



*ICADE Business School*

*MSc in Finance*

# Equity Valuation

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*A theoretical analysis and valuation of equity securities.*

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# THESIS PROPOSAL

*A theoretical analysis and valuation of equity securities.*

## **TITLE**

**ABSTRACT** The aim of this thesis is to conduct analysis of the main reasons that can motivate a valuation process, and the theory that lies behind the most important valuation methods. The main drivers used to make the valuation process have been the well-known discounted cash flow method, the sum of the parts method, and multiples peers based comparable. Identifying when to apply the different methods depending on the situation and how to make use of them properly. After explaining the theoretical part, which is the dissertation's core purpose, we will run a short but deep practical application of a real case, Prosegur, in which we will try to look into the Security sector from the valuation theory point of view.

## **METHODOLOGY**

Research strategy. The topic of this research isn't new, so it is an applied one. Numerous pieces of previous academic research exist regarding the role equity valuation. Because of that we would like to connect it with a real case, so we hope the proposed research took the form of a new research but on an existing research subject.

Research methods – Quantitative. This research study is to determine the relationship between equity securities and companies. The quantitative research design we are going to use is the descriptive one, used for subjects usually measured once. Applying quantitative research means dealing in numbers, logic, and an objective stance, all features needed to develop a proper financial model.

Research approach. The research approach that we've decided to follow is the deductive one. According to this approach, researchers begin with theoretical observation, which is aimed to testing theories from the research. It is going to be a conclusions target research.

Data collection method and tool. Books like 'Dammodaran Valuation' or 'La Valoracion en los negocios' and research works as 'valuation papers' related to the topic have been the main tools for data collection.



# 1. FUNDAMENTALS OF VALUATION

## 1.1. Introduction

Repeatedly many members in the investment profession such as Investors, Portfolio Managers or Researchers need to know the worth of a specific asset, the way of knowing or approaching the worth is valuating those assets by different methods we will discuss in this dissertation. Doing it in an effective manner will determine achievement or failure in accomplishing investment target.

Each asset has a given value that could be reliably measured if it is understood, when doing the valuation, not only what the value is, but also the sources of the value. Any asset may be valued, but there are different ways to measure different kind of assets, therefore the valuation of a real estate company may differ from the valuation used to measure a Public Traded Company. What is pretty interesting is that it does not really matter what kind of technique is utilised to value assets, and this is because the tremendous similarity regarding basic principles among all the techniques.

Valuation is widely used in investment finance. The way of using valuation, however, is different depending the role it plays. Let's differentiate three different valuation purposes: Portfolio Management, Valuation for M&A and Valuation in Corporate Finance. In the case of portfolio management, the investment philosophy of the investor is going to determine how important the valuation is. For those investors who follow a passive investment strategy, valuation will play a minimal role, whereas valuing would be crucial in the case of active investors, for which would be necessary to differentiate, for example, between market timers and investors, the first ones use valuation much less than the second. When talking about security selectors, valuation is totally crucial in portfolio management for fundamental analysts (not crucial for technical analysts). Valuation in acquisition analysis is undoubtedly a fundamental tool used by the analyst. There are many factors to consider in takeover valuation such as, synergies created from the value of both companies combined, the effect on value changing the management and restructuring the main objectives of the firm. Maximization of the firm value is the main objective of valuation regarding Corporate Finance, it is really important to distinguish among firm value, financial decisions and strategy followed by the company. Is essential for a firm to generate firm value the decisions it makes, from what kind of projects are the ones that are going to increase firms value up to how to finance them.

Understanding the relationship between these three variables is crucial to making a profitable sustainable value firm.

It is necessary to distinguish between value and price when talking about valuation. Despite the fact that both terms, value and price, seem to refer to a same monetary amount, these concepts are not coincident. Value is an amount obtained by means of a technical procedure and lies on objective and contrastable fundamentals. Otherwise, price is the resulting amount of a dealing process, in which an agreement between two parties is reached. In summary we could say that price is the result of a dealing process, initiated from a maximum and minimum values. Price equals value (Range) plus negotiation.

## **1.2. Different Valuation methods classification.**

There exist a large number of valuation methods that have been used over time in different circumstances and degrees of success. At present, a limited number of methodologies are generally accepted and commonly regarded as the best approaches to estimating the value of a company. For the most part, they are included in the International Valuation Rules<sup>1</sup>.

These most commonly used methods vary in sophistication and objectives, with their corresponding advantages and disadvantages. While it is arguably simpler and generally faster to calculate a Valuation Multiple, the calculation of a Discounted Cash Flow requires the establishment of assumptions and a broad knowledge of the business, in addition to requiring the use of a considerable amount of time in its preparation. On the other hand, the Valuation Multiples are easily influenced by market conditions (although this effect can be mitigated by corrective adjustments), while Discounted Cash Flows are less dependent on daily or temporary market trends and seek to estimate the 'fundamental' or 'intrinsic' value of the firm that tends to be more stable over time.

Each valuation method has advantages and disadvantages in its application. They must be used carefully since each one will be more appropriate for certain circumstances (availability of information about the company and the market, time limits, budget for its realization, etc.). In any case, it should be noted that it is best not to rely on a single valuation method. In order to obtain a more realistic and accurate estimation of the value of a company, is recommendable that the results of at least two methods be compared and complemented with one another.

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<sup>1</sup> The International Valuation Standards Council (IVSC) is an independent, not-for-profit organisation that acts as the global standard setter for valuation practice and the valuation profession, serving the public interest.

