



GROUP WORK ASSIGNMENT

GESTÃO FINANCEIRA II

UNDERGRADUATE PROGRAMS

1st SEMESTER 2011-2012

The Group Work Assignment of Gestão Financeira II consists in solving a practical corporate investment project case. 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 2nd, 2011:** 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, and class (turma) attended.
- b. **Final Due Date is December, 12th, 2011, before 10 am:** you can hand in your assignments to your class instructor (during class, before that final date) 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 4 to 5 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) Any group and group member may be asked by the course instructors to **present** their assignment.

CASE DESCRIPTION:



DISCLAIMER: Most numbers provided regarding costs and prices are totally fictional!!!

Surgeon Zhao Zhongliang serves a farming community in China's Hebei province. He recently worked with the Ethicon Endo-Surgery franchise to develop a new, market-appropriate surgical stapler to meet needs of patients like his. Specialized **surgical staples** are often used to connect tissue during certain surgeries. They're credited with quicker recovery times than suturing by hand. But in emerging markets, it often costs too much to use specialized equipment designed for developed markets. Dr. Zhao is excited about what the new surgical tool could mean for his patients. "Patients who can now receive better health care at lower cost are certainly grateful," he says. "Now, patients don't carry the psychological weight of financial burden, so their recovery is complete."

For a health care company passionate about meeting the unmet needs of hundreds of millions more patients, Johnson & Johnson needs to challenge its innovation capability to develop solutions that will be both appropriate and affordable. To that end, Johnson & Johnson is strategically basing research and development (R&D) centers in emerging markets to develop medical devices and pharmaceutical and consumer products based on insights available in local markets.

Now, the fictional component of the assignment comes. Suppose that Johnson & Johnson decides to spend \$5 million in capital expenditures in November 2011, in order to develop production of the new surgical staples for the Asia-Pacific region. The equipment in which the company will invest has a useful life of 15 years, but the company expects to sell it for \$500,000 at the end of 14 years, when the project ends.

The company expects to produce and sell 3.5 million units of the new surgical staples during the first year of production. The number of units sold is expected to increase 6% per year during the first 5 years of the project, and by 2% in the remaining 9 years of operations. The unit price of the staples is... your choice!!!!

Regarding operating costs (excluding depreciation) assume that the costs of products sold are approximately 30% of the value of the sales (according to the annual report, regarding the segment "Medical Devices"), and that selling, marketing and administrative expenses are approximately 32% of the value of sales.

With the launch of the new staples, Johnson & Johnson will also lose sales of other "older" products. Assuming an annual value of sales of the old-generation staples of \$10 million, we expect this new project to cause the loss of 10% of these sales.

The Net Working Capital needs of the project in a certain year are approximately 15% of the sales of the project the year after.

As a newly hired expert in the capital budgeting division you have been asked to evaluate the new project. You will compute the appropriate costs of capital and the net present value. You must seek out the information necessary to value the free cash flows. But you'll be given some directions to follow!

Additional Help on How to Get More Information:

Data on Johnson & Johnson (quote JNJ) is available at MarketWatch.com (www.marketwatch.com):

- Go to MarketWatch.com (www.marketwatch.com) and get the quote for Johnson & Johnson (symbol: JNJ). If you click "Financials", the **income statements** for the last four fiscal years will appear. You can place the cursor in the middle of the statements and right-click the mouse. You then can select "Export to Microsoft Excel."
- You can also select "**Balance Sheets**" from the top of the page. Repeat the download procedure for the balance sheets, then copy and paste them into the same worksheet as the income statements.
- If you click "Historical Quote" in the left column, you should find Johnson & Johnson's **stock price** for the last day of the month at the end of each of the past four fiscal years. Record the stock price on each date in your spreadsheet.
- For the cost of debt (r_D) you can go to NasdBondInfo.com, (<http://cxa.marketwatch.com/finra/BondCenter/Default.aspx>), and click to search by symbol. After entering Johnson & Johnson's symbol, you select the "Corporate" toggle, and press "Enter." You should have access to Johnson & Johnson's average **credit rating** for long-term bonds.
- For the cost of equity (r_E) you can get **the yield on U.S. Treasury Bonds** from Yahoo! Finance (<http://finance.yahoo.com>). If you scroll down to the Market Summary, you should find it. Enter that yield as the risk-free rate. To find the **beta** for Johnson & Johnson use Nasdaq.com. You should enter the symbol for Johnson & Johnson and click "Summary Quote." (sometimes you must be patient.)
- Use a **market risk premium** of 4.50%.
- To compute the **net debt** for Johnson & Johnson, add the long-term debt and the short-term debt and subtract cash and cash equivalents for each year on the balance sheet.
- To compute Johnson & Johnson's **market capitalization** at the end of each fiscal year multiply the historical stock prices by the "Basic Weighted Shares Outstanding" data in the income statement.
- You may also get information on industry betas from <http://pages.stern.nyu.edu/~adamodar/> by selecting Updated Data/ Levered and Unlevered Betas by Industry.

QUESTIONS

1. Estimate the FCFs of the project. Explain your assumptions.
2. Assume that the project is financed exclusively with equity (unlevered). Is this new investment valuable? Explain your answer.
3. Perform reasonable sensitivity and /or scenario analysis. Explain.
4. Now assume that the project uses a target capital structure, which is equal to the firm's average capital structure of the last 4 years. Compute the WACC rate, and re-evaluate the project. Comment.
5. Now imagine that the cash flows of this project were actually related to another project that the company wants to start in a totally different industry – the aeronautics industry – to be financed with a target debt-to-equity ratio of 1.2. What would the NPV be?