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Financial Engineering in Private Equity's Transactions; The Leveraged Buyout Operative

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Abstract

Private Equity applies Leveraged Buyout as the main way of investment with the objective of reducing the contributions they make and obtaining higher IRRs.

The LBO operative is considered financial engineering due to the complex structure it entails and that, using a company created ad hoc (Newco) and offering the assets and future cash flows of the target company as guarantees of the money borrowed for carrying out the investment, the risk of PEs is reduced to very low levels. In addition, due to the high levels of indebtedness that the LBOs suppose and making the management team to be shareholders of the target company, the value creation has place is and the agency costs are greatly reduced.

Through the study of the acquisition of the proposed company Bolsas y Mercados Españoles as a possible investment by LBO, it has been proven that it is a transaction that meets the profitability requirements of the Private Equities either under the conditions and hypotheses that have been used or in more adverse conditions in terms of buying and selling price of the company. The transaction offers such high level of IRR that if the financial transaction tax is finally put in force, a priori, would not impede the decision of investing.

1.- Preface

1.1.- Leveraged Buyout, conception and relevance

It is not possible to arrive at a complete picture of the finance world without having knowledge of the corporate takeover market. This market is the field of Mergers and Acquisitions (M&A) of companies resulting from expansion or profitability strategies of acquires such as investors or other companies.

Even if this market has a long path, it was during seventies when took a wider notoriety through multi-billion acquisition transactions and it took a larger growth during the eighties decade because of the Leveraged Buy-Out (LBO) operative development. The $25 billion LBO of RJR Nabisco by the KKR investment firm in 1989 was sign of it.

The Leveraged Buyout is an operative consisting in an acquisition transaction by means of a large amount of capital obtained from lenders. Its expansion was possible thanks to the progressive junk bonds use, which allowed to borrow greater amounts of money backed by the same guarantees. Besides this, this praxis uses the assets and the future cash flows of the target company as endorsement of such loans and the selling of non-strategic assets in order to obtain part of the resources needed. This aggressive method ensures investors greater rates of returns as the amounts of money invested is much smaller than the acquisition prices, this fact caught the attention of high-risk profile's investors and Private Equity funds.

Such leveraged takeovers use to take the shape of Institutional Buy-Out (IBO); i.e. the acquire is promoted mainly the participation of an investment fund (Private Equities) whose aim is to implement several changes in the operational features of the company guided to improve its performance and profitability and dispose it from their balance sheet some years later at a higher price. Nevertheless, there are other types of LBO's depending on who participates in the buyer party with the Private Equity and his principal purpose:

i. **Management Buy-Out (MBO**): In this case members of management are part of the investors. It is common being subject of these transactions public companies which becomes private through this process. In most of the cases these actions are a defensive response as result of an attempt to acquire the company by an external party, situation in which existing managers have at stake their positions.

ii. **Management Buy-In (MBI):** In a similar way who is taking control of the firm is an external group of directors. It can occur when large creditors of a company see diminishing the payback of debts and decide to take part of the executive in order to stabilise the situation.

   Another example increasingly important is the search fund's activity, whose aim is the inquisition of a firm with the aim of become the owners in long term basis with no perspective of selling it afterwards.

iii. As result of the two previous one's blend is usual to find a **BIMBO** transaction in which members of the current management and external participants join with the objective of taking control of the corporation.

iv. In the **Leveraged Employees Buy-Out (LEBO)** are the workers who decide to acquire the company, usually due to a special situation in which the plans of the current management put their conditions or employments in distress.

v. When for the same reason both, employees and managers, merge aiming to carry out the takeover in a trade union it is denoted as **MEBO**.

There could exist several additional methods, nonetheless, they are only modifications and derivatives developments of the abovementioned.

1.2.- Justification and objectives

M&A transactions are experiencing an extremely high standard in the past few years, in this scenario, Private Equity firms play a really important role; according the report of ASCRI (Asociación Española de Capital, Crecimiento e Inversión) (2019), in the absence of the definitive figures, Private Equity firms in 2018 are estimated to touch, for the second consecutive year, a historic maximum point in terms of investment volume in Spain. These estimations indicate that more than €5.8 billion of investments would have been taken during 2018, which means an increase of an 18% in comparation with the previous year, in a total of 670 investments.

The investment operative of these kind of entities is focused in company's takeovers though huge levels of debt -Leveraged Buyouts- a process which, due to its high complexity, is understood as an engineeringly designed process. Regardless its importance, this operative does not receive the visibility corresponding the magnitude it means neither in the academic field nor in the financial media.

This essay is aimed to deepen in the operative of Private Equities funds as main developers of financial engineering system of acquisition of companies focusing on knowing the details of these operative, the actors and its participation, types of debts used and its effects in the target the companies, pointing out the effects in terms of value that these transactions cause on companies and to know the viability of carry out an transaction of this type on a proposed company (Bolsas y Mercados Españoles).

1.3.- Methodology

The realization of this essay will be developed in two main parts; firstly, we will start from a preliminary and general study of the Private Equity operative as fundamental player within the M&A world. Private Equity funds are principal sponsor of the Leveraged Buyout transactions. Subsequently, the characteristics of this type of transactions will be analysed; studying the types of actors involved, the role they play, the means of financing used (paying special attention to the most important types of debt: Senior and Mezzanine, mainly). We will also study what, in my opinion, is the most interesting part of the transactions of Leveraged Buyout, which is, the effects that this practice have on the company, society and on investors, trying to identify if there is a real creation of value, or on the contrary, value is destroyed and company is left in worse conditions than before taking part in it.

In the second part of the essay, all the theoretical basis that has been acquired during the first section of the work will be put into practice. This will be done by making a proposal for a possible Leveraged Buyout on the Spanish company Bolsas y Mercados Españoles. With this simulation we will see how a Leveraged Buyout really works and consider the returns that can result from the transaction. We will deduce if it is an transaction that could occur or, on the contrary, it has little chance of success.

2.- Private Equity Funds

According to the data provided by European Invest in its report European Private Equity Activity 2017, the equity invested only in European companies in 2017 hit the quantity of €71.7 billion, this figure means an increase of 29% from 2016. A large contribution of this investment is linked with Private Equity’s performance.

Private Equity entities (PE) are financial entities whose main objective is to participate temporarily in the capital of non-financial private companies with a high growth potential, through contributions of financial resources. This participation can be both majority and minority and usually has a time horizon of three to ten years.

However, the contributions that Private Equity entities offer during the process are not only financial, they also have the added value provided by their components, these are professionals with long experience and knowledge of multiple sectors, who manage to provide the most effective solutions to the specific problems that could arise, they also advise and endow companies with very well-trained executives, these factors joint to contacts, credibility they provide among third parties and their effectiveness, achieve a maximization of the professionalization of the transactions they carry out and an increase in the value of the companies in which they participate.

The way to achieve the value of the company to increase as much as possible is trying to align the interests of shareholders and managers, through systems of retribution and motivation that we will explain afterwards.

It is often differentiated the Private Equity and Venture Capital entities. This approach use to be based on the idea that Venture Capital entities is focused on companies that are in the beginning or early stages of growth, generally technological companies, although not exclusively, while Private Equity entities do so in companies that are at a time of greatest maturity, in which the objectives are focused on efficiency improvements, opening new markets, achieving synergies or internationalization. Nevertheless, for the European Private Equity & Venture Capital Association (EVCA) PE's ca also develop new products and technologies and, therefore, defines Venture Capital entities as a subset of private equity activity:

"*Venture capital is, strictly speaking, a subset of private equity and refers to equity investments made for the launch, early development, or expansion of a business. Among different countries, there are variations in what is meant by venture capital and private equity. In Europe, these terms are generally used interchangeably and Venture capital thus includes management buyouts and buyins (MBO/MBIs). This is in contrast to the US, where MBO/MBIs are not classified as venture capital*."

We will consider, therefore, this approach; analysing the Private Equity as a set where the Venture Capital firms are included and so its operative.

2.1.- Types of investment

The transactions performed by PE could be classified in four categories depending on the pre-investment situation of the companies, the quantity of the investment it represents and the risk that these two facts involves:

i. **Growth Capital**: is based on financing the growth of a company that which has benefits. The funds are usually earmarked for investment in capex, financing research and development of new products as well as the expansion into new markets. Although they tend to be investments of high amounts, in turn they are usually the least risky.

ii. **Replacement**: In these transactions the Private Equities enter in the company to relieve part of the shareholders. These situations usually occur in family businesses that are in a moment of succession or generational change. It is also common in companies that get rid of assets or non-strategic business lines. The amount of money to invest in is smaller than in Growth capital and so the risk.

iii. **Turnaround**: this type of transaction is carried out on companies that are in a difficult phase which has been maintained for a long period of time; that company, therefore, will require huge investments to carry out structural changes in the operative and organization. This type of transaction, in addition to needing high investments, carries a high risk.

iv. **Leveraged Buyout:** this is the one with which deals this essay and that will be developed in depth afterwards.

2.2.- Private Equity Cycle

It is very important to analyse the stages of PEs in order to understand the sources of the capital and how it is managed. Gompers and Lerner (2004) analysed the Venture Capital Cycle in the development of projects were different phases can be identified, these are: Fundraising, Investment, Portfolio Management, where monitoring and value creation have place, and Exit.

i. **Fundraising**: This is the initial phase of any Private Equity project; it is the collection of the necessary funds so that the PE can carry out their activity. It is important to note out that these are the funds required for the fund's activity as a whole, and not for a specific investment.

These funds are obtained from investors who find in the EP an investment opportunity that adjusts to their risk and profitability profile. According to the report "2017 European Private Equity Activity" of Invest Europe of May 2018; in 2017, € 91.9 billion of fundraising was achieved, which is the highest level since 2006 and entails an increase of 12% with regard to the previous year. Of these € 91.9 billion, 29% came from pension funds, 20% from funds of funds, 15% from family offices and private individuals, 9% from sovereign wealth funds and 8% from insurance companies.

In this phase, the Private Equity must study the potential investors that could become participants in the fund with the objective of knowing which the profile of the target investors is. To carry out this process, the managers of the PEs will organize meetings and presentations for the those investors in which they will have to explain as thoroughly as possible the strategy, the operative and the transactions that they carry out, as well as transmitting with transparency what are the investments that will be carried out (types of company), the target returns and any other information required by investors. These presentations will also establish the remuneration for the managers, which will be established in such a way that their interests and the interests of the investors get aligned.

It is fundamental to obtain the confidence of the investors to explain not only the destiny of the funds that are will try to obtain but also the experience of the managers team, realized investments and obtained IRR's.

ii. **Investment:** managers of PE funds continuously study investment opportunities that are compatible with the criteria of the fund. It is important to point out that only very few of the huge number of opportunities analysed by the Private Equities are finally undertaken due to the rentability calculated with the analysis is lower than the expected initially and the minimum required for PEs for taking a project.

Companies always must have a transaction that ensures the stability of cash flows for meeting the periodic payments of the debt in order to become targets for PEs. In addition, the managers will draw a roadmap to achieve greater efficiency and the creation of value that ensures their profitability as well as a team of experienced managers to help them to achieve it.

There are two ways to reach the Target company: exclusively (One to One) or through Competitive or Auction Processes. The trend over the years has played in favour of Competitive Processes due to the growth of activity in the world of mergers and acquisitions of companies. This has benefited the selling party to the detriment of the buying party.

- One to One process: In this type of processes it is necessary to sign a Letter of Intent, where both parties, buyer and seller, establish all the details of the agreement prior to the transaction. Once the agreement is established, the Due Diligence process begins, where, through a detailed study of the situation of the target company, will be sought to confirm that all the data that had previously been provided are adjusted to reality. The result derived from Due Diligence may change the offer initially made. Finally, the purchase agreement will be signed where all the clauses of Representations and Warranties insurance policies (R & W) will be established for the benefit of the buyer.