In the following sections of the manual, we will present in a practical and simple way the most universally used approaches to valuing companies, which are:

The *Discounted Cash Flow method* identifies the absolute value of a business, then, no comparison is needed with similar companies and allows all factors of success to be taken into account explicitly. While this method is much more sophisticated than the Valuation Multiples, it is also more complicated to apply since many factors have to be explicitly considered and the result obtained is very sensitive to certain applied variables such as discount rates or long-term growth assumptions.

There are two basic starting points to make a DCF firm valuation:

- The cash flows generated by the company up to a certain point.
- The cash flows the firm is going to be able to generate from a certain point, which depends on future cash flows.

The first one makes reference on the firm's past, while the second is more difficult to determine considering that it takes in account future cash flows, then are needed some hypothesis and forecasts<sup>2</sup>.

The *Valuation Multiples method of public traded companies* provides a figure that relates the value of the company (sales, profits, etc.) to the market value of the shares (the price) or the value of the business (the value of the business as the sum of the market values of the various requirements on profits and cash flows of the business). They are not a measure of absolute value, but they make it possible to establish a relative value comparing the multiples of the company to its peers multiples. Sometimes the method of multiples is criticized for not taking into account precisely the various profitability indicators of any business: required return, growth, return on ROIC, etc. However, other points of view can also be discussed as the greatest benefit that multiples entail is that all success factors are incorporated into a figure, thus allowing more judicious and effective analyses.

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<sup>2</sup> Source: Corporate finance Book. 2016, Kaplan INC.





## 2. DISCOUNTED DIVIDEND VALUATION

### 2.1. Introduction

The DDM is a basic tool widely used in the valuation of companies. It is based on the idea that the value of an investment is the present value of its future flows, understanding by future flows dividends: The value of an action at time zero is equal to the discount of its future dividends plus the expected price of the stock at the time of its sale in year n. The discount rate is the expected rate of return. The expected rate of return is the minimum required return on investment, which is no more than the risk-free rate plus the risk premium associated with that action. The greater the risks perceived for the company, the greater the profitability that we will have to demand for the investment. This concept is equivalent to that used in valuing any investment, in which we will have to take into account the risks that we assume for the study of the viability of the same.

Strictly speaking, the only real cash-flow received by the stock owner is the dividend. Thus, if we always know what are the dividends that are going to be handed out, the simplest and most direct way of doing a Valuation would be finding the net current monetary worth of all future dividends. The dividend discount model (DDM) is based on the assumption that the intrinsic value of stock is the current monetary worth of its future dividends.

It is said that is the simplest valuation model, because knowing the dividend distribution of the past, assumptions on trends followed by the firm may be done, always being aware that this model does not take into account neither if dividends are given out in the future nor the evolution of the cash or net financial debt. Then, when we are talking about Dividend Discount Model we assume that the cash flows are reals (dividends), the discount rate is  $K_e$  (Cost of Equity) and that the net current monetary worth of DDM equals the market value of Equity.

The most general form of the model is as follows:

$$V_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1 + k_e)^t}$$

Where,  $V_0$  is the current stock value,  $D_t$  equals dividend at time  $t$   $K_e$  means the required rate of return on common equity.

The basis of the model is based in the current monetary worth rule: the value of any asset is the current monetary worth of expected future cash flows discounted at a rate appropriate to the risk of cash flows. There are two basic contributions to the model. The expected dividends and the cost of equity. Making certain assumptions about the expected future growth rates in earnings and pay-out ratios, we will obtain the expected dividends. As we know the risk is the factor

that determines the rate of return, and its measurement is different depending on which model you use, Beta for the Capital Asset Pricing Model (CAPM) and the factor betas in the arbitrage and multi-factor models. Given its flexibility, this model allows for variable discount rates over time, where the variation is caused by changes in the interest rate or risk.

Since it is not adequate to project dividends to infinity, there have been several Dividend Discount models developed from different hypotheses about the future growth rate. Previously we have mentioned the simplest one (the General DDM model), designed to value stocks at a stable growth rate for firms that pay affordable payments of dividends to its stock owners.

Starting from this model, we can adapt it to companies that have an expected high growth rate and may be paying small dividends or even not doing so.

## 2.2. The Gordon Growth Model

To discount an infinite flow of dividends, we must assume that the expected rate of return ( $r$ ) is greater than the dividend growth rate ( $g$ ). We must also assume that this rate is constant. The Gordon Model says that the value of a stock at time 0 ( $V_0$ ) is equal to the next-period dividend divided by the expected rate of return minus the dividend growth rate. The model, which is useful for its simplicity, also has limitations:

- The model requires a constant dividend growth rate ( $g$ ), and this must be less than the expected rate of return ( $r$ ) and greater than  $(-1)$ .
- If the growth rate of the dividends ( $g$ ) is very close to the market discount rate ( $r$ ) the model will be very volatile and the price will be very high.
- There are very profitable companies that pay very small dividends or simply do not pay them

$$V_0 = \frac{D_0(1 + g_c)}{k_e - g_c} = \frac{D_1}{k_e - g_c}$$

There are some assumptions in which the Gordon growth model is based. The first one is that dividends are the right measure of stock owner wealth. The constant dividend growth rate, and required return on stock, are supposed to remain stable. The Cost of Equity must be greater than the growth. If not, the result of the equation would be negative, which is meaningless. All the previous assumptions need to be met, if not, the model is not appropriate.

It is convenient to clarify some points when we talk about Gordon growth model, also called constant growth model. The use of this model should be limited either to those companies that are growing at a steady growth rate or are expected to grow at a steady growth rate. Given that dividends are expected to grow at a stable growth rate, and this will last forever, other magnitudes such as

earnings are expected to grow over time at the same rate of growth. If not, there would be mismatches, dividends would be eaten by earnings in the long run if they grew at a higher rate, or the dividends would eat by earnings if they had a higher expected growth rate.

