before going to the college, Jack got the scholarship which cover tuition fee and cost of living already, so he would not worry about the money anymore. Now, the scholarship committee offers two options of providing scholarship to Jack:
 - The scholarship will be paid as a lump-sum for 8,000,000 baht immediately
 - The scholarship will be paid annually for 3 periods starting next year; the first payment for coming year is 3,000,000 baht with the increasing rate of 6% per year.
- Based on Jack's decision at 1 year before going to college, which option is better for him? Assuming the discount rate is 10% per year.
5. Company AAA made a net profit in year 2009 of 1.5 billion baht. Many financial researches found out that the net profit of AAA is expected to grow 10% p.a. forever. AAA has the policy to pay the dividend to customer at 50% of net income at the end of each year (31st December). The outstanding number of share is 100 million shares.
- What should be the stock price of AAA on 1st January 2012? Apply required rate of return on equity as a discount rate of 15% to discount all future cash flows that shareholders should receive i.e. dividend.
 - However, on 2nd January 2012, the government implements the new minimum wage rate policy (300 baht per day). This would cost around 300 million baht in year 2012. Moreover, the expected year-on-year net profit growth rate would drop to 5% per year for next 3 consecutive years (2013-2015). Afterward since 2016, AAA would adjust the new policy already and the expected growth would be recovered to 10% forever again. Back to 2nd January 2012, if the stock price of AAA fell to 160 baht per share. Would you like to buy AAA stock at this price as a rational investor? Why?