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ON BUSINESS VALUATION - BOOK VALUE VS. MARKET VALUE.

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ÁREA TEMÁTICA: B - Valoración y Finanzas

Key words: Business Valuation; Market value; Book value; Price to sales ratio; Market Value Added method

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On Business Valuation - Book Value vs. Market Value.

ABSTRACT

This paper aims to develop a method that allows the evaluation of companies, according to the respective sector of activity, in a simple and fast way, comparing the value obtained through the application of the Market Value Added method with multiple Price to Sales.

To obtain a fair value that reflects the expected returns based on forecast there are several methods. Each method follows its own assumptions and methodologies, with the purpose of finding the value of the company. One of widely used methods is the Market Value Added method, or MVA method, that belongs to the group of methods based on cash flows. This method consists of the current value of all future Economic Value Added (EVA). EVA is the difference between the value of the company and the total capital invested. Another method widely used is the method of multiples, which is part of the group of methods based on patrimonial approach. Each multiple has a numerator and a denominator, where the numerator can be the book value or the market value, such as the market price. On the other hand, the denominator may be a measure of equity, such as the book value of equity, or an enterprise value measure, such as operating or sales revenues.

In the present paper is intended to create the multiple of price to sales for the companies of the sector of activity CAE 01 - Agriculture, animal production, hunting and related service activities, using the results obtained by the method MVA, as market price, taking into account the last 5 years of activity of the sector. Based on the obtained value, the multiple PS is determined for the activity sector. In this way, the value of a company, with this economic activity, can be determined by the multiplication of its sales by the multiple PS.

Key words: Business Valuation; Market value; Book value; Price to sales ratio; Market Value Added method

Resumen

El objetivo de este documento es desarrollar un método que permita la evaluación de las empresas, de acuerdo con el sector de actividad respectivo, de una manera sencilla y rápida, comparando el valor obtenido a través de la aplicación del método de valor agregado de mercado con precio múltiple a ventas.

Para obtener un valor razonable que refleje los rendimientos esperados según el pronóstico, existen varios métodos. Cada método sigue sus propios supuestos y metodologías, con el propósito de encontrar el valor de la empresa. Uno de los métodos más utilizados es el método de valor agregado de mercado, o método MVA, que pertenece al grupo de métodos basados en flujos de efectivo. Este método consiste en el valor actual de todos los valores económicos agregados futuros (EVA). EVA es la diferencia entre el valor de la empresa y el capital total invertido. Otro método ampliamente utilizado es el método de los múltiplos, que forma parte del grupo de métodos basados en el enfoque patrimonial. Cada múltiplo tiene un numerador y un denominador, donde el numerador puede ser el valor contable o una medida de valor de mercado, como el precio de mercado. Por otro lado, el denominador puede ser una medida del patrimonio, como el valor contable del patrimonio neto, o una medida del valor de la empresa, como los ingresos operacionales o ventas.

En el presente documento se pretende crear el múltiplo de precio a ventas para las empresas del sector de actividad CAE 01 - Agricultura, producción animal, caza y actividades de servicios relacionados, utilizando los resultados obtenidos por el método MVA, como precio de mercado, teniendo en cuenta En cuenta los últimos 5 años de actividad del sector. Con base en el valor obtenido, se determina el PS múltiple para el sector de actividad. De esta manera, el valor de una empresa, con esta actividad económica, puede ser determinado por la multiplicación de sus ventas por el PS múltiple.

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Palabras clave: Valoración de empresas; Valor de mercado; Valor en libros; Relación precio / ventas; Método de valor agregado de mercado.

1. INTRODUCTION

Globalization has been the dominant theme for investors and companies in the last two decades, with the primary ideas about the value-oriented approach of the company inspired by changes in the economic environment that began to emerge in the US in the 1980s (Berzakova, Bartosova, & Kicova, 2015). In Portugal, the "Technical and Research Committee" published the manual on procedures to be considered in the evaluation of a business in continuity, for the first time in December 1985 (Neves, 2002). Since then, there has been a growing discussion around the topic of evaluating companies with different opinions. Currently, practically everything is evaluated and in this way, evaluation can be considered the heart of finance (Orey, 2014).