The sustainable growth rate (SGR) is the maximum level of growth a firm is able to bear without having to rise its level of leverage.

$$\text{Sustainable growth} = (1 - \text{dividend pay-out ratio}) \times \text{ROE}$$

The quantity  $(1 - \text{dividend pay-out ratio})$  refers to as the retention rate, the proportion of net income that isn't paid out as dividends and goes to retained earnings, therefore increasing equity.

### 2.3. Multistage Dividend Discount Model

It is really complicated for a company to experience the same growth each year as the Gordon model assumes, so multi-stage models assume different growth for each period.

The most common use is the utilisation growths of two or three stages, where in the beginning the growths are higher but then tend to stabilize to a smaller constant growth.

$$\text{value} = \frac{D_1}{(1 + k_e)} + \frac{D_2}{(1 + k_e)^2} + \dots + \frac{D_n}{(1 + k_e)^n} + \frac{P_n}{(1 + k_e)^n}$$

$$\text{Where } P_n = \frac{\text{DPS}_{n+1}}{(K_{e, \text{st}} - g_n)}$$

It is an alternative to constant and is much more complicated. The reason is that it has fewer constants and many more estimates. Despite this situation, you can anticipate future changes as much as growth rates.

The calculation itself asks the user to add the value of a dividend paid during the period of high growth to the present value of the terminal value of the company. Instead of making predictions and forecasts about dividends into the future, the terminal value establishes the position of the indices at a certain point in time when dividends are expected to be stable in their growth. The underlying idea is that making predictions about dividends after a particular point is totally useless. Apart from that, future dividends are usually discounted so much that they cannot very significantly change the valuation of a stock.

An example of two-stage growth models is the H-model, which assumes precisely higher growth in the short term, but more moderate in the long run.

## 2.4. Conclusion

The discounted dividend model is a method for valuing a company's share price based on the dividends to be distributed by that company in the future. Also known by its English name dividend discount model (DDM). This model is based on the theory that the price of a share must be equal to the price of the dividends to be delivered by the company, discounted to its net present value. If the price of the stock in the market is less than the result obtained by the discounted dividend model, the stock is undervalued and therefore it is advisable to buy. If, on the contrary, the market price is higher than the model, it is understood that the share price is too high.

Choosing between the two formulas detailed here is a tricky task. The reason is that they reach different results. Apart from that, the user may be unsure of the results because the market changes a lot. It is good to keep in mind that we are talking about big companies, which change a lot through the course of just a few years. Depending on their line of business, they can launch new products, acquire smaller companies, sell part of their lines or mix with other entities. All these actions lead to significant changes that will render obsolete the results obtained via both models.

However, the constant growth formula is generally believed to be the best of both as far as mature and stable companies are concerned. This basically means that if the company is well established operating in its mature period, the constant formula is better. If you are trying to value stocks that are owned by a company that is still in its development stages, or is growing fast, you should use the multi-stage model.

The split discount model is also known as The Gordon Growth Model. Named in the 60s in honour of Professor Myron J. Gordon. Even so, the professor was not the only analyst to bet on this model. Robert F. Weise and John Burr Williams delivered great results in this field as well, through the work I did in the 30s. Under the Gordon model, a stock is by definition considered more valuable when its dividends increase, the investor's return index decreases or when there is an increase in the dividend growth index. At the same time, the model implies that stock prices need to grow at the same rate as dividends.

## 3. FREE CASH FLOW VALUATION

### 3.1. Introduction to Free Cash Flows

The Discounted Cash Flow (DCF) method is widely used to estimate the value of a company. It is a dynamic method that takes into account the value of money over time and allows to evaluate the concrete effect of many variables on future returns and behaviours. DCF valuations can be very sensitive to small changes in some of the starting data, so they provide the meticulous analyst with a very powerful tool. Although it can be argued that the method is complicated and subjective, we do not consider these reasons sufficient to reject it since the same can be said of many valuation techniques.

Identical reasoning can be applied to the sensitivity of DCFs in the long-term growth hypotheses: while this may also affect other valuation methods, in DCFs the effect can be mitigated by using a value-added growth rate in the long-term null or very low, in addition to conducting a rigorous study of the value that actually remains in the business at the end of the projected period.

In discounted cash flow models (or current monetary worth models), a stock's value is predicted as the current monetary worth of cash available to stock owners once the firm meets its necessary CAPEX investment and working capital expenses. Free cash flow is a measure of cash that is obtainable for discretionary purposes. There are several measures of free cash flow, two of the more common measures are free cash flow to the firm and free cash flow to equity.

The Discounted Free Cash -flow method values the company exactly in the same way as an investment project. Valuating businesses either finite or infinite in the long run is a clear advantage for this model. Unlike Dividends, free cash flows to firm and free cash flows to equity are not obtainable for analysts, which requires a very knowhow by part of the analysts on how to use the information provided by the financial statements issued by companies.

The methods of discount of flows are based on the detailed and careful forecast, for each period, of each financial items linked to the generation of the cash flows corresponding to the operations of the company, such as the collection of sales , Payments of labour, raw materials, administrative, sales, etc., and the repayment of credits, among others. Consequently, the conceptual approach is similar to that of the cash budget.

In the valuation based on the discount of flows an adequate discount rate is determined for each type of flow of funds. The determination of the discount rate is one of the most important points. It is done taking into account risk, historical volatilities and, in practice, often the type of minimum discount is marked by the interested parties (buyers or sellers not willing to invest or sell for less than a certain profitability, etc.).

Analysts will be likely to use cash flow discounts when at least one of the following conditions are met.

- In the event the company does not pay dividends.
- In case the company pays dividends but to a lesser extent than it could do.
- In case the analyst considers appropriate to discount at a free cash flow.
- In case the investor is going to take a control perspective.