- Competitive processes: in this process it is usual to provide interested buyers with an "Information Memorandum" which is a report detailing the economic-financial situation of the target company with the objective that buyers could analyse and fix the "Non-binding Offer", that is, a non-conclusive price that allows the seller to select the most interested players that will enter in a "short list".

  These selected will go into the Due Diligence phase, as in the One to One process buyers will have the opportunity to review that the information previously offered by the company reflects the reality and will be used to make adjustments in the offer previously made, this time the offers will be binding and, among all those submitted by the components of the Short List, the seller will decide which will be the ideal buyer, taking into account the amount of the bid and strategic reasons, if any.

iii. **Portfolio Management**: In this phase of the project, the management team will be responsible for carrying out the Business Plan previously established, under the supervision of the team of PE managers who will intervene in a timely manner in the management of the company. In this phase, there will be changes in the society aimed at improving the company's profits and reaching the profitability that had been set as an objective at the beginning of the process. Operational changes will take place, where cost reduction and revenue increase will be sought to achieve efficiency improvement and strategic changes, where purchases of other companies could take place in order to expand the market and achieve synergies, also the sale of assets or branches of non-strategic business.

The time that the PEs maintain the companies in their portfolio is variable and will depend on the specific conditions of each, however, the most frequent period is usually around five to seven years.

iv. **Exit**: it is the final phase of the projects carried out by the PE, the moment in which the result of the project is monetarized.

There are several exit options in these projects, the most recurrent are: the sale to an industrial investor, sale to another PE (secondary buy-out), sale to management (buy-back) and Initial Public Offering (IPO). This moment is a key point where the search for an appropriate buyer and the negotiating skills of PE managers in this new M&A transaction will be fundamental to maximize the profitability of the whole project.

According to the report "2017 European Private Equity Activity" of Invest Europe of May 2018, in 2017, about 3,800 European companies were exited in 2007, approximately the same level of the previous year, which meant € 42.7 billion, an increase of 7 % with respect to 2006.

2.3.- Financial Engineering

Large part of the interest on the topic that this essay deals comes from the complexity of the operative that PEs carry out with LBOs. Kaplan and Strömberg (2008) identify the transactions of PE as engineering of three types: Financial Engineering, Governance Engineering and Operational Engineering.

Financial Engineering is identified with the use of incentives to the management teams, as will be explained later, the PEs usually equip the management teams with important shares of the Equity of the company, either in shares or in options with the purpose of aligning interests, as well they are usually forced to make investments in the capital of the company; the fact that the companies with which the PEs operate are private means that the holdings of the directors are not liquid, which means that they will not be able to sell their shares or exercise the options at any time, they will have to wait, at least, until the EP decides to leave the company. This is achieved by not focusing their efforts on a performance with a short-term vision of the company, but with a perspective of longer-term growth.

In their study, Kaplan and Strömberg, analysed 43 transactions of Leveraged Buyout and found that the CEOs of the companies analysed had on average 5.4% of the capital stock and options, while the whole management team had an average of 16%.

Another identifiable factor as Finance Engineering is the leverage in which the company enters after an LBO, the large periodic payments of debt and interest that the company must make, significantly reduces free cash flows, and with it the possibility of carrying out investments that are not really profitable.

Governance Engineering is identified with the way in which the PE controls the management team of the companies in its Portfolio. In this type of companies, the management team is smaller, which facilitates the frequency of meetings to be greater. Besides the fact that the PE do not have problems when changing the management team at any time if the evolution of the company is not as expected.

On the other hand, **Operating Engineering** is explained by Kaplan and Strömberg as the use of the knowledge that PE managers have together with the experience they have gained over the years to improve efficiency through an action plan in a way that, through synergies, cost reduction, revenue increases, strategic movements, openings to new markets and acquisitions. In particular, the PEs try to focus on the industries that they know in depth and hire management teams with extensive experience in the sector and with operational knowledge, in addition to consultants, both internal and external.

3.- Conceptual framework; Leveraged Buyout transactions

Once the proposes and motivations of PEs have been explained we will focus in a deeper way which are the characteristics of the Leveraged Buyout transactions they carry out.

We have previously seen how the LBO transactions could be categorised distinguishing who participates in the buyer party beside the PE and the reasons which boost the deal, nevertheless, regardless the transaction's objectives or the driving head of investor's provenance, there are some main characteristics which are met in all those transactions considered LBO's. According to Brealy, Mayers and Allen (2011) the necessary points in common are summarized in the next three premises:

i. **High debt**: with no permanent time horizon, this debt is only required in order to meet the purchase price and it should be paid afterwards. In face of generate cash to response the debt payments discourage the management force to take non-reasonable investments, thereby this high debt ratio in the balance sheet will push the business into a greater finance efficiency.

ii. **Incentives**: making the managers part of the investment thought participations ensures a reduction of agency problems and consequently a greater maximization of efficiency.

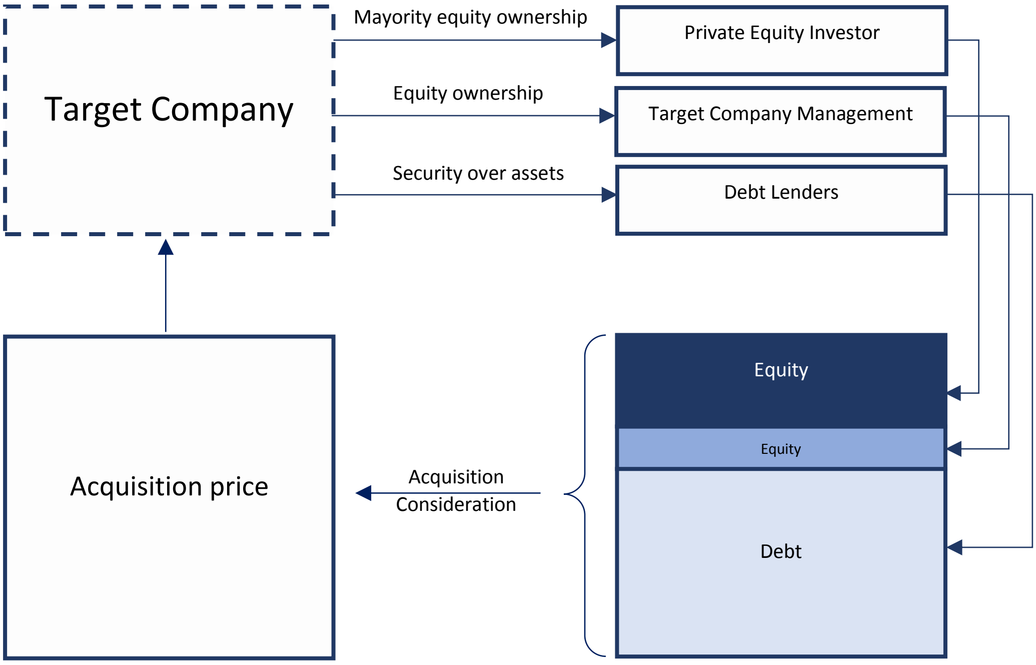
iii. **Private ownership**: the LBO goes private. Private investors take the control of the target company. The privatisation has a temporal character. In the most successful LBO transactions have become public after the changes have been implemented and much of the debt paid.

From these points we can appreciate how the LBO techniques create value; as the debt stress is such high in these transactions, cash flows available for pointless investments are highly limited, and involving the management in the investment carries the business to have a better corporate governance. We will enter deeper in this value creation process afterwards.

3.1.- Leveraged Buy-Out principles

The key points for understanding the structure of the target company acquisition are summarized by in the next diagram by Povaly in his doctoral dissertation: "*Private Equity Exits: An analysis of divestment process management in relation to leveraged buyouts*" (2006).

CHART 1: Key points of LBO principles' scheme


Target Company
Mayority equity ownership
Equity ownership
Security over assets
Private Equity Investor
Target Company Management
Debt Lenders
Acquisition price
Acquisition
Consideration
Equity
Equity
Debt

Source: POVALY (2006). P. 76

In a schematic way it is represented how the acquisition price is meet in the case of an LBO by a PE fund; much of the necessary amount proceeds from lenders whom could be banks, bondholders, etc. This debt is backed by the target company's assets. Most of the amount left of the purchase price belongs to the head of investors (the private equity in this case) and the management team participates of the remaining quantity; these two compose the equity ownership.

Two main points could be taken from this overall pattern: participants involved in the investors side of an LBO and the financing structure which will be briefly explained bellow.

3.2.- Investors participation

It is common for the buyer side of this kind of transactions to be promoted by a venture capital (or PE) fund, nevertheless industrial investors sometimes take this roll as well and even other parties as it was explained before. Due to the case which will be analysed will be make form a private equity perspective.

As it was abovementioned the fundamental tool of this kind of funds in order to make the transaction as much profitable as possible is to enlarge the external financing as far as they can, so the amount of money with which they participate is lower and leveraged advantages are obtained. This external financing tranche is composed by several different entities; the reason of this is the fact that these deals use to be large inversions that a single entity cannot assume for the risk they entail. The process is the following: a set of entities interested in being part of the external financing compete between them on the terms of interests, maturity and repayments timelines. In this process the competency guarantees the buyer the best possible conditions maximizing once again the profit. However, we can find another way in this financing process; the so-called "staple financing". This procedure consists in a service provided by an investment bank that, once the target company is decided to be sold, stablish a previous contract for financing the transaction with which the concerned buyers must carry out the takeover.

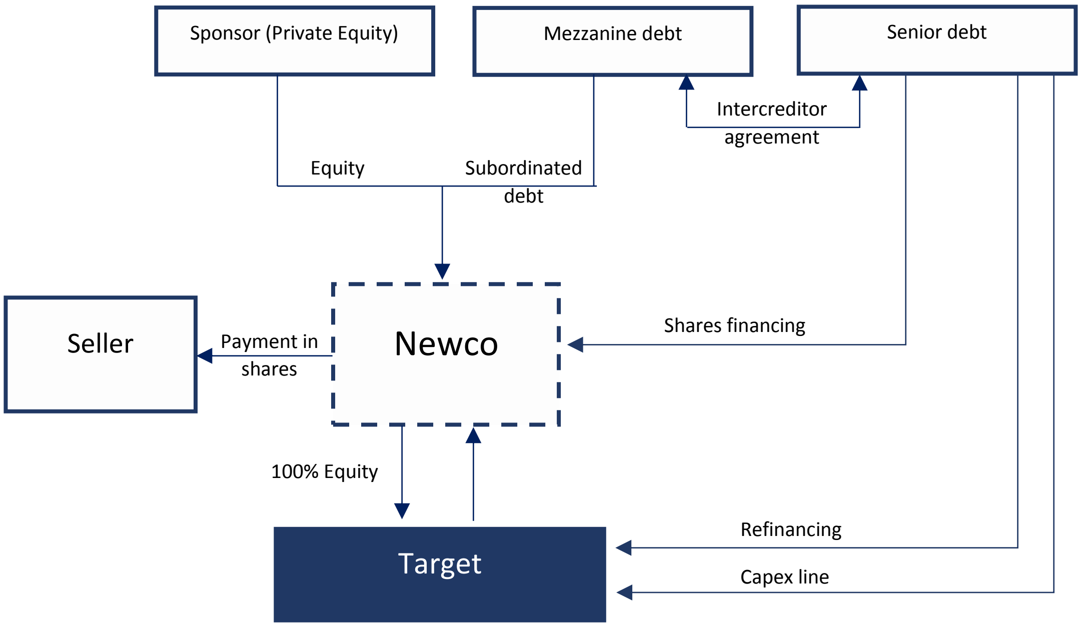
In addition to the private equity investors and the debt lenders the management team provide a fundamental roll. Let us note that the vital aim of venture capital funds for accomplishing such investments is to be able to sell them after three or five years obtaining a high return. For this reason, after the transaction is achieved a deep conversion will be carried out aimed to maximize its efficiency and building up a value creation process. The venture capital fund can decide to maintain the target company's management team (totally or partially) or replace it completely; independently the option chosen the decisions to be adopted must be backed by the fund.