Given this role, which is so fundamental in the evaluation of companies, this study aims to develop a method that allows the evaluation of companies, according to the respective sector of activity, in a simple and fast way, comparing the value obtained through the application of the Market Value Added method with multiple Price/Sales. In this way, will be used data from the activity sector of division 01 - Agriculture, livestock production, hunting and related services activities of CAE Rev 3.

The paper is divided in 4 more sections. A brief review of the literature is made in section 2. In section 3 is indicated the methodology used, followed by the data analysis in section 4. Finally, last section presents the main conclusions and suggestions for further research.

2. COMPANIES VALUATION

In general, investors are unaware of the time of the divestiture of their companies, which is why they are seen as potentially immortal (seen in a continuity plan) it is not strictly necessary to predict the cash flows of each year since the present to eternity (Brealey, Myers, & Allen, 2011). Since the role of managers goes a long way toward realizing the forecasts, in the medium to long term, financial areas tend to focus on the decisions taken in the scope of business activities, in order to maximize the value of the company taking into account the short, medium and long term flows (Silva & Queirós, 2011).

In order to create value for the company as well as its shareholders, new strategies and measures of success emerge, that is, models have emerged that are used in the evaluation of companies, each one presenting its level of complexity, being some more sophisticated than others (Orey, 2014). However, these methods of evaluation, although they support

different theories, regarding the value of the company, have the same characteristics, ending in some cases, by complementing each other (Cordeiro, 2013).

The evaluation of companies requires, as the main requirement, the high knowledge in the areas of finance, accounting and taxation, as well as know the strategy and organization of companies. An analysis and adjustment of the financial statements should not be excluded, in which account should be taken not only of the accounting policies of the company but also of an in-depth audit of the company (Neves, 2002). Thus, for anyone involved in the field of business finance, understanding the mechanisms of evaluation of the company is one of the essential requirements (Fernandez, 2013). Evaluation therefore plays a key role both in financing / investment and in the operational decisions of companies. In this way, many methods are employed to approximate the true value of a company (Perek & Perek, 2012).

According to Neto (2013) the basic premise in valuing companies is to obtain a fair value that reflects the expected returns based on forecasts. These expected returns are accentuated in subjective processes, since this depends on very different external and internal factors, such as the political, social and economic context in which the company is inserted. Thus, evaluation techniques, as well as their approaches, can be complex in their details and elaboration, but are relatively straightforward in their objectives and their application (Copeland, Koller, & Murrin, 2006).

The evaluation of companies acts on the basis of quantitative methods and models, that is, the evaluation is not based on an exact science, hence it is not possible to compare the results at all (Damodaran, 2009). Thus, there are undeniably uncertainties associated with valuation, often associated with the asset being evaluated, although the valuation model may increase this uncertainty (Damodaran, 2002). Thus, several problems arise in the evaluation of a company, such as: the plurality of the concept "value", in which the evaluator can opt for a method that may not be the most suitable for the company; and the diversity of the factors that can influence the evaluation, that is, the size, the market and the context where the company is inserted (Shefrin, 2001).

In this way, it becomes imperative to understand the true meaning of "value". According to Damodaran (2004), the "value" that the company presents corresponds to the value of the expected cash flows, including the assets already installed and also the future growth of the company, discounted to the cost of capital. However, an important part of the value creation model is the knowledge of all variables with economic potential to add wealth to the company's business, identified by so-called value drivers (Neto, 2014).

With the plurality of this concept, several concepts emerge, such as accounting value, value of use, exchange value, intrinsic / fundamental value, substantial value, market value and goodwill (Marques, 2014).

Thus, the valuation of companies is a complex process, since it is always necessary to create and estimate variables that are directly related to the determination of business risk and the estimation of the cost of capital (Lopes, 2017). In this way, the evaluation process has underlying several phases, so that the value of a given business can be estimated or determined (Monteiro, 2012). This process, known as Due Diligence, consists of the research plan and collection of all relevant information from the most diverse resources, including assets, liabilities, human resources, technologies, company policies, fiscal areas, marketing audits and distribution, and of business opportunities and risks (Neto, 2014).