### 3.2. Free Cash Flow to Firm

The Free Cash Flow to the Firm (FCFF) represents the funds that are available to all the company's financing providers (shareholders and banks or other financial creditors). Such funds may therefore be used in:

- Pay interest and repay principal of loans
- Increase the cash balance or other investments
- Pay dividends or repurchase shares

In a simplified way, is calculated as follows:

EBIT (Earnings Before Interest and Taxes)  
- Taxes on EBIT  
= NOPAT (Normalized Operating Profit minus Adjusted Taxes)  
+ Amortizations and other accounting notes  
= Gross Cash Flow  
- CAPEX (Investment in Fixed Capital)  
- Accounting changes in working capital  
= Free Cash Flow to the Company

Once the Free Cash Flow for the Company has been calculated, it is necessary to take into account possible assets not reflected therein such as investees or other investments, which have been added or adjusted to estimate the Total Value of the Company (EV). In the same way, possible hidden liabilities that have broad possibilities of emergence must be subtracted.

When preparing predictions for a DCF valuation, particular attention should be paid to the following points:

- Projected growth opportunities must be realistic and consider potential future competitive advantages.
- Growth assumptions must be consistent with the planned investment.
- The projected rate of return has to be realistic compared to past performance and forecasts of other analysts (or to make forecasts excluding inflation).
- The projected inflation rate should be in line with market expectations.
- The ratios and margins applied in the projected period must be consistent with the historical figures or the investments or strategic changes to be made.

The estimation of future cash flows is usually done for the 5-10 years, depending on the available information, of the sector and the company. For example, in cyclical sectors we will have to take into account at what point in the cycle we are and try to forecast one complete at the time or make sure that our last explicit cash flow is at an average moment in the cycle.

The accuracy of projections depends to a large extent on the quality of past, strategic and sectoral data used for their preparation. In order to reduce the uncertainty involved in estimating future cash flows, the factors that will have the greatest impact on the firm's performance (and thus on cash flows) are to be thoroughly studied and well understood by the analyst.

A sensitivity analysis on these factors (of success) allows to evaluate their impact on the value of the company. Another useful tool for the realization of forecasts is the preparation of several scenarios that reflect the different expectations of the market or the possible strategic alternatives of the company. Each scenario is evaluated using the DCF method (not necessarily with the same discount rate for all scenarios) and the value differences can be studied. The advantage of this technique in evaluating the possible impact of a change in conditions on the market is that:

- The effect of the cash flow differences between scenarios that occur in different years may be analysed.
- Any systematic error in the predictions of cash flows and / or discount rates will be neutralized when the percentage differences between the DCF valuations for each scenario are calculated.

### **3.3. Sum of the Parts (SoTP) Valuation**

The sum of the parts is an evaluation method that consists in evaluating the diversified groups by summing the value of their different business lines calculated using the DCF method or the multiples method in a patrimonial logic and then removing the present value of the head office costs and the consolidated net indebtedness. It is a revalued net asset.

For groups of companies involved in various fields of activity, and particularly for holding companies, the approach by the sum of the parts can be very useful. This method consists of evaluating independent, using one or the other of the evaluation methods presented in this document, each of the activities carried out by the group. The value of the group's equity, as a whole, corresponds to the sum of the valuations obtained for each of the activities carried out within that group, and whose valorization is sought. A discount can sometimes be applied, depending on the coherence, or not, of the activities carried out in the group.



The advantages of asset-based models are varied, for example, they are very useful for valuing listed companies that report the real value of their assets. They are at the same time very useful for providing analysts with the floor value. In the event that a company has primarily tangible short term assets, assets that can be easily transferred, or is in a liquidation process, the most useful valuation method would be this one

If we refer to the disadvantages, we may also find some as that market values are difficult to calculate, since they often differ from the company book value. It could also be a disadvantage to measure the value of an asset in periods of hyperinflation.

### 3.4. Determine discount rate (WACC)

Once the Free Cash Flows expected for each year have been calculated, their present value must be estimated. The rate used to discount future cash flows is in the cost of capital. If the discount rate is not accurately determined, the present value of the future cash flows will be too high or too low, and therefore also the valuation.

In the case of Free Cash Flows, the cost of capital consists of two large items:

- The cost of capital provided by the shareholders or partners of the company, and
- The cost of capital provided by the company's financial creditors, ie the profitability (interest rate) required by banks and other financial lenders

$$WACC = E/V * Ke + D/V * Kd * (1 - Tc)$$

E = Market value of equity Ke = Cost of Equity = Return expected by shareholders

D = Market value of debt Kd = Cost of Debt Before Tax = Expected performance by creditors, adjusted according to the effect of debt on taxes

The cost of debt (Kd) is the weighted average interest rate that the company has to pay for the loans and credits received. It is possible to calculate separately the cost of each component of the external resources, although in practice a general average of the cost of the debt is used. The cost must reflect current interest rates in the interbank market, risk free rate (Rf) and its spread (Rpd, differential of basic points) reflecting the company's credit risk.

$$Kd = Rf + Rpd$$

The cost of own resources (Ke) consists of the total returns expected by the shareholders of the company's share capital. The more risk the company presents, the more returns will be expected. The most commonly used

method of calculating the cost of equity is the Capital Asset Pricing Model (CAPM).

$$K_e = R_f + \text{spread.}$$

***R<sub>f</sub> = Risk-free rate***

To calculate this rate, the current performance of the public treasury bonds is generally used. This formula is sometimes discussed as long-term bonds are not truly risk-free. The disadvantage of this is that short-term interest rates, not long-term yields, do not reflect expectations about future changes in interest rates. For the same reasons, there are several arguments that advocate the use of the long-term bond interest rate. In practice, the risk-free rate is generally accepted as the yield on 10-year public treasury bonds. The market for such securities is generally liquid and therefore reliable.

