

KOI

Trimester 1, 2018

FIN700 – Financial Management

ASSIGNMENT– GROUP

Due date: Submit to your Tutor by the start of your Tutorial in Week 9: Monday, 14 May, or on Tuesday, 15 May, or on Saturday, 19 May, 2018. Keep a soft copy in case of misadventure.

Penalties for late lodgment, as per the Subject Outline, will be strictly applied.

This Assignment consists of 4 problems, each involving calculations, and in some cases recommendations.

You are required to complete this Assignment in Groups of 2 or 3 or 4 people.

*****Groups of 1 or more than 4 persons will incur a penalty of 5 marks out of 30%.*****

All members of the Group should come from the same Tutorial class. You may consult and discuss the Assignment topic with others, but you must write up your answers yourselves. Penalties for copying and plagiarism are severe.

You should follow the following typing conventions:

- Answers to be typed, in the space provided after each question
- If additional pages are required, use the blank pages at the end.
- Times New Roman font (at minimum, 12 pitch), 1.5 line spacing; and
- Left and right margins to be at least 2.5 cm from the edge of the page.

Research, Referencing and Submission

You should quote any references used at the end of each question.

Use Harvard referencing! See http://en.wikipedia.org/wiki/Harvard_referencing

As this is a calculations problem, there is no need to submit via TURNITIN.

Do not submit this page. Submit page 2 onwards, along with KOI Group Assignment Cover Page& Mark'g Rubric.

Marking Guide

The Assignment will be scored out of 70%, with 20 marks also awarded for quality of Recommendations and 10 for Presentation, in line with the rubric in the Subject Outline. This mark will be converted to a score out of 30%.

Dr Mervyn Fiedler, Subject Co-ordinator, FIN 700. 14 April, 2018.

*****NOTE:When submitting Assignment, please submit from this page onwards,
with a KOI Group Assignment cover page in front,
and a FIN700 Marking Rubric at the back.*****

Trimester T118

FIN700

GROUP ASSIGNMENT

Students: Please complete the following before submitting for marking.

Group members

<u>Student No.</u>	<u>Student Name</u>	<u>Percentage Contribution to Assignment</u>	<u>Signature</u>
1.
2.
3.
4.

Tutor:

Please circle one name: Ms Ruhina Karim; Mr Nishith Panthi; Mr Paul Power;

Ms Farzaneh Ortacand; Mr Ethan Zheng

Tutorial Dayand Time

This Assignment consists of four questions. All questions must be answered.
Please answer all questions in the spaces provided after each question.
Two extra pages are included at the end of the Assignment. If more pages are
required, please copy (or extend) page 14.

QUESTION 1. [6 + 4 + 6 = 16 Marks.]

a) This is a two period certainty model problem.

Assume that Daisy Brown has a sole income from Fantasy Ltd in which she owns 15% of the ordinary share capital. Currently, she has no savings.

In February, 2018, Fantasy Ltd reported net profits after tax of \$600,000, and announced it expects net profits after tax for the current calendar year, 2018, to be 30% higher than last year's figure. The company operates with a dividend payout ratio of 75%, which it plans to continue, and will pay the annual dividend for 2017 in late-May, 2018, and the dividend for 2018 in late-May, 2019.

In late-May, 2019, Daisy wishes to spend \$100,000, which will include the cost of an overseas trip. How much can she consume in late-May, 2018 if the capital market offers an interest rate of 10% per year?

b) This is an annual equivalent costs problem.

Y Ltd has received two offers for a new computer system. System P will cost \$200,000 now, has a three year life and costs \$10,000 a year to operate. System Q costs \$240,000 now, has a four year life and costs \$12,000 a year to operate. The relevant discount rate is 6 per cent per annum. Ignoring depreciation and taxes, calculate the AEC for each. Which do you prefer, and why?

QUESTION 1 continued.

c) *This question relates to the valuation of interest-bearing securities.*

Wildcat Bank Ltd has experienced large losses on its commercial loan portfolio and is unable to meet its next two annual interest payments on its recent issue of unsecured notes. The notes are of \$1,000 face value each, mature in May, 2023 and bear a yearly interest coupon payment of 14% per annum.

The Bank paid the interest due this month (May, 2018), and following a meeting of creditors, arranged to defer payment of the next two interest coupons due in May, 2019 and May, 2020 respectively. Under the arrangement with creditors, the Bank will pay the remaining interest coupons (due in May, 2021, May, 2022 and May, 2023) on their due dates, and pay the two deferred coupons (without interest) along with the normal final interest payment and face value of the notes on the maturity date.

Wildcat Bank Ltd's notes are now seen as risky, and require an 18% per annum return.