According to Monteiro (2012), over the years several methods of evaluating companies have been developed which have been improved in order to be more suitable and accurate. Each method follows its own assumptions and methodologies, with the purpose of finding the value of the company. However, despite the criteria adopted by each one of them to be rigorous, this value is an estimated and not definitive value of the company, since the pricing is developed based on assumptions subject to some subjectivity, as previously discussed (Neto, 2014). Thus, according to Dalmolin and Boligon (2013), there are models based on data taken from financial charts and other data that need to be adjusted for certain variables. However, according to the same authors there are still models that evaluate companies only for their operating income, while others also add non-operating income.

In this way, the evaluation methods can be divided into three main groups: the methods based on the patrimonial perspective; methods based on cash flows and, finally, dynamic methods (Monteiro, 2012). However, Neto (2014) states that in financial history there are other methodologies, but it has less application since they do not provide information that emphasizes the intended values. In general terms, the various evaluation methodologies have been adapted, making them flexible to the companies' needs, their level of complexity and their variety (Neves, 2002).

The Market Value Added method, or MVA method, belongs to the group of methods based on cash flows. This method consists of the current value of all forecasted Economic Value Added (EVA) in the future. The original concept of Economic Value Added (EVA) emerged in the nineteenth century and was proposed by managers as a measure initially termed as supernormal profit (or even residual profit). However, with the advancing of the years, its

concept has been extended, being nowadays, designated by the gain that the company obtains above its cost of capital (Neto, 2014). For Damodaran (2017) the EVA is a step backwards to the net present value rule, since future income will be discounted to date using the cost of capital. Thus, according to Berzakova et al. (2015), EVA is mainly known as a common measure of company´s performance, but can be used in other ways namely:

a) as an instrument of financial analysis;

b) as a management and incentive tool for employees;

c) as a tool for evaluating the company.

The EVA allows to determine performance criteria of a business, the effectiveness of its financial structure, as well as the use of a single reference rate for the various activities of the company (financial activities, investment, etc.) (Salaga, Bartosova, & Kicova, 2015). For Neto (2014) this method is a measure of genuine profit, an idea also reinforced by the authors Salaga et al. (2015) that refer to EVA as the most advanced instrument of business performance measurement based on the principle of value creation. Algebraically, according to Neves (2011) the EVA can be represented by the equation (1) :

$$EVA = ROLI - Km \times CI \tag{1}$$

Where,

CI is the invested capital; Km is the cost of capital or weighted average cost of capital (WACC) and ROLI is the net operating return.

Knowing that ROLI is represented by Equation (2):

$$ROLI = RO \times (1 - t) \tag{2}$$

Where, RO is operational return and t is marginal income tax rate.

$$WACC = \%\,CP \times Ke + (1 - \%CP) \times Kd \times (1 - IRC) \tag{3}$$

Being, %CP is the weight of equity in the capital structure; Ke is the cost of equity; kd is cost of debt; IRC is the marginal income tax rate.

Capital cost equation (3)(2) is accounted for by the average cost of capital applied to the total capital invested, evidencing the financial costs of the external capital and the required

remuneration component for equity (Neves, 2011). The fact that the EVA presents an absolute value, rather than a relative value, allows us to identify the contribution of each division of the company to the final result of the organization, since the results achieved largely reflect the size of the company (Berzakova et al., 2015; Damodaran, 2017). However, this method also presents its drawbacks, namely with regard to obtaining the necessary information for its calculation (Berzakova et al., 2015). Therefore, Carvalho (2014) also points out as a disadvantage of this method the fact that in periods whose EVA reaches higher values, there is a risk of an exaggerated distribution of results. Damodaran (2017) states that this method is the difference between the value of the company and the total capital invested. The author then mentions that this value will be positive only if the return on capital is greater than the cost of that same capital, and will be an increasing function of the spread between the two values, in contrast, it will be negative if the return on capital is smaller than the cost of capital.

For Neves (2011) this method represents the value created for the shareholder and allows to evaluate the performance of the management, that is, the way in which it uses all its resources.