***R<sub>p</sub> = Market Risk Premium***

It consists of a future risk measure calculated as the expected future market return minus the risk-free rate. It is the hardest component of the cost of own resources to calculate. Estimates of this premium usually range from values close to zero to 8% (or even higher values for Internet companies and new technologies), but the most typical values tend to be between 2% -5% depending on the market. Higher estimates usually derive from historical observations about bond yields. The lower estimates tend to be subjective judgments of the future returns expected by the investors or are the product of a dividend update model where the premium comes from a discount rate equal to the present value of future dividends at the current level of market.

***B = Capital Beta Factor***

It is a pure risk measure generally used in the CAMP model and to estimate the contribution of a value in a diversified portfolio. The risk inherent in a business can be divided into two factors in order to obtain a better and more consistent calculation of a b that allows comparisons between companies and markets

The systematic risk of a business is the risk inherent to the company given its sector and its business characteristics, regardless of its capital structure. Financial risk is a risk factor resulting from a company's leverage level. To make comparative bs between firms, first remove the leverage effect, then reintroduce it to a level comparable to that of comparable companies.

The beta of a stock (i) is equal to the covariance between the yield of the stock and market yield, divided by the volatility (measured by the standard deviation) of the market yield. A beta equal to 1 means that if the market is experiencing a 5% rise, then the company's share price will also rise by 5%. A beta equal to 2 implies that if the market goes up by 5%, the stock price will be increased by 10%.

In practice, betas are generally based on the relative volatility of historical returns, although this may not accurately represent risk if there have been changes in the structure of the firm's liabilities. Critics of the beta argue that the volatilities of the past cannot provide a measure of future risk in a constantly changing environment.

### **3.5. Conclusions**

May be difficult to apply at very early stages of the life cycle of a developing company with high growth and this can lead to give it a lower weight in the analysis of the same as other valuation methods. Having said that, other techniques also have disadvantages when it comes to valuing businesses such as those of biotechnology companies or new IT companies.

The DCF approach should be taken always in consideration, and as short-term forecasts begin to show more predictable cash flows allowing estimation of reliable long-term projections, this method will have to gain importance and weight in the valuation.

Next, we have outlined the major pros and cons of using DCF.

#### ***Advantages***

- DCF is a sophisticated valuation method that takes into account key business variables such as cash flow, growth and risk. With precise assumptions, a DCF would result in better estimates than any relative valuation. Even in the case of high growth uncertain start-ups, this feature represents a pro of this methodology.
- The DCF estimates the 'intrinsic' value of the business in absolute terms. Consequently, the attitude of each moment in the market does not affect valuation as strongly as in the case of relative valuations, obtaining, in principle, more precise estimates in the long run.
- Based on cash flows and current market value, the DCF can be used to calculate the discount rate involved in a business.
- The DCF provides tools to mitigate the effect, also present in other valuation methods, sensitivity to long-term growth assumptions, allowing the use of zero-term long-term value-added growth assumptions.

- Using the DCF methodology, it is possible to carry out scenarios analysis to study the impact on company value of non-systematic and company-specific factors. This is undoubtedly one of the most powerful analysis tools.
- The company is forced to explicitly predict the profile of its cash flows to locate and manage all aspects of the business and the strategic factors that will have to face in the future.

### *Disadvantages*

- Due to the aforementioned sophistication of the DCF method, many more assumptions (in comparison with relative valuation multiples) have to be made in order to obtain an accurate valuation. This increases uncertainty, particularly in the case of companies with negative benefits, no history or no comparable companies. However, the use of multiples also requires implicit considerations of the same factors and may be impossible to apply in such cases.
- The many hypotheses that are found after an assessment by DCF make it difficult and require that time is needed to defend them or discuss them with the executive team of the company or third parties.
- While we previously commented as an advantage that the DCF estimates the 'intrinsic' value of the company and, thus, ignores the current market attitudes, it is also true that when valuing a company with a particular stock transaction in mind, Market price is what tends to import more. Relative valuations normally produce values that are closer to the market price than those made through the discounted cash flow method.
- The magnitudes and timing of cash flows, as well as the discount rate, are subject to sudden changes. A small error in the predictions of the attributes of the cash flows and the discount rate would have a considerable effect on the resulting value.
- In many cases, about 80% of the value is after the projected explicit period and has to be calculated using residual value techniques. As explained above, these techniques usually result in gross approximations of value, and are to be considered as such



## 4. MARKET-BASED VALUATION: PRICE MULTIPLES.

### 4.1. Introduction

The Valuation Multiples method relates a figure linked to the value of a business with:

- The value of the shares.
- The total value of a company's business.

Valuation multiples are not a measure of absolute value, but allow relative value comparisons between similar or comparable companies.

This method works under the assumption that markets are efficient and that the value of companies whose shares are publicly traded is constantly available and is listed at fair value. It is not a method based solely on historical data, but also on predictions of the near future. Technically, the method itself is not as rigorous as the Discounted Cash Flow method, since accounting adjustments are frequently required and no two companies are exactly alike.

However, its best virtue, simplicity, makes this a method universally used and accepted by most market analysts and financial service providers. It is also frequently used to test results obtained through other methodologies. In this section, we will generally refer to multiples of quoted companies, although almost everything exposed can be applied exactly as multiples resulting from transactions with private companies.

### 4.2. Multiples Based on Share Value

Multiples based on the share value may be referred to both the share price (in which case, the figures used are measures per share) and the market cap of the company. Although the most important multiples may be obtained through the calculation per action, multiples based on the total value (capitalization) are consistent with the method used with the multiples based on the value of business (Enterprise Value or EV).