It is usually decided to let the management team to take part of the investment; this will drive them to get more involved for developing the best performance possible for the value creation final objective. Agency costs are then avoided as the risk and rentability is shared.

3.3.- Financial structure

Building on the source of the debt, we should point how such debt is compounded, that is, within the external financing tranche we could discern different types of credit titles depending on the guarantee and return they offer. We can overview this financial structure though the next scheme.

CHART 2: LBO financial structure scheme



SOURCE: ADAPTATED FROM SERRANO. A. 2013; PAG. 172

We will take advantage of the analysis of this graph for mentioning, at the same time, some concepts not explained yet.

A fundamental item in this process is the newco. A newco (short of new company) is a Special Purpose Vehicle (SPV) created with the only reason of carrying out the takeover transaction arising as the acquirer of the target company. This newco, therefore would have the structure emerged of the investors participation above indicated, that is, the management team and venture capital fund as shareholders, and the lenders of the debt used for financing the purchase as creditors.

In general terms, there are three origins of financing the LBO: equity (obtained from the venture capital fund and management), senior debt and mezzanine debt which finance the transaction through the newco (intermediary ad hoc society) that will guarantee the senior debt payback with shares. Senior debt and mezzanine debt lenders use to establish, via an intercreditor agreement, their concerns with regard the newco. This derives from the wide disparities they have, and which will be explained afterwards.

The proportion of these three financing sources depends on six factors (Serrano A, 2013):

i. **The size** of the transaction.
ii. **The business sector** of the target enterprise.
iii. **Cash flows** predictability level and the degree of seasonality of the target enterprise.
iv. **Operational flexibility level** (especially regarding to future disposals and acquisitions) and leaving flexibility required.
v. **Capital expenditure** requirements.
vi. **The target enterprise's capability** for meeting the requirements of the type of financial agreements usually required by the financial entities for the debt financial product needed.

3.3.1.- Senior Debt

If we built a hierarchy, the senior debt would be on the top for both participation and preference reasons over the rest of the lenders in terms of returns and recovery. This part of the debt is supplied by a trade union of financial institutions which stablish a syndicated loan for the purpose of reduce the transaction's risk.

The reason why this tranche is the safest one is because its payment takes priority in the foreclosure of the warrantee; these are the cash flows and assets of the target company. This fact has implications in the cost it means, specifically, enables this section to be the cheapest one.

Approximately, senior debts cover between 30% and 70% of the resources used in LBO transactions and have a maturity will typically lie within the range of five to ten years. However, it is possible to repay previously paying the corresponding fees in exchange. (Serrano A. 2013).

It is common to be known the senior debt in LBO investments as *conditions precedent*. Within these conditions are involved: (i) The right to participate in the Due Diligence process, (ii)

Representations & Warranties with respect to firm-specific patents and licenses, (iii) Material adverse change clauses and (iv) covenants. (Pindur D. 2007).

In the book: *Leverage Buyouts: "El Sistema Contractual de las Adquisiciones Apalancadas de Empresas por Operadores de Capital Riesgo",* the author distinguishes six tranches within the senior debt depending on the usage is given:

i. Acquisition financing tranche.
ii. Refinancing of the existing debt of the target company tranche.
iii. Financing of working capital needs of target company tranche.
iv. Bridge-tranches.
v. Capital expenditures tranche.
vi. Tranche of fund intended to finance future acquisitions of the target company.

3.3.2.- Mezzanine debt

This segment of the debt is located bellow senior debt and equity in terms of priority for recovering the money borrowed, nonetheless it is found above the pure debt, so it is the bridge between the debt with "more rights" and the purest debt, that is precisely the provenance of the name. Specifically, it is subordinated to senior debt so this must be completely returned before the mezzanine debt start to be paid and so the guarantees, thus it can be deduced the cost have to be higher and so the maturity.

Mezzanine debt is constituted usually by other venture capital entities, pension funds, investment funds or insurance companies.

This type of debt is fundamental in the Leveraged Buyouts transactions as its usage becomes possible riskier positions trough more aggressive investments. By reason of the high risk the mezzanine debt lenders carry with its board observation rights; the observer can participate in the board meetings but not having decision-making capability; it is, support of the management activity.

The proportion of mezzanine debt in the financial structure use to be in the range of 10% to 30% and a maturity between eight and ten years approximately, (Serrano A. 2013). The higher duration is justified by the fact of been subordinated to senior debt; otherwise the hierarchy could not be guaranteed.

Antonio Serrano (2013) distinguish also six different categories of mezzanine debt, which we will summarize as follows:

i. **Bullet debt**: with this debt modality there are not repayments of the principal until its maturity, only interests are paid before this date.
ii. **Loan with premium for early cancelation**: unlike the senior debt in which, as said before, allows a previous repayment in exchange of a cancelation fee; using this type of loans, the borrower can obtain a bonus for paying in advance.
iii. **Pay If You Can loan (PIYC):** through these loans' interests are only applied if a given cash flow level is passed.

iv. **Payment in Kind notes (PIK):** the debt holder has the option of covert the debt into shares or bonds; however, both principal and interests are paid at maturity.

v. **Equity kicker**: aimed to reduce the risk, LBO lenders ask for convertible shares or warrants of the target company.

vi. **High yield bonds**, also known as junk bonds; its lack of guarantees is compensated with a high yield.

4.- Value creation in Leveraged Buyouts

Within the firm's takeover world exists a major debate in terms of leveraged buyouts effects on target companies. On the one hand there is a trend of thinking which criticize LBO operative claiming that the Private Equity funds (PE) have a short term perspective through which several aggressive changes attended reduce costs in the target company will have place during the investment period in order to get as high return as possible in the disinvestment moment, leaving the company in a high demise hazard.

On the other hand, we can find the LBO activity defenders who suggest that LBO is also beneficial to the target company. "Research on these topics has yield different, and sometimes opposite results. On the issue of employment, which is often targeted, academic papers have studied samples of hundreds of LBO transactions within a country and found that LBOs are either job creative […] or job destructive." (Cordon J. 2016). The same divergencies have been demonstrated for policies of investment or innovation.

An important point to have in consideration is the fact that part of the value created stays in the private equities after the hole process is completed, this means after selling it back, and part of the value remains with the target company.

We will consider value creation when the position of any of the participants of the LBO process have been improved**.**

There are many models used for calculating the value of an enterprise and it is possible to obtain different result using one or another. For that reason, in this analysis we will indicate only the factors which affect to value but not pointing the different ways of valuating.

This fact will depend in independent and control variables (Pindur, D. 2007); the independent ones are: size, profitability, managerial incentivisation, disciplining debt, management support, fundamental value drivers, capital markets attractiveness. In the control size we can find: region, entry mode and time.

Nicolaus Loos in his dissertation *Value Creation in Leveraged Buyout,* categorize the sources of value in direct drivers of value creation and indirect drivers of value creation:

4.1.- Direct drivers of value creation

Direct divers generate real value, in other words, produces changes in the cash flows of the target company, mainly by means of changes in the cost structure, incomes or efficiency. Here could be allocated any action that the private equities take in the target companies: changes in the production process, improvements in the distribution, process of internationalization, changes in the staff size or behave…

4.2.- Indirect drivers of value creation

All those factors which, do not have an explicit impact in the cash flows but contributes to the value creation process are considered indirect drivers. Booster factors and synergies as, for instance, changes in the organizational, corporate governance and ownership structure. The primary examples of these drivers are the effects of LBO's above explained: "failure" of cash flows for taking non very profitable investments, the effects of making the directors of the business part of the shareholding, etc.

5.- Value destruction in Leveraged Buyouts

Despite the great effects the leveraged buyouts use to provoke in businesses, it is not a silver bullet. Many authors are hardly defenders of this point claiming that the actions that take place drive some of the actors indirectly involved into a worse position. The wealth transfer theory explains how the PE funds archive value increases deteriorating the status of others. Daniel Pindur, in its book *Value Creation in Successful LBOs* recognize three different sources of these wealth transfers: (i) bondholders, (ii) firm's employees and (iii) the government.

5.1.- Wealth transfer from bondholders.

The wealth transfer from bondholders is justified by the fact that the acquisition of the company with the LBO procedure entails to use a big percent of resources obtained from debtors. As the target company's financing structure will be seen modified because of this reason, the pre-takeover bondholders will be affected by new conditions. Increasing the percentage of debt in a company the proportion of equity available for facing a difficult situation is minor. In other terms, in bankruptcy circumstances the quantity of equity to react the bondholder's rights decrease, so the default risk of the company increases, and so for the investors whereas the return still the same. This point of fact reduces the bondholder's wealth in advantage of the new shareholders (PE).

However, Pindur D. (2007) indicates, some reasons by which this view might be too simplistic: "first, some debt securities are convertible into common stock. Second, nonconvertible debt issues might be redeemed for cash, converted into other more favourable securities or renegotiated. Third, according to the reduced agency costs hypothesis, free cash flow available for distribution to debt and equity holders is said to increase following a LBO"

Besides this we found the limitations and constrains that the bank loans use to involve which could force the PE or the financial sponsor to amortise or refinancing the totality of those loans, so the new debtors returns would be adjusted to the new risk conditions.

5.2.- Wealth transfer from employees.

After a LBO there could exist changes in the target company employee's wealth through a reduction of their rights as, for instance, reducing wages, raising hours or in extreme cases, firing workers.

Nonetheless it was demonstrated by Kaplan (1989) that the average in changes after a Leveraged Buyout is lower than 1%, while for those transactions which does not take any divestments the employment use to improve in almost 5%.

5.3.- Wealth transfer from the Government.

The highest transfer of wealth comes from tax benefits that the LBO procedure characteristics causes. The high levels of debt post buyout in the target companies have the result of most of the financial costs to be debt interests. In most of the countries interest expenses are tax deductible so it will produce an adjustment (reduction) in the taxable income, allowing the company to save up big amounts of money. We should point the fact that the bigger is the debt proportion of the financing structure the higher is the cost of this debt as result of the higher risk the company takes, so in this kind of transactions this cost should be high.

Additionally, after the transactions some differences between market value and book value of the company assets could emerge. If so, in the case the market value is higher it will allow the company to depreciate a higher amount in the same useful life, with the fiscal benefits it entails.

Moreover, in the same line, when a transfer of an enterprise has place usually an accounting goodwill is materialized. Part of this goodwill will be allocated as financial goodwill. In spite of it is not possible to amortize this entry, it has to be actualized every year comparing it with the cash flows; if it results above, the difference will be registered in the Profits and Loss (P&L) account, emerging in this way another tax benefit.

Nevertheless, even if Daniel Pindur presume this reality as a value transfer it was demonstrated by some authors that the increase of value in the new company does not result in a worse position for the government; "several authors were able to show that when considering the total net tax effect caused by the LBO, the tax authorities actually collect up to 60% more taxes than without the event of the buyout" Loos N. *Value Creation in Leveraged Buyouts: Analysis of Factors Driving Private Equity Investment Performance,* page. 17. The same author details the reasons of this government improvement as the following: (a) the selling shareholders have to pay a significant amount of money coming from the capital gains they accumulated till that moment, (b) the deductions in taxes for the interest are not deductible for most recipients and (c) there is a tax collection for the gains obtained from the assets of the company until the disinvestment.

6.- LBO simulation

In order to understand better how a Leveraged Buyout works and to get deeper in the operative functioning is necessary to put in practice the concepts explained before giving to this essay a practical approach.

6.1.- Presentation of BME

This part of the essay is a proposal Leveraged Buyout of the company Bolsas y Mercados Españoles (BME).