To update the various EVA at the current moment (MVA) it is necessary to determine the refresh rate. For Muller and Teló (2003) in practice are used minimum rates of discount which are agreed upon by the surrounding parties (buyers and sellers).

Company valuation can also be done using the multiples method. For Fernandez (2001) the multiples method, which is part of the group of methods based on patrimonial approach, is a widely used method and currently used in evaluation processes. This method is premised on comparing a company with other similar companies, since the valuation is done by price analysis of similar companies, where the price of the evaluated firm is obtained by multiplying between a certain ratio of comparable companies and the respective value of the company to be evaluated (Cordeiro, 2013). A buyable company is defined by Neto (2014) as being a company that operates in the same sector of activity and presents profits and risks similar to the one that is being evaluated. Thus, the value of a given company comes from similar and comparable companies, regularized by identical variables, such as profit (Orey, 2014).

However, although the multiples method is widely used, they are only used as an additional measure, that is, as a support for the evaluation to be able to compare values with other methods used (Neto, 2014). According to Damodaran (2002) the multiples method is easy to apply and requires four fundamental steps:

a) ensure that the multiple is consistently defined and that it is uniformly measured between the compared companies;

b) to be aware of the cross-sectional distribution of the multiple, not only among the companies in the sector under analysis, but also throughout the market;

c) analyze the multiple and understand not only what are the reasons that determine the multiple, but also how changes in these motives translate into changes in the multiple;

d) find the right companies so that they can be used to parallelize and verify the differences that may persist in these companies.

In this way, the choice of the multiple to be used in the evaluation of the company should be carefully delineated, since it is difficult to indicate a priori which is the best multiple to use in each situation (Santos, 2010). For Fernandez (2001) the method of multiples can be divided into three groups, as we can see from table 1:

Table 1- Division of multiple groups

Multiples Based on Company Capitalization	**Value Based Multiples**	**Multiples Based on Company Growth**
Price Earnings Ratio (PER)	Enterprise Value to EBITDA (EV/EBITDA)	PER to EPS growth
Price to Cash Earnings (PCE)	Enterprise Value to Sales (EV/Sales)	Enterprise value to EBITDA growth
Price to Sales (PS)	Enterprise Value to Unlevered Free Cash Flow (EV/FCF)	
Price to Levered Free Cash Flow (P/LFCF)		
Price to Book Value (PBV)		
Price to Customer		
Price to Units		
Price to Output		
Price to Potential Customer		

Source: Adapted from Fernandez (2001)

According to Damodaran (2002) each multiple has a numerator and a denominator, where the numerator can be the book value or the company value, as the market price. On the other hand, the denominator may be a measure of equity, such as the book value of net worth, or a firm measure, such as operating revenues (Damodaran, 2002). Thus, according to the same author, when the numerator is of an equity nature, the denomination must respect the same

nature. In one of its several studies, Fernandez (2001) concludes that the most used multiples are PER, EV / EBITDA and PBV, however, the choice of multiples always depends on the sector / industry in which the company fits.

One of the most used multiples is Price to Sales (PS). According to Damodaran (2002) this multiple uses in the numerator the market value of equity and in the denominator the value of sales. This indicator, which can be even called as a multiple of business volume, is less volatile than the other methods, and doesn't consider differences in cost structures and profitability (Cordeiro, 2013; Teixeira, 2016). This ratio is made up of the ratio of the company's market capitalization to sales (Damodaran, 2002). According to Curral (2013) the PS ratio can be translated as what the investor pays for the company's sales, the less the value of this ratio, the more appealing the investment will be. Thus, this multiple compares the price with the value of the shares, according to Monteiro (2012) calculated using the equation (4).

$$PS = \frac{Price\ per\ share}{Sale\ per\ share} \quad (4)$$

In this way, the relationship between price and sales divides the value of the assets by the revenues generated, which will consequently produce lower values in companies that are more leveraged, which can lead to fraudulent conclusions (Damodaran, 2002). According to Monteiro (2012) when the turnover is higher than the value achieved by the multiple PS will be lower, which makes this multiple has a direct bearing on the profitability of sales. Therefore, it has a growing function when compared to the profit margin and decreasing when compared with the risk degree of the company (Damodaran, 2002).

