

Anexo I. Registro del Título del Trabajo Fin de Grado (TFG-BA)

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PROGRAMA: 5º E-3

GRUPO: Analytics

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Apellidos Nombre

Título provisional del TFG-BA: “Breaking the loop: Handling circular references in LBOs”

The **purpose** of this project lays on the idea of giving a useful solution to the issues that every analyst encounters when creating a financial model for their LBO's.

First of all, an LBO (Leverage Buyout) is a transition in which the asset is acquired by using a significant amount of debt. When developing a possible operation, an analyst must create a financial model in order to project the future expectation of this asset and justify how this buyout will be profitable.

The issue, that most encounter and the one we will be addressing, is that the nature of these deals and of the operations within generates calculations that refer back to themselves, creating a loop that prevents from obtaining a solution. As these financial models are usually done by using Excel, many solve these references by using its provided tools. However, although it could be useful, this Excel tool (as it operates in a random base) can present deficiencies.

Therefore, the aim of this project will be to develop, with the use of programming, a useful tool that could solve this existing issue.

Methodology

During this project I will be using different methodologies.

1. Research on LBO's financial models and circular reference
 - Literature review
 - Comparative analysis
 - Problem identification
2. Problem-solving and design
 - Algorithm thinking
 - Computational finance techniques
 - Decision tree logic
3. Software engineering and implementation
 - Prototyping
 - Agile development
 - User-centered design

Preliminary Table of Contents

1. Leverage Buyout
 - 1.1. Introduction
 - 1.2. What's an LBO
 - 1.3. Relevance on today's financial world
 - 1.4. Financial models
 - 1.5. Innovation on modelling
2. The problem on financial models
 - 2.1. Operations on financial models
 - 2.2. Tools used today
 - 2.3. Circular reference
 - 2.4. Nowadays solutions for solving the circular reference
3. Solution proposition
 - 3.1. Description of the logic
 - 3.2. Tools that will be used
 - 3.3. Programming and development
4. DEMO
 - 4.1. Initial test
 - 4.2. Feedback and adjustments
 - 4.3. Compilation of the following conducted tests
 - 4.4. Following feedback
 - 4.5. Conclusion on the DEMO
5. Results
 - 5.1. Explanation on the DEMO's results
 - 5.2. Ultimate verdict
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 - 5.4. Review and conclusion on the project
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Firma del estudiante:

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