Generally, the use of multiples based on the shares value can obtain fairer and real values since their calculation is normally more objective and less error-prone. However, in the case of young companies with a high growth rate and very low or zero indebtedness, the two values (business and of own resources) are very similar.

#### *Price per share / Earnings per share (PER, P / E)*

Earnings per share are defined as profits divided by the number of outstanding shares issued and have to be calculated before exceptional items and goodwill amortization. Earnings per share (EPS) must be calculated taking into account

all equity instruments in order to include them in the total (diluted) number of shares.

The price per share is related to the ability to pay dividends of the company (profits). The nature of the relationship between social capital and profits is that prices are proportional to both profits and expected growth.

Despite being a widely used technique due to its simplicity and the general availability of the required information, this method involves a risk for accounting differences that can lead to inaccurate results. Thus, it is recommended to use an adjusted earnings-per-action analysis in order to eradicate, as far as possible, the effect of exceptional items and to increase comparability between companies. However, this risk has a reward that lies in the fact that the PER takes into account differences in the tax rates of each country as well as in the capital intensity, allowing for comparisons between sectors.

### ***Price / Cash earnings***

Cash earnings are considered as benefits plus depreciation (both tangible and intangible fixed assets) and non-cash provisions. It is closer to a cash flow than profits, although cash earnings do not consider the amortization of assets, nor the investments required in fixed assets (CAPEX). This method is less likely to be affected by accounting differences than the PER.

### ***Price / Cash flow from equity***

This analysis is not very popular since Cash Flows can be represented in various ways and historical Cash Flows can be very volatile. However, if used well it is a good indicator of value.

### ***Price / Value in Books***

Book value often leads to erroneous results because it depends a lot on the accounting policies of each company. However, Book Value is useful in cases where the value of goods is a key factor in valuation, and provides an intuitive and relatively stable measure of the value of a company.

Although book value can be used to value businesses with negative benefits, it is often not very useful for Internet companies because they are often services or companies that base their economic activity on few or no fixed assets. In most cases the book value is below the value of the company.

### ***Dividend Performance***

Dividends are the ultimate benefit to shareholders of a company, which would drink to make this ratio a widely used and representative measure. However,

dividend yield is highly dependent on dividend policies and corporate strategies, so it is not really widely used.

### **4.3. Multiples Based on Comparables**

Valuation based on price multiple comparables, also called comps, involves using a price multiple to value whether an asset is properly valued relative to a reference point (benchmark). Usual benchmarks include the stock's historical average (a time series comparison) or similar stocks and industry averages (a cross-sectional comparison). Comparing firms within an industry is useful for analysts who are familiar with a particular industry. Price multiples are readily calculated and provided by many media outlets.

The economic principle guiding this method is the law of one price, which asserts that two assets with exactly the same characteristics should sell at the same price, or in this case, two comparable assets must have approximately the same multiple.

The analyst should be sure that any comparables used really are comparable. Price multiples may not be comparable across companies if the firms are different sizes, are in different industries, or are growing at different rates. Furthermore, using price to earnings ratios for cyclical firms is complicated due to their sensitivity to economic conditions. In this case, the price to sales ratio can be benefited over the price to earnings ratio because the sales are less volatile than earnings because of both operating and financial leverage.

Some counterpoints of utilising price multiples based on comparables are:

- Analysts. have to be aware of the accounting methods used by the companies evaluated when studying multiples prices, especially when comparing companies internationally
- The fact that a stock is overvalued when you do the valuation of multiples based on comparables does not mean that it will also be overvalued in case of using multiple based on fundamentals, and vice-versa.
- Companies with a more pronounced cyclical component may be affected to a large extent by economic conditions.

### **4.4. Enterprise value multiples**

This type of multiples combines the company's business value (market capitalization plus net debt / net cash) with a measure of value-related activity. For reasons of consistency, these multiples must be based on measures related to the global business (demands of shareholders and creditors).

Multiples based on Enterprise Value (EV) facilitate a more comprehensive approach than those based on own resources, since the former are less influenced



by differences in the structure of the liability and other accounting differences. The obtained multiples allow better comparisons between companies.

### ***EV / Sales***

The Value of Business / Sales is a gross measure but less susceptible to accounting differences and, therefore, allows comparisons between countries. It should not be used to compare companies from different sectors where margins differ. This measure is widely used for Internet companies and high growth due to the impossibility of applying more complex multiples (partly because of the lack of benefits).

### ***EV / EBITDA***

The Earnings Before Amortization, Interest and Taxes (EBITDA), have become a very popular measure among investors, since it avoids the problems caused by accounting differences in amortizations and accrued taxes. Also, it allows comparisons between firms that present net losses, since this measure can remain positive. This measure also facilitates comparisons between businesses with different levels of indebtedness, because it focuses on pre-financial data. It is closer to a Cash Flow than other measures of profit, but does not reflect adjustments for investments in working capital or fixed assets. This multiple is affected by the capital intensity, since a high intensity results in a low multiple.

### ***EV / EBIT***

Earnings Before Interest and Taxes (EBIT) are easier to compare than EBITDA in cases where the capital intensity and / or treatment of accrued taxes differ. However, EBIT is affected by differences in accounting policies in the treatment of depreciation. By definition, EBIT is a measure farther from the calculation of Cash Flow than EBITDA, thus providing the latter with a greater attractiveness for investment analysis.

### ***EV / NOPAT***

The Normalized Operational Benefits Less Adjusted Taxes (NOPAT) consist of an after-tax EBIT. It takes into account differences in the structure of taxes and tax rates. If the companies were only financed by their own resources, the NOPAT would be equal to the profits.