This multiple, given its characteristics, may be less volatile than the remaining multiple indicated in Table 1. Since the accounting policies recorded a minor impact, which means that it can be applied to companies from different sectors, with negative results or even in companies that are at risk of default (Pereira, 2012).

3. HYPOTHESES AND RESEARCH DESIGN

From the brief review of the literature, it can be verified that the evaluation of companies is still a topic that generates a lot of discussion due to its complexity, before which several researchers have tried to find models that adapt quickly, simply and accurately to the specific realities of each company (Rodrigues, 2016).

This study aims to develop an evaluation model that allows companies to obtain, in a simple, fast and effective manner, a value for a possible transaction determined based on the sector where the company is inserted. The study is pertinent in that it may allow to find a methodology, relatively simple, that makes it possible to carry out an evaluation of companies through their sector of activity, being thus in the interest of all the stakeholders that are in the market.

The study will be quantitative in nature and will focus on a descriptive and inferential analysis, information being used from the balance sheet and statement of division results, 01 - Agriculture, livestock, hunting and service activities, the CAE REV. 3 taken from the sector statistics of the Bank of Portugal. This analysis has a historical timeline of five years plus five years forward (for forecast). To allow the historical values to be comparable within themselves, they were updated to the year 2018, at the average inflation rate corresponding to each year. The forecast share was determined on the basis of turnover growth, for the forecast period based on the historical data of the last five years, with the aid of Excel software calculation tools.

After the determination of the forecasted turnover, the remaining headings of the statement of estimates results were determined based on the average structure of the statement of historical results. For the study, and to maintain the uniformity and consistency of the study, only the size that includes "all" companies was selected, since it is the dimension that presents a greater number of information.

In order to determine the value of the companies in the selected division, we used the EVA and MVA evaluation methods as well as the multiple PS, previously described, since, in our view, they fit more fully into the research in question.

Economic Value Added **(EVA)**

The evaluation of companies through the EVA is an appropriate means to determine the credibility of the company, providing important information for the various areas related to management (Berzakova et al., 2015).This method determines the business performance criteria, the effectiveness of its financial structure and quantifies the value that was added as a result of the implementation of the company's activities during the period under analysis, namely investment activities (Salaga et al., 2015). In this way, the EVA aims to align the objectives of the shareholders with those of the managers, thus being able to represent the

margin generated by a company after having paid all the factors that are affected to it (Muller & Teló, 2003). The choice of EVA is not only due to its ease of calculation and understanding, but also because there are methods that use it in its calculations, as is the example of the MVA (method also used in performing this work). In this study, taking into account equation (1) mentioned above, the calculation of EVA was developed by the equivalent equation (5):

$$EVA = EBIT \times (1 - IRC) - WACC \times ANC \tag{5}$$

where, ANC is the non-current assets. It should be noted that EBIT is obtained through the forecast data calculated by Excel software. Regarding the IRC, this rate is applied through an assumption. It is assumed that the marginal income rate is 21%. On the other hand WACC (Weighted Average Cost of Capital) is obtained, according to Cabral (2014) through equation (6):

$$WACC = \%\,CP \times Ke + (1 - \%CP) \times Kd \times (1 - IRC) \tag{6}$$

The %CP is calculated by dividing the total value of equity by the total asset. On the other hand, the cost of equity (Ke) requires the creation of an assumption when we have negative net profit values, in this case we assumed a 2% for Ke as an assumption. If the values of the results are positive, Ke is calculated by equation (7).

$$Ke = \frac{Net\ Income}{Total\ Equity} \tag{7}$$

Note that in the income statement an inflation rate was applied for each year that was obtained through the INE (National Institute of Statistics) in order to maintain the accuracy of the data, which means that the net results applied in this formula include this inflation. Finally, the cost of external capital (Kd) was calculated using equation (8).

$$Kd = \frac{Financial\ \ Expenses}{Total\ Non\ Current\ Debt} \tag{8}$$

Finally, it should be noted that since the EVA is calculated for each forecast year, the perpetuity value of this method was calculated from Equation (9).

$$EVA\ (Perpetuity) = \frac{EVA_n \times (1 + g)}{WACC} \quad (9)$$

In that the EVA_n value corresponds to the value of the EVA in the last forecast period under analysis and g corresponds to the average annual growth rate, being calculated through equation (10).

$$g = \sqrt[n]{\frac{Total\ Sales\ and\ Services_{n+t}}{Total\ Sales\ and\ Services_n}} - 1 \quad (10)$$

Given the criticisms pointed to the determination of continuity value, determined from a perpetual income (Reis, 2015), the perpetual EVA value was determined considering the average life time of 20-year-old companies.