The corporative group Bolsas y Mercados Españoles was constituted in 2001 with the role of being the operator of the stock markets and financial systems in Spain. In 2006, the 14th of July, BME achieved one of its milestones, starting to be listed in the Spanish Stock Market through an Initial Public Offering; during a period BME attained to become part of IBEX – 35; since July of 2007 it started been one of the biggest quoted companies of Spain for 8 years. In June of 2015 it ceased quoting in this section of the market. Nowadays, at 31st of May of 2019 it is quoting at a price of €23.52 per share, which means a capitalization of €1.966 million.

BME is directed to offer products, services and systems of the negotiation with an own developed technology in global stock markets to issuers, intermediaries and investors whether in Spain or internationally.

One of the main characteristics of BME is the breadth of the services it offers; it is divided in different business areas: Equities, Fixed Income (corporate and public debt), Financial Derivatives (Options and Futures), Clearing, Settlement and Registration, Market Data and Value – Added Services (VAS).

BME is found among the most liquid systems worldwide, the only markets with better results in these terms (measured in proportion between the cash volume of domestic shares traded and the domestic capitalisation) are Tokyo, Frankfort and New York.

In order to have an overview of the financial situation of the company, a summary of the Balance Sheet and Profits and Loss account will be presented in the next tables:

TABLE 1: BME P&L account summary (2014-2018)

€ Mns	2014	2015	2016	2017	2018
Turnover	333	335	320	321	307
EBITDA	239	245	216	210	186
EBITDA margin	71,8%	73,1%	67,5%	65,4%	60,6%
EBIT	233	239	208	202	177
EBIT margin	70,0%	71,3%	65,0%	62,9%	57,7%
EBT	235	240	211	203	180
Net income	165	173	160	153	136
% Interanual variation		4,8%	-7,5%	-4,4%	-11,1%

Source: Own elaboration

TABLE 2: BME Balance sheet summary (2014-2018)

€ Mns	2014	2015	2016	2017	2018
Non current assets	166	171	176	174	179
Current assets	33783	31101	22906	22509	14232
Total assets	33949	31272	23082	22683	14411
Equity	419	433	424	430	400
Non current liabilities	18	19	20	20	40
Current liabilities	33511	30820	22637	22233	13970
Financial debt	0	0	0	0	0
Total liabilities	33949	31272	23082	22683	14411

Source: Own elaboration

From these figures some facts should be pointed out:

i. Bearish trend is having place during the last years in both turnover and EBITDA margin. This means, BME is undergoing a decline in its activity, and is losing efficiency in its operational activity. This fact could be perceived by a PE fund as an opportunity for having a greater bargaining power and for improvements implementation.

ii. Bearish trend is having place in Earnings After Taxes, specially during the last year, when the interannual variation is higher than 11%.

iii. Very high figures of current liabilities and current assets, this fact will be explained afterwards and considered for the model which will be built.

Bolsas y Mercados Españoles carries its activity out in different fields, for the performance of each activity in charge a different entity. The BME Group, therefore, consist of a conglomerate of several entities:

iv. Governing society of the **Madrid**’s stock exchange.

v. Governing society of the **Barcelona’s** stock exchange.

vi. Governing society of the **Bilbao’**s stock exchange.

vii. Governing society of the **Valencia**’s stock exchange.

viii. **Sociedad de Bolsas**; company in charge of the management and transaction of the SIBE (Sistema de Interconexión Bursátil Español / Spanish Stock Market Interconnection System), a technical trading platform for the Spanish securities market and the place where the order book resides. Sociedad de Bolsas is the primary source of the information generated in the SIBE and it is responsible for its organization and management. It is also the downer of the IBEX 35 index and responsible of its structure, management, governance, calculation and dissemination.

ix. **Mercado Alternativo Bursátil (MAB**); is a trading system that operates through the SIBE. This market is aimed to be a springboard for the small and medium size companies which characteristics are not enough for been part of the Spanish Stock Market but have plains of expansion or to get non-bank financing.

x. **Latibex:** Is the international market for Latin American securities. It allows European investors to buy and sell the main Latin American companies in a single market, through a single operative system of contracting and settlement, always within a strong transparency and security base and using a single currency: The Euro.

xi. **MEFF**: Governing society of the derivatives product market. In this market either swaps or futures are object of negotiation. The transactions that take place in this market are managed by the market, but it allows the ones which comply with the terms already fixed by the agents. This platform ensures and guarantees the terms of the transactions for both parties and ease standard conditions for contracts.

xii. **AIAF**: it is the main Spanish market for corporate fixed income debt. The financial authorities manage and supervise its operative and control, the acceptance of companies to be quoting and the dissemination of information. During the last decades it has had a great performance, resulting in one of the most transparent, fluent and modern markets in this field's world.

xiii. **Iberclear**: it is the commercial name for the filial company of BME which function is to be the Spanish Central Securities Depository. In these terms, the main role of this entity is to be the central deposit and accounting record of negotiable securities represented by book entries. Also manages the liquidations, carries out the securities transfers and ensures the payments of the transactions that are performed for these securities.

xiv. **Regis – TR**: this company is a joint venture which started operating in February of 2014. It is a registration of the transactions performed with OTC's derivatives having the functions of a trade repository. Regis – TR is a European registration born in order to comply with the European regulation EMIR. Thanks to Regis – TR administrative duties and operative management of transaction become easier.

xv. **Market Data**: Is another company within the BME Group which is specialized in generation, processing and commercialization of information coming from different regulated markets and multilateral trade systems of the BME Group, as well as the development of value-added services driven to the stock markets industry. Market Data offers also specialized products of every financial security quoted in the BME Group.

xvi. **BME Inntech**. This is another unit of the BME Group which main function is to give a digital support to the compound market where Bolsas y Mercados Españoles operates. Principally, it tries to assist in an innovative and advance way the transactions, channels, access, etc.

xvii. **BME Regulatory Services**. The function of this company is to carry out the regulation and compliance function for the group either in European or national basis.

xviii. **BME Institute**. It is a training centre aimed to promote and disseminate the financial markets culture, being focus mainly on the securities, markets, platforms and operative which form the group.

xix. **Openfinance**: directly linked with BME Inntech section, this entity supply technology for finance companies as well as technological facilities for finance consulting and portfolio management. Currently, it operates in Spain, Colombia, Costa Rica, México and Chile, where gives support to one hundred thousand users and seventy different financial institutions, where could be mentioned BNP Paribas, Bankinter, Santander, etc.

6.2.- Rationale of the choice

The choice of this company as target of the proposed Leveraged Buyout is since it can be considered a strong company, with high and periodical cash flows that would ensure the debt payments. Besides having opportunities for improvement and a high growth potential that in recent years is experiencing a negative development.

The financial environment in recent years is strongly influenced by the new regulation and the strengthening of the existing one, which establishes new standards, patterns and processes that significantly change the rules of the game and that is condemning the intervening agents to change and reinvent themselves. In addition to the regulatory changes we must consider the advances in technology, the birth of new products and trading platforms that are changing the way we operate in these markets and significantly increase the competition for a company of these characteristics.

If we established a relationship of ideal characteristics for a company to be the objective of a LBO, the first and most desirable would be that it had a stability and continuity over time of the free cash flows generated by the company, a condition that BME Grupo perfectly fulfils as it is the ownership of the platforms that must be used to operate in the Spanish regulated market and is the supervisor of those market.

Another important and very necessary point for carrying out a LBO is that the previous indebtedness of the company object of the purchase must be as low as possible. BME also meets this condition, since the proportion represented by debt over equity is 23.6%. ***** We obtain this ratio when calculating the total of liabilities excluding the item of other current financial liabilities. This item has been excluded for calculations since it includes the collateral received from the participants, financial instruments in a central counterparty, credit balances for liquidation, creditors of cash retained by liquidation and cash creditors for liquidation. The fact that Bolsas y Mercados Españoles acts as a liquidity agent and counterparty insurer of the transactions makes it have a series of guarantees in its balance sheet that ensure the positions of the intervening agents, in fact, the guarantees offered by BME for supporting these transactions are obtained from the requirements that are required to the agents in order to undertake them, so they also appear in the assets side of the balance sheet. By not considering these items neither on the asset side nor on the liability side we would obtain a more accurate picture of the company's situation and not detract from the ratios of leverage, capitalization, etc. This is one of the main premises that have been used for building the model and necessary for giving it sense; otherwise, no hypothesis of reasonable indebtedness could be raised (we would start with a debt that would initially exceed more than 35 times the value of net worth, making a leveraged purchase on a company with this degree of indebtedness would be unthinkable). Therefore, the degree of indebtedness to be considered by the company Bolsas y Mercados Españoles is more than favourable for an acquisition of this type.

Another very interesting factor in most of the cases for the Private Equity funds is that the company is in a stage of maturity, because of that, once the necessary investment is made for acquiring it, there is no need for very high additional investments which could reduce the expected return of the company. Entering during another stage of the company, for example in the growth stage, could significantly increase the risk (since it would be at the time of greatest uncertainty for a company) or jeopardize the profitability at the time of the divestment (if we talk, for instance, about a company that is in a market already saturated or in decline). A company at its moment of maturity is the optimal time to invest for most of the PE funds, as it is the time when the expectations of the company's growth and revenues will be more limited and, therefore, the price at which they can acquire it will be lower. A common strategy of PEs is to acquire a company at this moment of its life and look for its growth through the synergies obtained by the fusion or integration of other companies they have in their portfolio, or even seek its internationalization, using the means and knowledge that they already have in other markets. If a project of this type is successful, it could achieve a significant reduction in costs or a very high growth of incomes. On many occasions, companies facilitate the entry of Private Equities as partial shareholders, since they have some means and knowledge that they could not dispose of independently.

As previously stated, the Leveraged Buyout has the main premise of investing the minimum possible capital in order to achieve that at the time of exit the obtained profitability is as greater as possible, in these terms it would be desirable for the target company to have assets or non-strategic business lines. that could be obtained by obtaining in this way extra funds that would reduce the amount to be invested. As mentioned, the group has many dependent companies, among which we could find some that were not strategic for the strategic future of the company, so it could be a very interesting point for a PE. Nevertheless, we will no introduce this option as the hypothesis of a possible sell would be built up on not very substantiated assumptions.

For all Leveraged Buyouts made by Private Equities, a business plan will be established focused on reducing costs and increasing revenues in order to increase the operating margin and, therefore, the free cash flows needed to pay the debt in which is incurred during the process. It would be desirable to find a company that has not achieved the optimum point of productivity and operability yet, with the aim of creating value from a new management team and the application of the "know - how" that PEs have. BME has potential in this sense, since it is not managing to update itself to the changes that the market environment is experiencing and that is one of the factors that has caused a fall in revenues for fourteen consecutive quarters.

Finally, another of the characteristics that would be desirable for a company that is target of a Leveraged Buyout is to have a qualified management team, with experience in the sector, and to be able to develop in situations of high financial risk and able to work under the pressure; as explained in the first part of this work, a large part of the success and creation of value in the LBO is a consequence of the effects on the company of the high indebtedness to which it is subject and which will lead the management team to strive maximum possible to create free cash flows that are sufficient for paying the debt with which the company has been contracted, hence the high levels of pressure to which the management team will be subjected. This pressure grows even more when managers are involved in the investment (a common practice within LBOs), in some cases, even Private Equities themselves offer loans to managers with the purpose of investing in the companies. In fact, this is a very interesting feature for PEs, who often have difficulties in finding the appropriate managers that can direct a company towards the target point in the desired terms, it is recurrent for these funds to turn to head-hunters or human resources consultants.