REQUIRED: Calculate the current value of each Wildcat Bank unsecured note.

QUESTION 2. [(4 + 4) + (2 + 2 + 3 + 3) = 18 Marks]

a) ***This question relates to the time value of money and deferred annuities.***

Joan Daly is age 38 today and plans to retire on her 60th birthday. With future inflation, Joan estimates that she will require around \$1,800,000 at age 60 to ensure that she will have a comfortable life in retirement. She is a single professional and believes that she can contribute \$3,600 at the end of each month, starting in one month's time and finishing on her 60th birthday.

i) If the fund to which she contributes earns 5.4% per annum, compounded monthly (after tax), how much will she have at age 60? Will she have achieved her targeted sum? What is the surplus or the shortfall?

ii) Using the entire fund balance, Joan then wishes to commence a monthly pension payable by the fund starting one month after her 60th birthday, and ending on her 85th birthday, after which she expects that the fund will be fully expended. If the fund continues to earn the above return of 5.4% per annum, compounded monthly, how much monthly pension will Joan receive, if the fund balance reduces to zero as planned after the last pension payment on her 85th birthday?

QUESTION 3. [(2 + 2 + 4 + 3 + 3 + 2 = 16 marks)]

This question relates to alternative investment choice techniques

Andrew Hardcastle is considering the following cash flows for two mutually exclusive projects.

Year	Cash Flows, Investment M (\$)	Cash Flows, Investment N (\$)
0	-48,000	-48,000
1	15,000	24,000
2	24,000	24,000
3	36,000	24,000

You are required to answer the following questions:

- i) If the cash flows after year 0 occur evenly over each year, what is the payback period for each project, and on this basis, which project would you prefer?

IN THE REMAINING PARTS, ASSUME THAT ALL CASH FLOWS OCCUR AT THE END OF EACH YEAR.

- ii) Would the payback periods then be any different to your answer in i)? If so, what would the payback periods be?

QUESTION 3 continued.

- v) Calculate the exact **crossover point** (an interest rate, expressed as a percentage correct to two places of decimals) of the respective net present values for the above projects.
- vi) Having regard to the above calculations, state – with reasons - which of investments M and N you would prefer.

QUESTION 4. [18 + 2 = 20 marks].

This question relates to capital budgeting.

Interstate Haulage Ltd is considering the purchase of two new modern large trucks costing \$500,000 each, which it will fully finance with a fixed interest loan of 8% per annum, with interest paid monthly and the principal repaid at the end of 4 years. The trucks will be used in the company's interstate and intra-state trucking business.

The two new trucks will replace three existing smaller trucks and will permit the company to reduce its storage costs by \$50,000 a year and its labour costs by \$200,000 a year, both over the next 4 years. [Assume these savings are realized at the end of each year.]

The new trucks may be depreciated for tax purposes by the straight-line method to zero over the next 4 years. The company thinks that it can sell the trucks at the end of 4 years for \$150,000 each.

QUESTION 4 continued.

The three smaller old trucks were bought 1 year ago for \$250,000 each, with a then life expectancy of 5 years, and have been depreciated by the straight-line method at 20% a year. If the company proceeds with the above purchase, the old trucks will be sold this month for \$100,000 each.

This is not the first time that the company has considered this purchase and replacement. Twelve months ago, the company engaged Cartage Consultants, at a fee of \$20,000 paid in advance, to conduct a feasibility study on savings strategies and Cartage made the above recommendations. At the time, Interstate Haulage Ltd did not proceed with the recommended strategy, but is now reconsidering the proposal.

Interstate Haulage Ltd further estimates that it will have to spend tax-deductible amounts of \$40,000 in 2 years' time and \$50,000 in 3 years' time overhauling the trucks.

It will also require additions to current assets of \$30,000 at the beginning of the project, which will be fully recoverable at the end of the fourth year.

Interstate Haulage Ltd's cost of capital is 10%. The tax rate is 30%. Tax is paid in the year in which earnings are received.

REQUIRED:

- (a) Calculate the net present value (NPV), that is, the net benefit or net loss in present value terms of the proposed purchase costs and the resultant incremental cash flows.

[HINT: As shown in the text-book, it is recommended that for each year you calculate the tax effect first, then identify the cash flows, then calculate the overall net present value. Finally, make your recommendation.]

QUESTION 4 continued.

(b) Should the company purchase the new trucks? State clearly why or why not.

END OF ASSIGNMENT QUESTIONS

ADDITIONAL PAGE 1 (for workings, or if your answers take more space.)

ADDITIONAL PAGE 2 (for workings, or if your answers take more space).