Market Value Added (MVA)

As mentioned above, the MVA corresponds to the difference between the value of the company and the capital invested (Damodaran, 2017). Thus, the maximization of this variable presumes the creation of value for the shareholders of the company over the years, which ends up meeting the need to obtain values for the EVA above zero and that are increasing over the periods (Neto, 2014). Clearly, the value of the MVA will be positive only if the return on capital is higher than the cost of capital, therefore it will be negative if the situation described is the opposite (Damodaran, 2017). Since the MVA appears to suppress certain shortcomings of the EVA, it corresponds to the current value of the EVAs updated at the cost of capital, that is, the MVA represents the present value of all the values that are obtained by the EVA, including the EVA forecast in perpetuity (Berzakova et al., 2015). In this way, the MVA can be represented by equation (11):

$$MVA = \frac{EVA_1}{(1 + WACC)} + \frac{EVA_2}{(1 + WACC)^2} + \cdots + \frac{EVA_n}{(1 + WACC)^n} \quad (11)$$

In short, MVA is an option to approximate shareholder value creation, that's, it's a contrast between the market value of the company and the capital provided by investors over a period of time (Nakhaei, 2016). According to the same author is a measure of external performance, and is considered the best index in terms of creating value for the shareholder.

Price to Sale Multiple (PS)

The calculation of this ratio is obtained through Equation (4) mentioned in the literature review, which leads to the conclusion that the main advantage of PS is that sales are less variable than results and therefore difficult to manipulate by the accounting policies that each company adopts, thus becoming a very reliable multiple (Neves, 2011). However, according to the same author, it should be noted that this multiple does not take into account the financing structure nor the growth of the company, making this its main disadvantage.

4. ANALYSIS AND DISCUSSION OF RESULTS

Over the previous chapters, we have studied the key points that allowed the execution of an adequate methodology for the accomplishment of the present work. In this way, this chapter will address the CAE Rev3 split 01, in order to find the value corresponding to the multiple PS that allows finding a possible value for the companies belonging to this sector of activity.

For the implementation of the evaluation methods, the following assumptions were taken into account:

a) the IRC rate considered was 21%;

b) the value of inflation rates were withdrawn for each year through the INE (National Statistics Institute);

c) the forecasts made take into account the historical years and each sector / subsector taken from the database of the Bank of Portugal, included in the Sector Charts;

d) the variable *Ke* assumes a value of 2% whenever there are negative values in the results, otherwise the value is calculated according to equation (7).

The main objective of these assumptions is to make the necessary comparisons and draw the fundamental conclusions for the execution of this work.

Division 01 - Agriculture, livestock, hunting and related service activities falls within the groups: 011 - Temporary crops; 012 - Permanent crops; 013 - Culture of vegetative propagating material; 014 - Animal production; 015 - Combined agriculture and livestock production; 016 - Service activities related to agriculture and animal husbandry; 017 - Hunting, restocking and related service activities; 021 - Forestry and other forestry activities.

Table 1 –**Income statement for the years 2013-2017.** presents the historical income statement for the years 2013 to 2017, division 01.

Table 1 –Income statement for the years 2013-2017.

