

GROUP WORK ASSIGNMENT

CORPORATE INVESTMENT ANALYSIS

MASTERS IN FINANCE

1ST SEMESTER 2017-2018

The group work assignment of CIA is a practical case of determining the cost of capital and the capital structure of an international corporation, after digging for relevant information. The case description follows, but you are advised to read first the rules of the game.

Rules of the Game:

- 1) **Important Dates: The Deadline for delivery of the assignment is December 6th.**
The assignment should be delivered electronically via ISEG's platform Aquila.
- 2) **Each group has a maximum number of 5 students.**
- 3) **The assignment involves delivery of 3 elements:**
 - a. A **printed Report** written in Microsoft Office word, describing the situation, the procedure followed, and the outcome. (MAXIMUM 10 pages A4);
 - b. A **Spreadsheet** in Microsoft Office **excel**, supporting the analysis of the written report;
 - c. An appealing **Presentation** in Microsoft Office **powerpoint** summarizing the case.

Disclaimer

Although based on a truly existing company and on what could be a real new project, the information that follows is purely fictional – nothing more appropriate for the Christmas Season!?

CASE DESCRIPTION:



The highly reputed carmakers Fiat-Chrysler (FIAT CHRYSLER AUTOMOBILES, FCA) are considering launching a new revolutionary automobile in December 2017 — the brightest and lightest FIAT500 ever! Exclusively designed by FCA’s Board Member Mr. Ermenegildo Zegna, the new FIAT500 will be the first mass produced car that is able to fly over large cities, reaching up to a height of 20 miles, with autonomy to fly for a maximum distance of 100 miles. It will be known as the **Flying FIAT 500**. FCA’s CEO, Mr. Sergio Marchionne, is extremely excited at the prospect of launching this project and making history with his small but beautiful lightest car in the world, the **Flying FIAT 500**. He is waiting for FCA’s finance team to bring him the numbers based on which the final investment decision should be made. The finance team has been working based on the operational estimates of FCA’s engineering department (that is working on the project since 2013), and also based on the marketing department’s inputs. FCA’s Chairman, Mr. John Elkann, also has high expectations regarding this project, and revealed to his Board members that he and his wife will make sure that all European Royals will drive and fly the new **Flying FIAT 500**, which should boost even further its global sales. For this project to materialize, the company will make an immediate investment in fixed assets with a useful life of 15 years. This investment should be approximately three times the amount that the company invested in property, plant and equipment and in intangible assets during the last fiscal year (2016). The new flying car alone is expected to generate revenues in 2018 of approximately 20% of the company’s total revenues in 2016 (the last year for which annual accounts have been published). Over time, sales of this flying car are expected to increase at a rate of 4% per year, for the 15 years of production that FCA has in mind. The structure of operating costs (as a percentage of total revenues) is expected to be similar to what it has been for the last 3 fiscal years.

With the launch of the new flying car, FCA should experience, as a side effect, a reduction of 5% in the sale of its other cars. 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 using different valuation methods. You must seek out the information necessary to value the free cash flows. But you'll be given some direction to follow!

1. Go to <http://finance.yahoo.com>. Under "Market Data", you will find the yield to maturity for Treasury bonds with maturity close to 15 years listed as "x Yr Bond (%)." Collect this number as your risk-free rate. Comment. Note: You are free to get this information from a different source (such as Bloomberg, for example) and justify it. Identify your sources always.
2. In the search box "Quotes Lookup", type FCA - Fiat Chrysler Automobiles' ticker symbol in the NYSE (FCAU) and press enter. Once you see the basic information for FCA, find "Key Statistics" and click on the left side of the screen. From section "statistics" collect FCA's market capitalization (its market value of equity), enterprise value and beta. Comment. Note: You are free to get this information from a different source (such as Morningstar, for example) and justify it. Identify your sources always.
3. Use the information from point 2. above to compute the weights for FCA's equity and debt for the WACC rate.
4. Calculate FCA's equity cost of capital using the CAPM, and a market risk premium of your choice. Justify your choice and comment.
5. To get FCA.'s cost of debt and the market value of its long-term debt, you will need the yield to maturity of the firm's existing long-term bonds. Try to <http://finra-markets.morningstar.com/BondCenter/Default.jsp>.
6. Under "Bonds", search for "Corporate" and type FCA as the bond issuer (or use "FCAU" in the symbol/cusip). A list of FCA's outstanding bond issues will appear. Assume that FCA's policy is to use the expected return on fifteen-year obligations as its cost of debt. Try to identify a bond issue that is as close to 15 years from maturity as possible. (Sometimes you have insufficient information about some bonds – in this case, simply ignore those for which you have no data; it might be the case that the company already called those bonds.) (*Note: if possible, select a bond that is not "Callable" – if you can't find one, just use the callable bond information*). Find the credit rating and yield to maturity for your chosen bond issue (it is in the column with the heading "Yield"). You can get detailed information about your bond by selecting it with a tick and then opening the information in a new window.
7. Based on the bond you selected in 5., estimate FCA's cost of debt (based on the yield to maturity).
8. Get the Income Statement and the Balance sheet from Yahoo Finance (or another source, such as the company's website and selecting section

“Investors”, etc.) Place your cursor in the Income Statement or the Balance sheet and right-click. Select “Export to Microsoft Excel” (the last few years available, maybe 3-4 years). If the information is incomplete, try other sources of data. For example, try FCA’s webpage, section “Investors” and look for its financial statements, remember to consider the consolidated statements.

9. Compare FCA’s market value to its book value and make a short comment.
10. Calculate the average corporate tax rate for FCA over the last three years, by dividing “Income Tax Expense” by “Income Before Tax”. Use the average corporate tax rate for your project.
11. Calculate FCA’s WACC rate based on its current market value and the costs of equity and debt that you computed above. Note: Do not forget the tax effect in that rate. Justify your choice.
12. Create a timeline in Excel with the free cash flows for the 15 years of the project.
13. Compute the NPV of the new project given the free cash flows you calculated, using the WACC method of valuation, assuming the company will keep a target ratio of capital structure similar to the current one. Comment.
14. Make an investment recommendation regarding this project. Justify your choice.
15. Perform some robustness analysis on your valuation. Clearly explain all your steps and assumptions.
16. Determine the NPV of the project using the Adjusted Present Value method, and also using the Flow to Equity method. In both cases assume that FCA maintains the target leverage ratio you computed before. Comment.
17. Compare the results under the three methods.
18. What is your opinion about this company’s capital structure? Would you choose to increase or reduce its leverage, and by how much? How would the value of your project change? Explain.
19. Surprisingly, FCA’s Chairman persuades the board to abandon the new Flying FIAT 500 project and instead proposes a different joint venture to Mr. Zegna: designing the FIAT 500 Hotel chain, which would constitute a dramatic diversification strategy for FCA. To keep things simple, assume that the free cash flows estimated for this new project would be the same numbers that you estimated for the previous questions. How much would this project be worth now? Explain, stating all assumptions and showing all the steps in your computations.