6.3.- Financials considerations

A factor that is very important in a M&A transaction is the set of investors that will be decisive in the last step of the transaction, the execution of the sale. In this case we are with a company whose shareholding is formed by 95.30% minority shareholders whose participation is the 43.75% of the company. This means that there is no a player totally determinant for the transaction to be carried out. This is a good point because the bargaining power of sellers is not very high, this helps us to set a hypothesis in the model that we will develop later in which the control premium to pay does not have to be very high. In a base scenario a premium over control of 8% will be considered, nevertheless, different scenarios will be considered afterwards. In our model we will supposed, for simplicity, that the shareholding configuration after the takeover is 100% the guessed PE.

There is no doubt that Bolsas y Mercados Españoles is a profitable business, and that the flows it generates are high and stable; we can see that, in addition, the EBITDA margins are very high (during 2018 it invoiced more than 307 million euros, obtaining an EBITDA of more than 186 million euros, which is a EBITDA margin of approximately 60.5%) even taking into account the decrease in revenues and profitability in recent years. The progressive decline of BME is characteristic of a directive team that shows an exhaustion in its strategy and a difficulty in adapting to the new market conditions.

The market data does not leave room for passivity in the direction of a company in this field, during 2018 the trading volumes in Equities in the Spanish Stock Market decreased by almost 10%, and in the first quarter they did in more of 26%. In aggregated basis the incomes decreased a 9,3 percent hitting 71.5 million euros, while operative costs increased a 0.6%. The EBITDA margin decreased as well by a four percent; the set of this data shows a prior necessity of changes in the strategic plan.

The current company's strategic plan has as main premise the conversion into the provider of infrastructure solutions for financial institutions with a view to 2021. This objective is based on three key foundations:

i. The conversion into a "**single window**" to strengthen ties with the Spanish financial industry as a first step.
ii. Grow and further **diversify** the business lines from the existing base to make it scalable.
iii. Achieve **synergies** by taking advantage of the neutrality of Bolsas y Mercados Españoles and the existing customer base.

With these objectives, some quantitative goals have been set in the company's financial objectives. They are divided into three categories:

i. **Growth objectives**: achievement of an annual growth rate of 4%, thus obtaining a 6% annual increase in the group's net profit.
ii. **Cost discipline objective**: a decrease in operating costs of 2% per year and a Capex of €10 million per year will be sought.
iii. **Capital allocation and M&A objectives**: the company's objective is to maintain the current dividend policy and prudent and focused inorganic growth.

It should be noted that a prudent plan is being considered and that it enhances revenue not related to trading volumes and the changes and strategies that arise will take time to be appreciated in the profit and loss account.

Let us recall that the Spanish Government approved a tax on financial transactions at the end of last year, which will entail a tax of 0.2% on purchases of Spanish shares executed by operators in the financial sector. While it is true that this tax only affects companies that are listed on the stock market and have a market capitalization of more than one billion euros, we must realize that in this group there are nineteen of the IBEX - 35 companies; that is, those that represent more than seventy percent of the trading in the Spanish market.

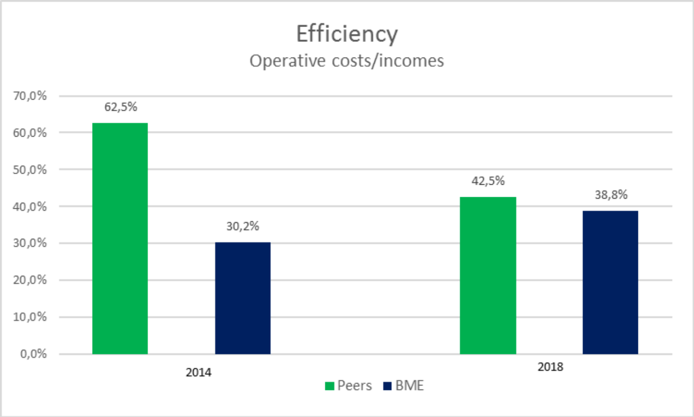
This law is not yet in force as the previous government did not get enough support for the budgets that were proposed. However, after the result of the elections of last April, it is very likely that the political party that held the presidency in the previous term will be able to form a government and the necessary support for the approval of budgets that include the execution of this rate.

Seven years ago, a tax with similar characteristics was approved in France and the results were, as expected, very negative in the volume of quotation of the values to which it affected, a reduction of 10 to 15%. The analysis team of Bankinter estimates that the same tax in Spain would have a permanent negative impact on the income of Bolsas y Mercados Españoles between 4.5 and 6.8% and between 6.2 and 9.2% on annual net profit, a scenario that, we will consider in our financial model.

If we pay attention to comparable companies of BME we can see that the evolution has not been the same for the whole sector. Although BME stands out in terms of solvency and profitability, this difference has not stopped decreasing in recent years.

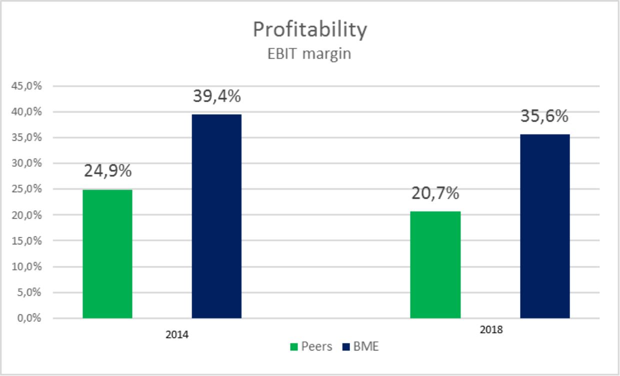
The following graphs from the Bankinter analyst report on the sector show the changes with respect to the efficiency variables (in terms of costs and operating income), and profitability in terms of the profitability of the Equity and the EBIT margin:

CHART 3: Efficiency BME – Peers (2014 – 2018)



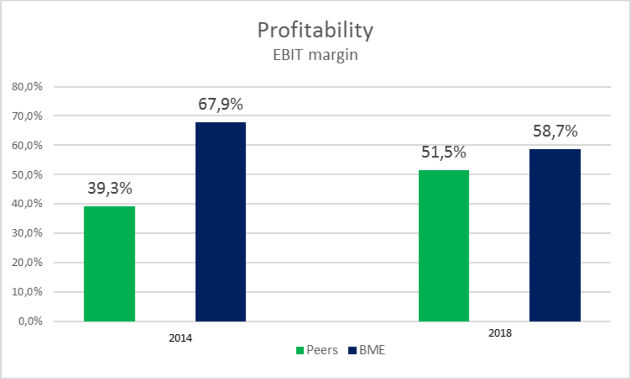
Source: Análisis, Nota compañía BME. Bankinter Broker Publications

CHART 4: Profitability (ROE) BME – Peers (2014 – 2018)



Source: Análisis, Nota compañía BME. Bankinter Broker Publications

CHART 5: Profitability (EBITDA margin) BME – Peers (2014 – 2018)



Source: Análisis, Nota compañía BME. Bankinter Broker Publications

From these graphs we can extract two different perspectives:

i. The first one is positive, due to the increase in BME's efficiency by more than 8% in terms of costs and operating income; giving a worsening in the same period of 20% of the average of the comparable for the same magnitude.

ii. The second one is not such optimistic.

   a. In profitability calculated through the ROE, although BME has decreased by approximately 4% the whole sector has done it in approximately the same amount, maintaining a great distance.

   b. For the performance measured with the EBIT margin, the evolution is different for BME and for the average of the peers. While the profitability of BME decreases by almost 10%, the one for the peers increases by 11%, cutting a distance that before was almost 30 percentage points in practically 7.

All this information only reinforces the initial approach of the difficult situation and the bad expectations for the company that we are analysing. All this information will be the basis for determining the starting hypotheses of our model, especially those that will determine the estimated evolution of revenues and costs, and that will help us determine if a Leveraged Buyout is feasible and, if so, the conditions of indebtedness and profitability in which the Private Equity Fund would incur.

6.4.- Market situation

Another factor that we must take into account to determine the set of assumptions of our model is the market environment, especially in a type of business such as the one we are dealing with that depends to a great extent on the moment of the cycle and the economic conditions.

From the company itself, they identify eight key points in the development of the Spanish economy and, therefore, of Bolsas y Mercados Españoles in the last year; These factors will also determine the results of 2019, the year in which the investment that will be proposed in the proposed model will be made later, so it is necessary to comment on them, albeit briefly:

i. Change in growth expectations for Spain for the coming years. Even though during 2017 the international organizations increased their growth estimates on several occasions, the first signs of a slowdown in the economy began to be felt in 2018. This trend is expected to continue during 2019. However, we must point out that this deceleration is less pronounced in Spain than in the neighbouring countries.

ii. A change in monetary policy is foreseen for the coming years, which would imply higher interest rates and, therefore, reduce investment.

iii. Movements in the Euro, which weakened during 2018, in the price of commodities and in the Spanish risk premium. These three factors are very important when investing in one country or another, so BME gets affected.

iv. Political situation; As indicated above with reference to the tax on financial transactions, the fiscal policy adopted by the next government could be very determinant in BME's revenues.

v. Last year the rejection by the European Commission of the Italian budgets took place, this can affect and compromise the approval of the Spanish budgets and, therefore, the political stability that is so decisive in the investment of a country.

vi. Despite all these factors, Spanish companies manage to close the year with benefits and an improved overall financial situation.

vii. Spanish listed companies have increased their income in a greater proportion than in the neighbouring countries. This increase is around 2 - 3 percent.

viii. Better conditions for accessing financing by companies in addition to the solvency ratio.

As we can see, the economy has entered a cycle moment that we could identify as a period of maturity. That, in some way, has not meant a big change due to the decrease in the price of oil during the last months of 2018, which represented a very important decrease in the price of imports.

6.5.- Initial assumptions

Once the company's environment is explained, we can establish a series of initial hypotheses that allow us to build our model.

The starting point we are going to take is the current market capitalization of the company. At 31st of May of 2019, it is quoting at a price of 23.52 euros per share, which means that the company's market capitalization is approximately 1.966 million euros. If we compare it with the EBITDA result of 2018 (€ 186.000) we would obtain that the markets are valuing the company at approximately 10.57 times its EBITDA.

We can see bellow, in the table 3, that a projection has been made in the medium term, estimating the cash flows that would produce the company until 2031. This does not mean that the proposed investment has a duration of 12 years, only has been sought have a general perspective of the result of investing in this company and to be able to observe the differences in the final profitability for the divestment in one year or another. The best option for Private Equity to get out of the company will be determined once we have analysed the entire transaction.

As we have indicated previously, the company is not at its optimum moment of economic efficiency, therefore, the intervention of the guessed PE will be focused to a large extent on improving this efficiency. In the last two years, the EBITDA margins were 65.4% in 2017 and 60.5% in 2018. The hypothesis that we will use from the starting point will be to improve efficiency, reducing costs. The way to achieve this goal is through a deep reform in the digitization of the transactions and products offered by BME. We should recall that the difficulty that is most affecting the development of this company is the lack of adaptation to new markets, digitalization would achieve a high reduction in personnel costs and a simpler and more agile operative. It has therefore been decided to establish an EBITDA margin that reaches 72% in 2019 and that can be kept constant for the remaining years.

Regarding the assumptions for the projection of income, it has been considered that the effect of the changes made by the Private Equity will mean an increase in income of approximately 15% in the first year while in the second it will be 7%. From then on, a more stable growth is estimated, maintaining 3 percent during the rest of the years that have been projected.

The amortization and depreciation estimated during these years have been evaluated as follows: depreciation has been based on the volume of transactions that have taken place, that is, based on the volume of sales. During the two years prior to the guessed purchase, the amortizations and depreciations that have taken place have been approximately 2.53% and 2.57% in 2017 and 2018 respectively. For 2019, an average of these two percentages has been calculated, obtaining 2.5% that has been fixed constant throughout the entire period. The justification for this estimate is the following: depreciation of assets is not a factor that depends significantly on the group's strategy, rather it is usually carried out a depreciation accounting policy that favours the company as much as possible in fiscal terms and we will assume that it will remain this way with the Leveraged Buyout. In fact, PE will seek to depreciate as much as possible during their years in the company with the aim of benefiting as much as possible from tax advantages.