### ***EV / OpFCF***

The Operational Cash Flows (OpFCF) is EBITDA minus (i) CAPEX for maintenance and ii) the increase in working capital in the maintenance phase. This measure has more significance than EBITDA, and is

less affected by accounting differences than EBIT. However, it is not available directly from the financial statements of the companies, and the calculation of maintenance CAPEX and the increase of working capital in maintenance phase and ii can be subjective. It can be considered equivalent to a normalized EBIT or a smoothed Cash Flow.

#### *EV / Free Cash Flow*

This multiple is a true Cash Flow calculated as NOPLAT (hence, before taxes) plus depreciation, less CAPEX and plus / minus changes in the working capital, but before any Cash Flow from financing. The calculation of the Real Cash Flow is based on historical measures that can be volatile, thus producing inaccuracies. Cash Flow can be negative for companies with a high level of growth such as many internet businesses, thus eliminating the meaning of the multiple.

#### *EV / Employee Capital*

Mostly used in sectors where the value of tangible fixed assets is a key point but does not provide consistent information about profitability or cash generation.

### **4.5. Conclusion**

Comparable multiples represent a simple and relatively little valuation method because it is possible to combine different factors of success in a number. Although other methods may be more accurate or academic, fewer inconsistencies appear when evaluating by the comparable multiples method, and much of the necessary information is normally available. Probably the biggest drawback of multiples is that they are influenced by different accounting policies (depreciation, accrued taxes, etc.) and certain adjustments need to be applied to obtain the optimum degree of comparability between companies. The latter explains why pre-tax multiples are the preferred option when comparing companies from different countries.

On the other hand, we must not forget that in the background the multiples are, each of them, the summary of a valuation. Therefore, when we apply what we are doing is to implicitly assume the same business and future hypotheses for the company we are valuing as those assumed for the company whose multiple we are applying. The ignorance of such hypotheses, as is often the case, is a significant disadvantage in applying this methodology.

Regarding the choice between the multiples based on the business value and the value-based ones, when the first offer the advantage of focusing on the business as a whole and are not affected by differences in the structure of the liability, the latter generally offer greater confidence since the calculation of the business value tends to require more calculations and is therefore more subjective and given to errors. Probably the most popular ratios among those based on business value and equity are

the PER and EV / EBITDA ratio, respectively. Their joint use can provide the analyst with a global approach to the business by complementing the study of cash flow and the relative position of profits: (i) while the EV / EBITDA ratio focuses more on cash flow than on profit and avoids issues related to accounting amortizations; (ii) the PER focuses on post-tax profits and is more comparable across sectors because they take into account differences in capital intensity

## 5. PROSEGUR VALUATION.

### 5.1. Company Overview

Prosegur is a Spanish multinational company that supply specialized and integrated security solutions using cutting-edge technology which, high competitive human capital, seek maximum efficiency for the business management of companies. With an income of 3,783 million euros in 2016 equivalent to an EBIT of 342 million euros and to net consolidated earnings of 185 million euros, Prosegur provide services for a total of 420,000 customers; more than 24,000 companies and institutions, 180,000 small and medium enterprises and 200,000 households was founded on 1976, initially with services focused on cash-in-transit. Afterwards, they started the activity of manned guarding. In 1987, Prosegur debuted on the Madrid Stock Exchange. 5 years later, Prosegur created the alarms division. It is a global company formed by more than 163,000 employees working in more than 350 offices distributed in 4 continents: Asia – China, India and Singapore –, Europe – Germany, Spain, France, Luxembourg and Portugal –, Oceania – Australia – and Latin America – Argentina, Brazil, Chile, Colombia, Mexico, Paraguay, Peru and Uruguay. However, Prosegur, aware of the particularities of each country, pursues a ‘glocal’ strategy, combining a global understanding and a way to act locally. Their strategic model is based on a clearly differentiated business strategy, investing in innovation and adapting to the specific client’s needs. A close relationship with their clients, innovation and the excellence of their services, coupled with a strong financial position, has made them a trustworthy company which tirelessly focuses on customers to improve their experience and offer added value. In this way, Prosegur has become one of the main multinational companies in the private security industry and a market leader (Spain, Germany, China...) been a reference in the markets where it operates. Currently, they offer a wide range of services, grouped into three main business lines, covering different areas of security: Integrated Security Solutions, Cash Management and Alarms.

- **Integrated Security Solutions:** Through the Integrated Security Solutions area, Prosegur provide to their clients an efficient and specialized combination between guarding services and security technology, adapted to the needs of each activity sector. Thus, the company is working to make available to companies high added value integral security services obtained from the experience in and knowledge of the areas of risk in the value chain of its business segment. The main products and services of this area are: Security Consulting Services, Manned Guarding, Electronic Security Systems, Auxiliary Services, Cybersecurity, Fire Protection and Close Protection.
- **Cash Management:** These are services with higher added value focused on Business Process Outsourcing covering the entire cash cycle. These services

provide optimization of cash management costs and improve availability in the ATM network. Prosegur has a fleet of more than 5,200 armoured vehicles with the highest levels of passive and active security to ensure traceability and to offer real-time location information. This area included: Specific Services for Bank Branches, ATM Management, Services for Retail Business, Financial BackOffice and Other Services (International transport of goods, Preparation of bank notes to put back in circulation, etc.).

- **Alarms Solutions:** With regard to the Alarms area, Prosegur in order to strength its leadership in all geographies, promote a business model “Business to Consumer” with high added value. The company has a wide range of customized security solutions trying to enhance security and peace of mind for families and businesses, such as mobile surveillance and GPS location. The main products and services included in this area are: Anti-Intrusion Alarms, Mobility Alarms, Medical Alarms, Fire Protection, Technical Leak Alarms, Foggers and Additional Services (Personal assistance in the event of emergencies, robbery or fire insurance of premises and assistance towards compliance with the data protection law).

