



GROUP WORK ASSIGNMENT

GESTÃO FINANCEIRA II

UNDERGRADUATE PROGRAMS

1ST SEMESTER 2010-2011

The Group Work Assignment of Gestão Financeira II consists in solving a practical corporate investment project analysis. This involves a sound knowledge of cash flow forecasting, determining cost of debt and cost of equity in different industries, making credible assumptions about different scenarios, and decision-making.

The case-study is briefly summarized in the next page, but please read first the rules of the game.

Rules of the Game:

1) Important Dates:

- a. **Group Composition by November 5th, 2010:** Each group must give to one of the course instructors a sheet of paper containing – for each member of the group: name, student number, photograph, class (turma) attended.
- b. **Final Due Date is December, 17th, 2010, before 1pm:** you can hand in your assignments to your class instructor (during class) or address it to Professor Clara Raposo (Gabinete 616) – at the reception of the ISEG building in Rua Miguel Lupi, No. 20;

2) **Each group must be of 3 to 4 students.** If any of you has a problem in finding partners, let your class instructor know as soon as possible, and a solution will be found.

3) The assignment involves producing three elements:

- a. A **Report** written in Microsoft Office **word**, discussing your choice of methodology, assumptions, computations, tables, and conclusions (MAXIMUM 10 pages A4);
- b. A **Spreadsheet** in Microsoft office **excel** in a cd-rom, supporting your written report;
- c. A **Presentation** in Microsoft Office **powerpoint** included in the cd-rom.

4) The course instructors may ask different groups (and group members) to present their work before the final marks are given.

CASE DESCRIPTION

A NEW INVESTMENT PROJECT: LOCKHEED MARTIN CORPORATION

Lockheed Martin Corporation, a company that mostly operates in the Aerospace/Defence industry, is considering a new investment project with the following financial projections:

| | Year 1 | Year 2 | Year 3 | Year 4 |
|--------------------------|---------|---------|---------|---------|
| Production ('000 units) | 4.5 | 10 | 17 | 20 |
| Personnel costs (\$'000) | \$1,750 | \$2,000 | \$2,500 | \$2,500 |

The variable costs include: cost of raw materials (30% of revenues) and energy costs of \$70 per unit in the first year, growing annually at 4%.

The estimated selling price for Year 1 is \$3,000 per unit, growing at an annual rate of 3%. All the production is expected to be sold at the end of each year. The project will last 4 years.

Net Working Capital each year is approximately 8% of next year's sales.

Two years ago the company started the first tests of this new technology, having invested then \$3 million in Research & Development. In Year 1 the company is expected to spend additionally \$400,000 in R&D in order to make final adjustments to the product.

In terms of marketing effort in promoting its new product, Lockheed plans to invest annually \$425,000 during the next 4 years.

The initial capital expenditure to be made immediately in new equipment is \$8 million, with full depreciation straight-line during the 4 years. This equipment will be sold in year 4 for an estimated value of \$200,000. In year 1 there is a new investment in fixed assets of \$1.2 million, to be depreciated in 4 years – though it will be sold at the end of the project for \$380,000.

Additional data on Lockheed Martin Corporation (quote LMT) is available at <http://finance.yahoo.com/>. You may also use other sources, such as MyFinanceLab, or Damodaran's site (given below).

Data on long-term government bonds yield (T-bonds yield) and the expected market risk premium (arithmetic average, Stocks – T-bond) can be downloaded from <http://pages.stern.nyu.edu/~adamodar/> by selecting Updated Data/Historical Returns on Stocks, Bonds and Bills – United States on Discount Rate Estimation topic. You may also use other sources, such as MyFinanceLab.

QUESTIONS:

- a) Assess the quality of this project by computing – whenever possible – its NPV (net present value), IRR (internal rate of return), and Profitability Index. Assume that this project is scale-enhancing for LMT (that is, in the same industry as the company itself), and all-equity financed. Should the company invest?
- b) Perform reasonable sensitivity analysis for the variables you consider relevant and interpret your results.
- c) Provide reasonable optimistic and pessimistic scenarios, and interpret your results.
- d) Reformulate a) considering that the investment is financed partly with debt, with the same debt-to-equity ratio as Lockheed Martin Corporation itself. Comment.
- e) Compute the NPV assuming this time that the project is a biotechnology investment with a target debt-to-equity ratio of 1.5. Data on the biotechnology industry beta is available at <http://pages.stern.nyu.edu/~adamodar/> by selecting Updated Data/ Levered and Unlevered Betas by Industry.