6.6.- Estimates results

Once we have fixed the initial assumptions, we are able to project the estimations of Profits and Loss account and Cash Flows. The results of the estimation of the P&L account can be seen in the following table:

TABLE 3: P&L estimations of BME

€k	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
P&L															
Turnover	320.777	307.359	353.463	378.205	389.551	401.238	413.275	425.673	438.444	451.597	465.145	479.099	493.472	508.276	523.525
% Growth			15,0%	7,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%
EBITDA	209.788	186.066	254.493	272.308	280.477	288.891	297.558	306.485	315.679	325.150	334.904	344.951	355.300	365.959	376.938
% Margin	65,4%	60,5%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%	72,0%
DA	(8.105)	(7.902)	(9.009)	(9.640)	(9.929)	(10.227)	(10.534)	(10.850)	(11.175)	(11.510)	(11.856)	(12.211)	(12.578)	(12.955)	(13.344)
% Turnover	2,5%	2,6%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%	2,5%
EBIT	201.683	178.164	245.484	262.668	270.548	278.665	287.024	295.635	304.504	313.639	323.049	332.740	342.722	353.004	363.594
% Margin	62,9%	58,0%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%	69,5%
Financial Result	65	206													
EBT	201.748	178.370	245.484	262.668	270.548	278.665	287.024	295.635	304.504	313.639	323.049	332.740	342.722	353.004	363.594
Taxes	(49.528)	(43.724)	(61.371)	(65.667)	(67.637)	(69.666)	(71.756)	(73.909)	(76.126)	(78.410)	(80.762)	(83.185)	(85.681)	(88.251)	(90.899)
EAT	152.220	134.646	184.113	197.001	202.911	208.998	215.268	221.726	228.378	235.230	242.286	249.555	257.042	264.753	272.696

Source: Own elaboration

Comments:

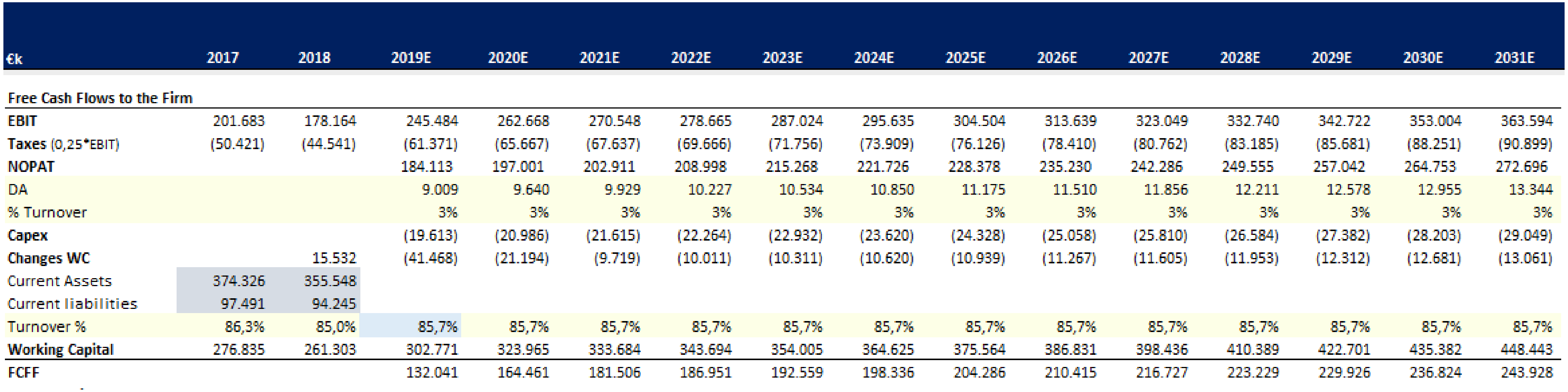
The effect of the PE entry can be seen in the estimation. After the changes expected to be made, revenues go from 307 million euros in 2018 to 523.5 million euros in 2031, which represents an increase of more than seventy percent. The same happens with the EBITDA, which has a change of more than 100% from 2018 to 2031. The change in EBITDA is a very important factor to be considered, since the magnitudes that we will consider when entering and leaving of the investment will be multipliers of times EBITDA. Therefore, in this scenario the fact of entering and leaving with the same multiplier would double the price.

Once the profit and loss account has been estimated, we can state how the free cash flows that the company would have during the same period.

In this case, it has only been necessary to establish a hypothesis, which has been necessary to calculate Working Capital. Because of that we have taken into account the difference between current assets and current liabilities, but without taking into account the short-term financial investment items and short-term obligations that are given by the guarantees that it demands and that it offers to the participants of the transactions made through the platforms that BME provides. We have justified this fact previously. After this we have been able to calculate the percentage that Working Capital represents on income; Through this calculation we have obtained percentages of 86.3% and 85% for the years 2017 and 2018 respectively. With these two data we have calculated an average result that has been 85.7% that we considered as the Working Capital necessary for the operative of a company of this type, hence that percentage has been set for the rest of the projected years.

In the following table (Table 4) we can see the Cash Flows that have been obtained:

TABLE 4: Cash flows estimations of BME



€k	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Free Cash Flows to the Firm															
EBIT	201.683	178.164	245.484	262.668	270.548	278.665	287.024	295.635	304.504	313.639	323.049	332.740	342.722	353.004	363.594
Taxes (0,25*EBIT)	(50.421)	(44.541)	(61.371)	(65.667)	(67.637)	(69.666)	(71.756)	(73.909)	(76.126)	(78.410)	(80.762)	(83.185)	(85.681)	(88.251)	(90.899)
NOPAT			184.113	197.001	202.911	208.998	215.268	221.726	228.378	235.230	242.286	249.555	257.042	264.753	272.696
DA			9.009	9.640	9.929	10.227	10.534	10.850	11.175	11.510	11.856	12.211	12.578	12.955	13.344
% Turnover			3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Capex			(19.613)	(20.986)	(21.615)	(22.264)	(22.932)	(23.620)	(24.328)	(25.058)	(25.810)	(26.584)	(27.382)	(28.203)	(29.049)
Changes WC		15.532	(41.468)	(21.194)	(9.719)	(10.011)	(10.311)	(10.620)	(10.939)	(11.267)	(11.605)	(11.953)	(12.312)	(12.681)	(13.061)
Current Assets	374.326	355.548													
Current liabilities	97.491	94.245													
Turnover %	86,3%	85,0%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%	85,7%
Working Capital	276.835	261.303	302.771	323.965	333.684	343.694	354.005	364.625	375.564	386.831	398.436	410.389	422.701	435.382	448.443
FCFF			132.041	164.461	181.506	186.951	192.559	198.336	204.286	210.415	216.727	223.229	229.926	236.824	243.928

Source: Own elaboration

Comments:
We can see how the changes carried out by the guessed PE and management team in this scenario has had a great result, reaching almost double the yearly cash flows of the company. The results shown are those that will give us the ability to finance the Leveraged Buyout during the years of investment.

In order to put into practice, the theoretical terms that have been explained above and to obtain a model that resembles the reality, two types of debt have been considered, each with different hypotheses to establish limitations inherent to the contracts of these types of debt.

Firstly, we have considered a Senior tranche, which will finance the purchase until we reach 8.13 times EBITDA. This is a high proportion for a debt tranche of the characteristics that Senior debts tend to have, however, since it is a business with very stable free cash flows over time and with a prior level of indebtedness such BME has, it would be a quite probable scenario. The cost of debt of this type is usually low due to the guarantees that are demanded and that we will explain later; therefore, considering the current market situation has been decided to set it at 3%.

The other section of debt that has been considered is the so-called "mezzanine" that usually allows much more flexible conditions and, therefore, will suppose a cost higher than the Senior tranche. This is because the risk is higher and its collection is subordinated to the senior debt being repaid previously.

The guarantees that are usually required for the senior tranche are quite demanding and usually include requirements for minimum payments, debt limits, minimum cash amounts, etc. The requirements that we have assumed are the following:

i. Minimum amortization of seventy million euros for the Senior tranche and the payment of interests that the outstanding debt generated during the year. It will be assumed that the repayment of the debt will be with the typical terms of the French method.
ii. With the aim that the company does not enter a situation in which the lack of liquidity endangers the fulfilment of its obligations, a minimum cash balance is usually required. In this case we have assumed a minimum required of five million euros.
iii. We will also assume that the terms of the contract do not allow us to borrow more than 8.13 times EBITDA with senior debt and 1 time with mezzanine, which means that the difference between this limit and the purchase price will be the money that the Private Equity Fund will provide from its own funds.

Regarding the section of debt subordinated to the previous one or "mezzanine" we have assumed a debt of once EBITDA; this means that the creditors of this tranche will finance approximately 186 million euros to carry out the transaction. Because the collection of this loan is conditioned to the payment of the Senior tranche, we will assume a required interest of 4.5%. It also assumes a series of conditions that are significantly more flexible than previous ones:

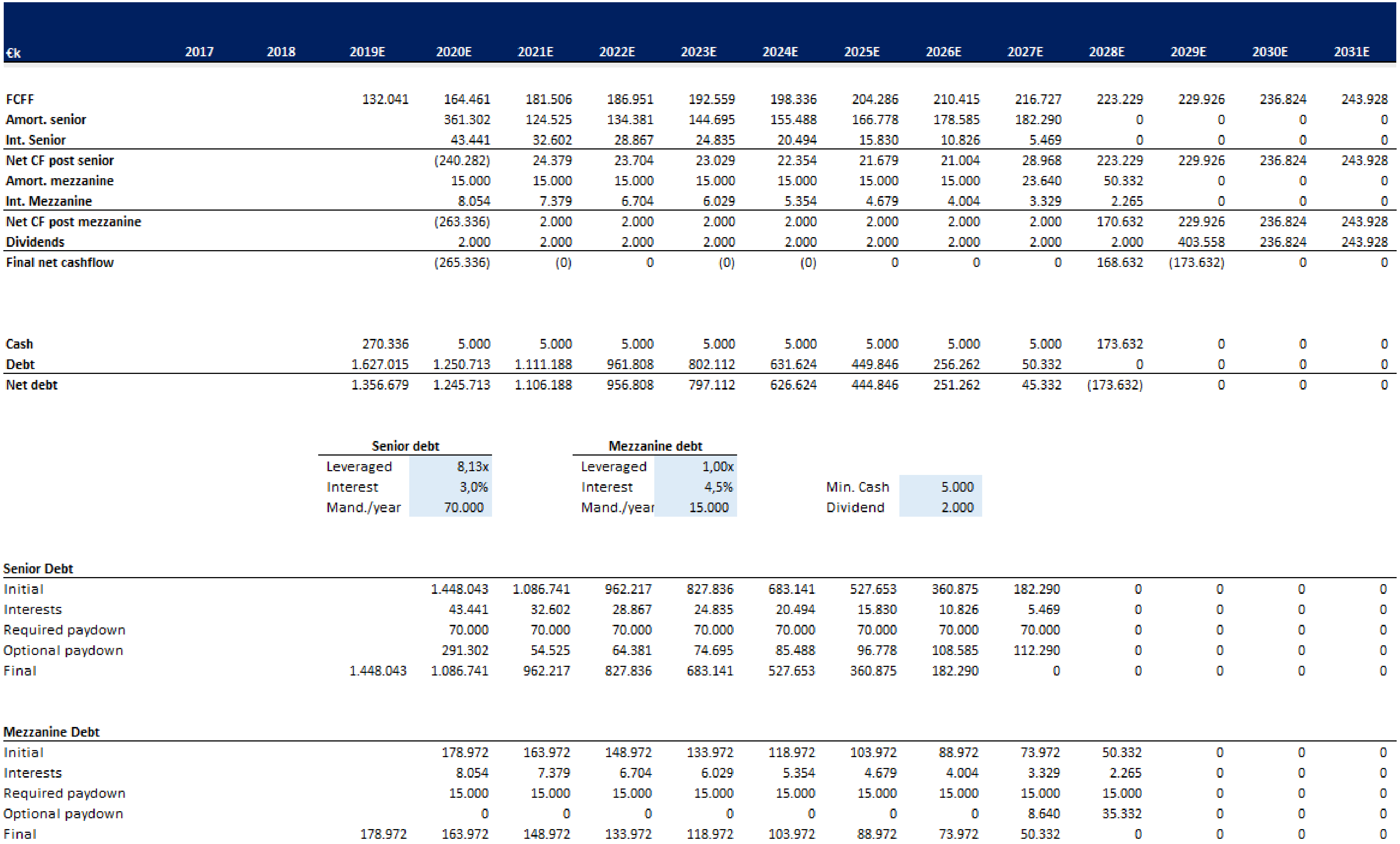
A minimum payment of 15 million euros per year will be required in addition to the payment of interest for that year. In the case of not having an enough cash flow, the minimum and the interests of the Senior tranche will be paid first. If there was a surplus of cash after paying the Senior, the interests would be paid firstly and then the minimum required for this tranche.