(Thousands of Euros)

Descrição	2013	2014	2015	2016	2017
Sales and services provided	2 938 364	3 158 023	3 528 859	3 743 272	4 101 250
Cost of goods sold and materials consumed	1 764 250	1 819 789	2 007 131	2 077 086	2 204 047
Supplies and external services	767 965	839 696	935 962	1 015 596	1 143 525
Gross margin	406 149	498 537	585 767	650 590	753 679
Other income, excluding financial income and financing	450 406	465 900	521 582	607 186	650 560
Staff costs	417 567	456 312	502 830	550 037	608 059
Other expenses, except finance and financing expenses	68 480	73 583	92 531	104 860	81 385
Operating income	370 509	434 542	511 987	602 879	714 796
Financial income and financing	38 939	33 438	56 137	43 219	76 400
Financial expenses, except financing	31 876	16 575	15 215	13 183	11 948
Income before depreciation, financing expenses and taxes (EBITDA)	377 572	451 406	552 910	632 915	779 248
Depreciation and amortization expenses	260 259	282 867	311 293	330 102	356 752
Income before finance expenses and taxes (EBIT)	117 313	168 540	241 616	302 813	422 496
Financing expenses	106 771	109 281	105 985	95 096	90 474
Income before taxes (EBT)	10 542	59 259	135 632	207 717	332 023
Tax over the period's income	26 070	38 129	51 519	65 492	81 954
Net income for the period	-15 528	21 130	84 113	142 224	250 070

Source: Own elaboration

Based on the Table 2 – **Statement of income for the years 2013-2017.**the company's MVA was determined through equation (11).

Table 2 – Statement of income for the years 2013-2017.

(Thousands of Euros)

Descrição	2018	2019	2020	2021	2022
Sales and services provided	4 367 259	4 658 361	4 949 463	5 240 565	5 531 667
Cost of goods sold and materials consumed	2 478 622	2 643 836	2 809 050	2 974 264	3 139 478
Supplies and external services	1 172 712	1 250 880	1 329 047	1 407 215	1 485 383
Gross margin	715 925	763 645	811 366	859 086	906 806
Other income, excluding financial income and financing	672 078	716 875	761 673	806 471	851 268
Staff costs	632 637	674 806	716 974	759 143	801 312
Other expenses, except finance and financing expenses	105 411	112 437	119 464	126 490	133 516
Operating income	649 955	693 278	736 601	779 924	823 247
Financial income and financing	61 074	65 145	69 216	73 287	77 358
Financial expenses, except financing	23 446	25 009	26 572	28 134	29 697
Income before depreciation, financing expenses and taxes (EBITDA)	687 583	733 414	779 245	825 076	870 907
Depreciation and amortization expenses	385 654	411 360	437 066	462 772	488 478
Income before finance expenses and taxes (EBIT)	301 929	322 054	342 179	362 304	382 429
EVA	96 303	112 202	128 101	143 999	159 898

Source: Own elaboration

By the analysis of **¡Error! La autoreferencia al marcador no es válida.**it is verified that the continuity value can significantly influence the value of the company, therefore, the value of the multiple PS.

Table 3 – Determining the PS multiplier.

(Thousands of Euros)

	Value of perpetual continuity	Continuity value 20 years
MVA	7 048 099	2 643 590

		6 714 698	2 958 306
PS	1,92181	0,84669	

Source: Own elaboration

5. CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH LINES

The valuation of companies is an issue that reveals interest both for the owners of the capital and for the own managers and diverse stakeholders of the companies. In this sense, the objective of this paper is to determine a quick and simple way to determine a potential value for the company. It is essential to always bear in mind that the value of these (or a good) is the result of the balance between what buyers are willing to pay for their acquisition and what sellers accept as the selling price before alternatives that have (Fernandes, 2002). That is, the value found will serve only as reference for the beginning of a negotiation.

In this sense, two values were found for the PS, as a function of the companies' continuity value. These two values reveal that the value of continuity has a significant weight in the evaluation of the company, since the company's life expectancy is not known. The application of one of the PS values, considering the value of continuity applying a perpetuity or applying a 20-year average life expectancy, may be related to the economic and financial health of the company as well as to the depreciation of its non-current assets.

This methodology may also be adequate to evaluate the quality of the company's management, in different moments of time, in a simple and fast way.

Given that the findings on PS multiple is significantly different, given different calculation methodologies; it may be one of the limitations of this work. As a suggestion, for further research, it is proposed to apply more than one method of evaluating companies such as CVA - Cash Value Added or Free Cash Flow as well as the use of more multiples to try to find a multiple suitable for the evaluation of companies depending on their sector of activity.

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