

ASSIGNMENT QUESTION

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| Programme: | Executive MBA |
| Module Code & Name: | EMBFDM – Finance for Decision Making |
| Business School: | IEMD Graduate Business School, Spain |
| Course Leader: | |
| Title: | Firm X's Capital Structure Decision |

Assignment Tasks:

Firm X is a new firm, and has the opportunity to invest in its first new project. The new project will require investment of \$100,000, and is expected to provide net cash flow of \$40,000 per annum for the foreseeable future (that is, it can be treated as a perpetuity). The board are discussing the best way to raise finance for the new project.

A heated discussion follows. One board member has just been on a course on Miller-Modigliani, and announces that “it does not matter how we finance the project. It will not affect the value of our company. What matters is that the project has a positive NPV at a discount rate of 15%. Therefore, we should take it with any financing mix.”

Another board member disagrees. He argues “The financing mix does matter! It is crucial that we find the right capital structure, especially as we pay corporation tax of 40%.”

Further Information:

The finance director has obtained two possible estimates of the pre-tax cost of capital for different capital structures as follows (for simplicity, assume that the pre tax and post tax cost of equity is identical);

Case 1: Risk Free Debt

| % Debt/ % equity. | Cost of Debt (%) | Cost of Equity (%) |
|-------------------|------------------|--------------------|
| 0/100 | 5 | 15 |
| 10/90 | 5 | 16.2 |
| 20/80 | 5 | 17.5 |
| 30/70 | 5 | 19.3 |
| 40/60 | 5 | 21.7 |
| 50/50 | 5 | 25 |
| 60/40 | 5 | 30 |
| 70/30 | 5 | 38.5 |
| 80/20 | 5 | 55 |

Case 2: Risky Debt

| % Debt/ % equity. | Cost of Debt (%) | Cost of Equity (%) |
|-------------------|------------------|--------------------|
| 0/100 | 5 | 15 |
| 10/90 | 5 | 16.2 |
| 20/80 | 5 | 17.5 |
| 30/70 | 5 | 19.3 |
| 40/60 | 5 | 21.7 |
| 50/50 | 5 | 25 |
| 60/40 | 6 | 30.5 |
| 70/30 | 7 | 39.4 |
| 80/20 | 8 | 57 |

Required:-

1. You are required to prepare a numerical analysis for the board regarding the effect of capital structure on firm X's cost of capital and firm value. You should analyse 4 cases: a) risk-free debt without tax. b) Risky-debt without tax. c) Risk-free debt with tax. d) Risky debt with tax. In each case, you should present tables, and graphs, that show the WACC and project values for different debt-equity ratios. Your report should recommend the optimal capital structure for the new project in all cases.
2. The CEO likes your report, but points out that it only tells half the story. In particular, he is concerned that it ignores the agency and signalling effects of capital structure. He requests a further brief report examining these problems, and how they might affect firm X's financing decision and firm value.

No specific word limits and assignment length but with indexed headings & subheadings in the following format:

- A Cover Page
- Table of Contents
- Introduction
- Body
- Conclusion
- Reference Section

The **Harvard Referencing System** must be adopted with in-text citations.

Further Instructions for Assignment.

1. The general assessment criteria are: Substance, Originality of work, Presentation, Use of illustrations / examples, where appropriate.
2. Independent research on the relevant topics is encouraged.

3. Special consideration would be given to students who demonstrate an in-depth analysis of the questions.
4. Candidates who simply regurgitate their answers from sources may risk getting a poor mark and may risk failing the paper outright if plagiarism is detected.
5. Any similarities between individual assignments will result in a fail grade.
6. The presentation format should be:
 - Top, Bottom margins : 1"
 - Left margins : 1.25"
 - Right margin : 0.8"
 - Header & Footer : 0.5"
 - Printing : Single Page A4 size
 - Vertical spacing : Double
 - Font type & size : Times Roman 12 pt
 - Binding : Comb
 - Page numbering : Page x of y (right justified in footer)
7. Retain a copy of your assignment.
8. You are required to submit a labelled soft copy of your assignment.

Legends for Term Used

| Terms | General Description of Work Presented |
|--------------------------|---|
| Excellent | <ul style="list-style-type: none"> • Relevant issues consistently identified/discussed/analysed to a very high standard with very clear explanations/rationale/justification. • Very strong evidence of wider reading with relevant citations used providing very strong insights into the topic of discussion. • Critical analysis very well developed with strong identifications of pros and cons and the impact/implications of both to the issue at hand. • Very professionally and creatively presented quality of work that is very neat and tidy with very coherent flows of arguments. |
| Good/Strong/Clear | <ul style="list-style-type: none"> • Relevant issues consistently identified/discussed/analysed to a high standard with clear explanations/rationale/justification. • Strong evidence of wider reading with relevant citations used providing strong insights into the topic of discussion. • Critical analysis well developed with good identifications of pros and cons and the impact/implications of both to the issue at hand. |

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| | <ul style="list-style-type: none"> • Some professionalism and creativity shown in the quality of presentation with work that is neat and tidy with coherent flows of arguments. |
| <p>Some / Fair / Somewhat</p> | <ul style="list-style-type: none"> • Relevant issues consistently identified/discussed/analysed to a satisfactory standard with good explanations/rationale/justification. Some inconsistencies. • Some evidence of wider reading with relevant citations used providing good insights into the topic of discussion. • Critical analysis somewhat developed with some identifications of pros and cons and the impact/implications of both to the issue at hand. • Some professionalism and creativity shown in the quality of presentation with work that is somewhat neat and tidy with some coherent flows of arguments. |
| <p>Poor / Little / Partial</p> | <ul style="list-style-type: none"> • Relevant issues consistently identified/discussed/analysed to an inconsistent standard with poor explanations/rationale/justification. Many inconsistencies detected. • Little evidence of wider reading with relevant citations used providing little insights into the topic of discussion. • Critical analysis poorly developed with little or no identifications of pros and cons and the impact/implications of both to the issue at hand. • Little professionalism and creativity shown in the quality of presentation with work that is NOT neat and tidy with incoherent flows of arguments. |