We have also assumed a very common practice for PEs, which is to withdraw money every year as a dividend in the case that after paying the minimum payments and interest of both tranches of debt there is still a surplus cash flow. This distribution of dividends will also be limited by the senior debt tranche in our model; senior creditors will not allow to take out more than two million euros per year of dividends even if all the minimums established in the contracts have already been fulfilled. The reason for this extra limit is, as with the minimum cash required, to avoid problems in the future for repaying the debt. It is also motivated by the fact that the cash flows that usually remain after making the mandatory payments are usually used to pay in advance part of the debt that remains. And this is, precisely, another hypothesis that is going to be used in the model; ultimately, if after paying all the minimum required payments and interests, saving the minimum of mandatory funds and distributing the maximum allowed dividend there is still a surplus of cash flow, this will be used to advance part of the debt that remains to be paid. Of course, there will never be any early amortization of the mezzanine debt if there is still some senior debt to be repaid.

Once all the debt that has been used to finance the purchase of the company has been fully amortized, all the extra cash flows generated by the company will be withdrawn by the Private Equity in the form of dividends. This will be so because when the debt contracts cease to be in force, the restrictions they set will disappear. This is a scenario that can be observed in the cash flows of the last years that have been estimated.

The total cash flows that have been obtained with the investment, debt payments and considering the restrictions are shown below, in Table 5, together with the debt amortization tables.

TABLE 5: Debt repayment estimations of BME



€k	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
FCFF			132.041	164.461	181.506	186.951	192.559	198.336	204.286	210.415	216.727	223.229	229.926	236.824	243.928
Amort. senior				361.302	124.525	134.381	144.695	155.488	166.778	178.585	182.290	0	0	0	0
Int. Senior				43.441	32.602	28.867	24.835	20.494	15.830	10.826	5.469	0	0	0	0
Net CF post senior				(240.282)	24.379	23.704	23.029	22.354	21.679	21.004	28.968	223.229	229.926	236.824	243.928
Amort. mezzanine				15.000	15.000	15.000	15.000	15.000	15.000	15.000	23.640	50.332	0	0	0
Int. Mezzanine				8.054	7.379	6.704	6.029	5.354	4.679	4.004	3.329	2.265	0	0	0
Net CF post mezzanine				(263.336)	2.000	2.000	2.000	2.000	2.000	2.000	2.000	170.632	229.926	236.824	243.928
Dividends				2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	403.558	236.824	243.928
Final net cashflow				(265.336)	(0)	0	(0)	(0)	0	0	0	168.632	(173.632)	0	0
Cash			270.336	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	173.632	0	0	0
Debt			1.627.015	1.250.713	1.111.188	961.808	802.112	631.624	449.846	256.262	50.332	0	0	0	0
Net debt			1.356.679	1.245.713	1.106.188	956.808	797.112	626.624	444.846	251.262	45.332	(173.632)	0	0	0

Senior debt	
Leveraged	8,13x
Interest	3,0%
Mand./year	70.000

Mezzanine debt	
Leveraged	1,00x
Interest	4,5%
Mand./year	15.000

Min. Cash	5.000
Dividend	2.000

Senior Debt	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Initial				1.448.043	1.086.741	962.217	827.836	683.141	527.653	360.875	182.290	0	0	0	0
Interests				43.441	32.602	28.867	24.835	20.494	15.830	10.826	5.469	0	0	0	0
Required paydown				70.000	70.000	70.000	70.000	70.000	70.000	70.000	70.000	0	0	0	0
Optional paydown				291.302	54.525	64.381	74.695	85.488	96.778	108.585	112.290	0	0	0	0
Final			1.448.043	1.086.741	962.217	827.836	683.141	527.653	360.875	182.290	0	0	0	0	0

Mezzanine Debt	2017	2018	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Initial				178.972	163.972	148.972	133.972	118.972	103.972	88.972	73.972	50.332	0	0	0
Interests				8.054	7.379	6.704	6.029	5.354	4.679	4.004	3.329	2.265	0	0	0
Required paydown				15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	0	0	0
Optional paydown				0	0	0	0	0	0	0	8.640	35.332	0	0	0
Final			178.972	163.972	148.972	133.972	118.972	103.972	88.972	73.972	50.332	0	0	0	0

Source: Own elaboration

There are several things that can be observed in the previous tables:

i. In the first place, as indicated above, we can see how in the last years the debt disappears due to it begins to be amortized as soon as extra cash flows start to be obtained. This will help us to set the optimal exit time for the PE fund. Without the necessity of calculating returns, we can guess that the time horizon of exiting the investment could be the year 2027 or 2028, since the debt has already been paid and the improvements that were established in the initial strategic plan have already been implemented and exhausted. However, we will study afterwards the financial result that would be obtained if they leave the shareholding before the end date of payment of the loans.

ii. Secondly, we can check how the order in the hierarchy of payments is fulfilled, ensuring the hypothetical restrictions that contracts with lenders would establish.

iii. We can also see how over the years the cash deposit remains stable at five million euros, this fact is not accidental, the policy of debt repayment as soon as there are funds to do so makes the cash reserves fall to the minimum that the Private Equity has committed to maintain. In fact, it can be observed that in the first year of entry into the company all the cash that had previously been available is used. This is a procedure that is followed in all transactions of this type.

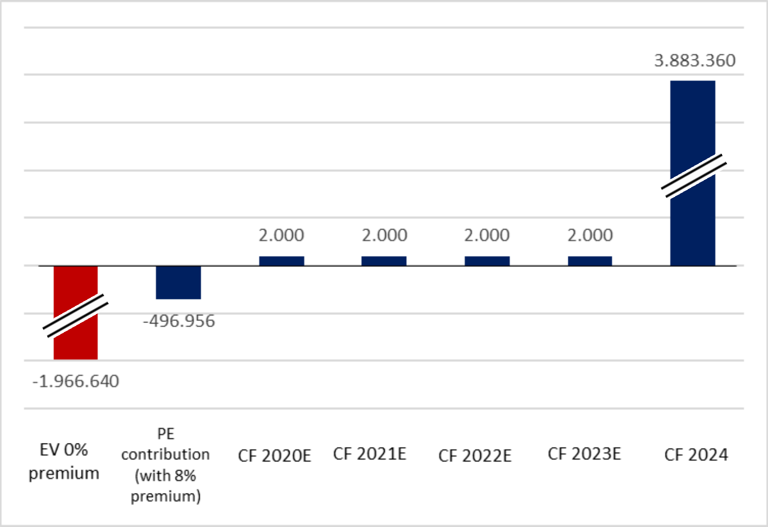
iv. The same applies to dividends, given that over the years it is possible to generate free cash flows necessary to pay the Senior and Mezzanine debts and their interests and maintain the pre-established minimum of cash, the Company distributes dividends among its shareholders. These dividends will also have to be considered for the calculation of the IRR of the transaction for Private Equity. We can also see that as soon as the debts are paid off, the 100% of the free cash flows leave the company as dividends.

6.7.- Investment Result

Once the cash flows have been estimated and the patterns for the payment of the debt have been established, we are able to set alternatives for the time of exit of the investment and the influence on profitability as one or the other is chosen.

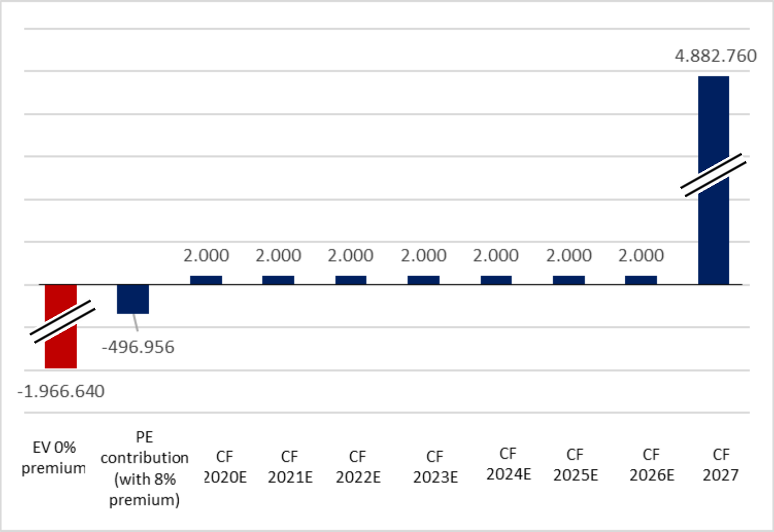
We are going to assume two years to make the investment in the company by the PE; 2024 and 2027, that is, after maintaining the investment for 6 and 9 years, which is a common horizon for PEs. When calculating the IRRs of both possibilities, we consider the annual dividends that the PE has obtained from the company. it is assumed, also, that the sale is made giving to the company a valuation of 10.57x EBITDA, considering the debt outstanding, which means that the new buyer would pay to the PE a multiple of 8.52x in the first case and 10.43x in the second case; this assumption in which the exit multiple is the same than the entry multiple could be considered as a no-optimistic one, in the sense, the exit situation is much better than the situation at the entry moment, so could be deduced that is feasible to sell the company at a higher multiple nevertheless, this is only a base scenario and other scenarios will be taken into account afterwards. The results of the investment are represented in the next two graphs:

CHART 6: CFs for investing until 2024



Source: Own elaboration

CHART 7: CFs for investing until 2027



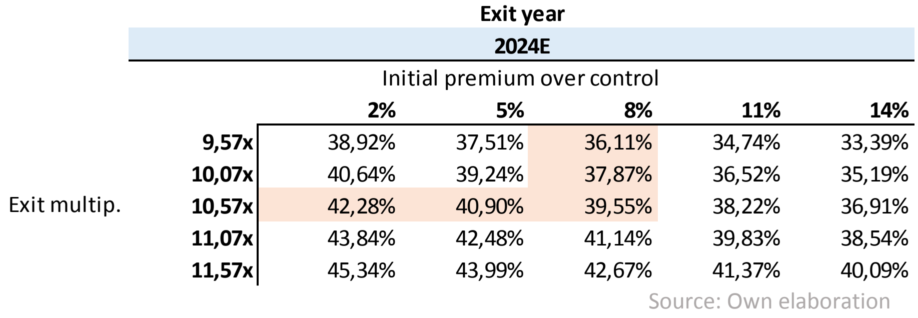
Source: Own elaboration

For the first case, an IRR of 39.55% was obtained and for the second case of 27.79%. This implies a much lower profitability than the PEs requires for their investments. This leads us to the conclusion of the leveraged purchase of the group Bolsas y Mercados Españoles, is highly profitable and it could represent an adequate investment for a Private Equity fund, at least under the conditions and hypotheses that have been established in the model that has been developed.

