

Assignment 1 (5% of total grade)

Due date: Saturday 18th February 2012, 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 assistant
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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 \$180 each 72 days for 3 years, nominal rate of 6% per annum (p.a.), compounded every 72 days.
 - b) FV of \$2 each 1 day for 3 years, nominal of 7% p.a., compounded daily.
 - c) Between choice a) and b), which one would you prefer and why? Discuss.
 - d) Suppose there is a diamond ring cost \$2,000 three years ago with price rising rate of 5% p.a.. According to saving choice a) and b), can you achieve to buy that diamond ring now?

2. Jaras plans to buy the condominium unit in next two years with the expected price around 1,800,000 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 300,000 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 25,000 baht per month on 5-year loan, 6% p.a.; what is the maximum amount of loan that he could borrow?

3. Sajjapat is the High Net Worth Individual guy and he is looking for investment opportunity. The asset management company offers him with 3 investment choices:

Fund A: The policy of fund is to invest on stocks market only; fund manager would buy and hold it for 8 months. After 8 months, he sell stocks and reinvest again. According to performance in past 12 years, the portfolio values 120,000,000 Baht while the beginning amount was 10,000,000 baht.

Fund B: The management style is like the hedge fund which looking for high return with high-risk acceptance. Fund manager always has the short-term investment by trading securities and foreign currency. The holding period is 1 week only. With starting amount of 1,000,000 baht 9 years ago, now his portfolio worth 8,000,000 baht.

Fund C: The fund promises to pay return with nominal rate 20% p.a. compounded continuously

 - a) Based on the effective annual rate (rate of return), which fund seems to be the interesting way for Sajjapat? Provide the reason and calculation.

- b) Nevertheless, 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. Jamie is going to apply master degree program in finance in next 4 years. This program is 3-year program with the current tuition fee of 4,500,000 baht for entire program; however, the fee will rise up 3% per year due to inflation. The tuition fee payment can be made annually at the average cost.
- a) Find the tuition fee of this program in next four year
 - b) Since the fee can be paid annually i.e. the average of tuition fee of the program, what is minimum amount of money that Jamie should have in next four year. Let the discount rate is 3% per year.
 - c) Suppose at 1 year before going to the college, Jamie got the scholarship which cover tuition fee and cost of living already, so she would not worry about the money anymore. Now, the scholarship committee offers two options of providing scholarship to Jamie:
 1. The scholarship will be paid as a lump-sum for 8,000,000 baht immediately
 2. The scholarship will be paid annually for 3 periods starting next year (when she goes to school); the first payment for coming year is 3,000,000 baht with the increasing rate of 7% per year.

Based on Jamie's decision at 1 year before going to college, which option is better for her? Assuming the discount rate is 8% per year.
5. Company N&N made a net profit of 2.5 billion baht in year 2009. Many financial researchers found out that the net profit of N&N is expected to grow 10% p.a. forever. Given, there are 50 million shares outstanding and N&N imposed a retention ratio of 70% of net income (i.e. the remaining net profit will be paid to shareholder as the dividend) at the end of the year (31st December)
- a) What should be the stock price of N&N 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. Note Dividend is paid after the retaining of firm cash flows.
 - b) However, in 2011, N&N has affected by mass flooding crisis. It costs the company 500 million baht in year 2011 from its initial expectation. Moreover, the expected year-on-year net profit growth rate would drop to 5% per year for next 3 consecutive years (2012-2014). Afterward since 2015, N&N recovery will result in dramatically growth up to 12% forever again. Back on 2nd January 2012, if the stock price of N&N is quoted at 320 Baht per share. Would you buy N&N stock at this price as a rational investor? Why?