We can identify a huge reduction of the IRR when increasing the investment period, this is because of the effect of the time over the investment. It will be decision of the fund the year of exiting depending on the final performance of the company and the different opportunities that could appear.

In order to know how much the assumptions taken regarding the premium to be paid and the exit multiple affect in the investment decision a table of sensibilities has been built. The result is shown in the tables bellow:

TABLE 6: Sensibility table for IRR's result in the exit year 2024



Exit year

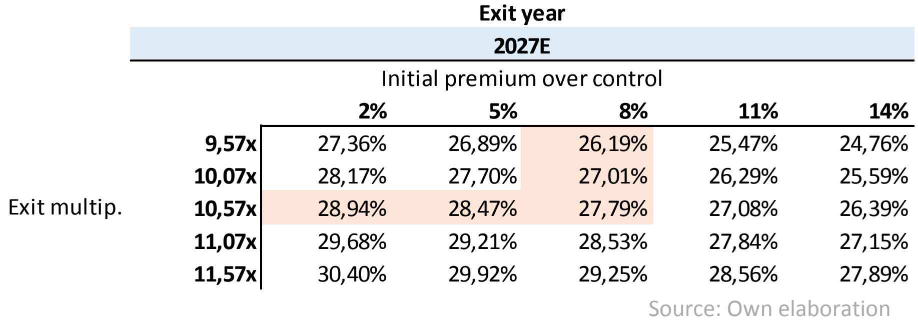
2024E

Initial premium over control

		2%	**5%**	**8%**	**11%**	**14%**
	9,57x	38,92%	37,51%	36,11%	34,74%	33,39%
	10,07x	40,64%	39,24%	37,87%	36,52%	35,19%
Exit multip.	**10,57x**	42,28%	40,90%	39,55%	38,22%	36,91%
	11,07x	43,84%	42,48%	41,14%	39,83%	38,54%
	11,57x	45,34%	43,99%	42,67%	41,37%	40,09%

Source: Own elaboration

TABLE 7: Sensibility table for IRR's result in the exit year 2027



Exit year

2027E

Initial premium over control

		2%	**5%**	**8%**	**11%**	**14%**
	9,57x	27,36%	26,89%	26,19%	25,47%	24,76%
	10,07x	28,17%	27,70%	27,01%	26,29%	25,59%
Exit multip.	**10,57x**	28,94%	28,47%	27,79%	27,08%	26,39%
	11,07x	29,68%	29,21%	28,53%	27,84%	27,15%
	11,57x	30,40%	29,92%	29,25%	28,56%	27,89%

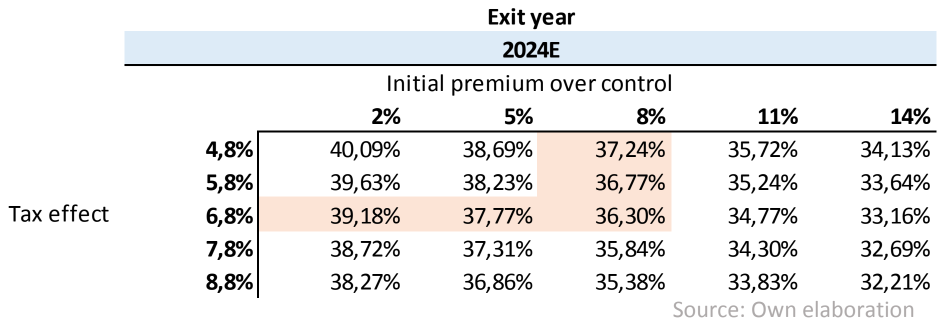
Source: Own elaboration

As we can see in the tables, even in the different scenarios of premium over control and exit multiple, the returns are still high, this drive us to the conclusion that the transaction could be perfectly executed. Even though was surging the necessity of paying a high premium or selling at a lower multiple. We can conclude that due to the high return the operation produces, the assumptions taken of premium over control paid and exit multiple are not highly conditioning the decision of investing.

As said abovementioned, the financial transactions tax is a high risk that a buyer should have in consideration. The analysis team of Bankinter estimates that a tax of this type in Spain would have a permanent negative impact on the income of Bolsas y Mercados Españoles between 4.5 and 6.8% and between 6.2 and 9.2% on annual net profit.

Placing our studio in a bad scenario, in which the result would be a decline of 6.8% of incomes the result that we get are the following: 36.34% of IRR for exiting in 2024 and 26.08% for exiting in 2027. We should point out that the percentage used was only an estimation, reason why we will construct sensibility tables were the result of other final consequences in the incomes.

TABLE 8: Sensibility table for IRR's result in the exit year 2024 considering the financial tax



Exit year

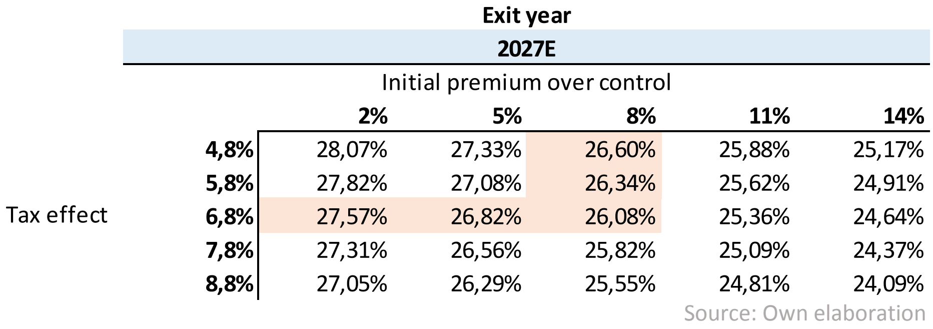
2024E

Initial premium over control

		2%	5%	8%	11%	14%
	4,8%	40,09%	38,69%	37,24%	35,72%	34,13%
	5,8%	39,63%	38,23%	36,77%	35,24%	33,64%
Tax effect	6,8%	39,18%	37,77%	36,30%	34,77%	33,16%
	7,8%	38,72%	37,31%	35,84%	34,30%	32,69%
	8,8%	38,27%	36,86%	35,38%	33,83%	32,21%

Source: Own elaboration

TABLE 9: Sensibility table for IRR's result in the exit year 2027 considering the financial tax



Exit year

2027E

Initial premium over control

		2%	5%	8%	11%	14%
	4,8%	28,07%	27,33%	26,60%	25,88%	25,17%
	5,8%	27,82%	27,08%	26,34%	25,62%	24,91%
Tax effect	6,8%	27,57%	26,82%	26,08%	25,36%	24,64%
	7,8%	27,31%	26,56%	25,82%	25,09%	24,37%
	8,8%	27,05%	26,29%	25,55%	24,81%	24,09%

Source: Own elaboration

In the tables above we can see the different IRR results for different tax effects and different premium levels, maintain the base assumption of exit multiple at 10.57x. The conclusions we obtain is that the permanent impact of this tax, at least up to 8.8% of the income are not highly conditioning the decision of investing. As we can appreciate, the effect of time softens the consequence in the IRR.

Finally, for concluding this work, it would be interesting to differentiate the contribution that each factor has on the IRR of the investment. For this, the base case has been used -the one in which the rate on financial transactions is not considered- and the investment conditions have been changed in the model that has been previously constructed in order to identify the effects of the leverage and the action of the PE.

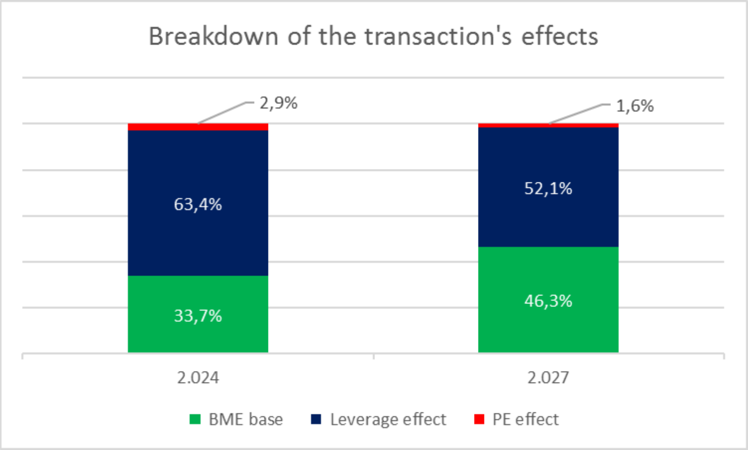
Recall that in the base case the IRR obtained were 39.55% and 27.79% for an investment of 6 and 9 years, respectively.

Firstly, the assumption that the acquisition was made using financial leverage has been eliminated and, therefore, the full purchase price is meet with equity. As result, the returns in this case have been calculated considering that all the free cash flows are taken as dividends (instead of the 2 million per year that were previously considered as consequence of the debt payments). In this way, TIRs of 15.00% and 13.32% were obtained for the output in 2024 and 2027 respectively. We can see a very high reduction in profitability, thus demonstrating the multiplier effect of profitability caused by leverage.

Second, the efficiency improvements that have been assumed by the entry of the EP have been eliminated. The strategic plan presented by BME set a 4% growth target for the next three years, so this scenario has been considered, from then on, we will assume a permanent 2% annual growth, instead of 3% used before. The IRR's obtained without leverage and the PE's effect are 14.09% and 13.02%. The rest we will consider is the profitability offered by the purchase of the company without applying any change in the operations of the company.

All these scenarios have been contemplated keeping the assumptions of premium over control and exit multiple. In order to show in a visual way, the results it has been represented in the next graph.

CHART 8: Breakdown of the transaction effects



Source: Own elaboration

7.- Conclusions

After the study that has been carried out for the elaboration of this essay, several conclusions have been drawn.

Private Equities are entities that manage to extract very high returns from the investments they make. This is possible thanks to the type of operative they use in their activity.

The usual way in which PE transactions are carried out by companies is the Leveraged Buyout. The PE borrow heavily in the purchase of companies to achieve the highest possible profitability with the leverage effect; by reducing the amount they contribute from their funds for these transactions, they get IRRs much higher.

Through a Leveraged Buyout the money that has been borrowed is backed by the assets of the company that is the object of the transaction and the cash flows it will generate in the future, so we can say that even though the levels of indebtedness are very high, the risk for the PEs is not so high. This is reinforced by the structure that the purchase itself has; through a company created ad hoc for the realization of the investment (newco) it is achieved that the responsibility that would reverberate on the PEs is even lower.

The use of Leveraged Buyout transactions in M&A transactions ensures a strong reduction of agency costs. The high debt rates create a pressure on the management team that leads them to significantly improve the efficiency of the company in order to repay the debt in which have been incurred. In addition, this need of repayment of debt means that the funds available in the company are significantly reduced, making difficult to carry out investments that are not very profitable.

This complex operative is considered financial engineering and causes great benefits in the target company in terms of value. We could say that it is the own Leveraged Buyout operative that, by its form, ensures the creation of value in the company. However, exists a major debate among authors; in this sense, it has been seen how its use can also cause destruction of value, where the main affected are usually: governments, employees and pre-buyout bondholders.

Finally, we have been able to see how the transaction proposed on the BME company does meet the profitability requirements of a target transaction of Private Equites, either under the conditions and hypotheses that have been established or with more adverse conditions. Also have been proven how the possible put in force of the financial transaction tax, a priori, would not impede the decision of investing. The development of this case has served to put into practice the knowledge developed in along the essay.

Finally, the importance of LBO has been pointed out. It has been proven that most of the rentability obtained with the transaction is because of the leverage.

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