In terms of results by region and business line, incomes are distributed as follow:

- The **business lines** Integrated Security Solutions (SIS.) and Cash Management represent the majority of company sales, contributing with a 51.2% and a 44% respectively.
- Regarding the **breakdown by regions**, on the one hand, LatAm, led by Brazil (1,042 MM€), represents the 58% of the total incomes, in such way that: 970 MM€ (SIS); 1,149 MM€ (Cash Management); 81 MM€ (Alarms). On the other hand, the economic bloc “Europe & Asia Pacific”, led by Spain (856 MM€), represents the 42% of the total incomes, distributed such that: 966 MM€ (SIS.); 515 MM€ (Cash Management); 100 MM€ (Alarms).

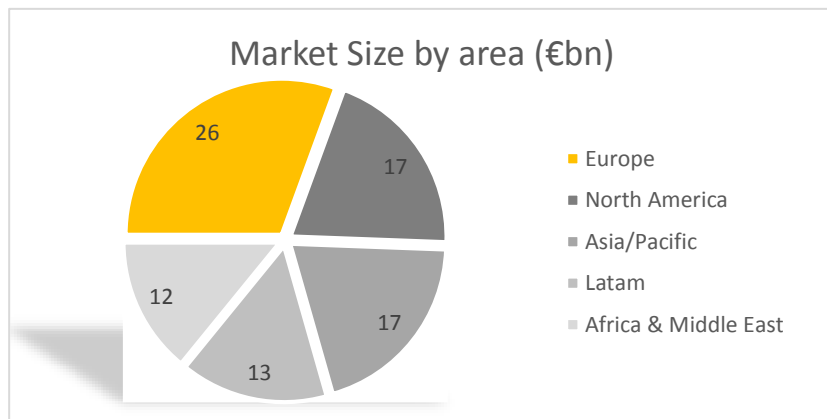


Table 1. Source: Company Data. Own elaboration

Finally, we identify the key business and economical drivers:

- Excellent organic growth and consolidated margin improvement despite the uncertain currency environment
- Strong recovery in Europe and Asia-Pacific due to the results improvement in Spain and the inputs generated in Germany and Asia-Pacific, especially in Australia.
- Margins remain stable in LatAm with growths above the average affected by the general macro situation.
- Crucial boost to the alarm business with larger investments in customer attraction and strong growth goal.
- Focus on integrated security solutions and extension of the Cash Management Business towards the Business Process Outsourcing.
- Cost structure optimization policies and cash flow generation.

Regarding Management & Governance the implementation of a good corporate governance practices is considered by Prosegur as a fundamental element to guarantee the future success and sustainability of their business. Prosegur mostly comes from a family ownership (GUBEL, SL ~50.1%), hence this shareholding pattern it is expected to assure the stability of the firm business strategies, financial policies and commitments in the long-term. Moreover, the presence of other owners (Oppenheimer, FMR...) allows for a broader view of the business and understanding of new opportunities and markets. Prosegur has demonstrated it has the skills/management to benefit from these trends. The Group's shareholding structure remains stable and is as follows: Helena Revoredo (50.1%), Oppenheimer (5.7%), Mirta Giesso (5.3%), FMR (4.0%), Cantillon (3.1%), treasury stock (3%) and free-float (28.9%).

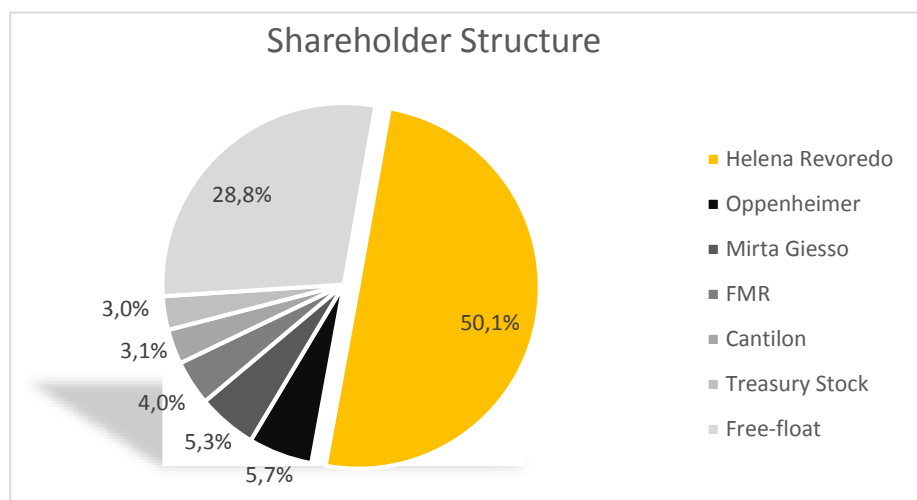


Table 2. SOURCE: Company Data. Own elaboration

### **Recent History**

In 1995 the activity in Latin America stated one of the crucial highlights of the Group. Back in December 2016, Prosegur announced their intention to list Prosegur Cash, subsidiary that represents approx. 90% of the consolidated EBITDA devoted to the transport service for cash and valuables.

As a result, in December a group formed by 6 entities underwritten the Eur 600m term loan to distribute an extraordinary dividend.

In February, a wide group of entities joined the transaction and separately the 19 entities signed 2 revolving credit facilities for general corporate uses at Prosegur Cash level (Eur 300m) and PCS level (Eur 200m). Regarding company overview and strategy is worth to say that Prosegur is a pure player in the security services industry operating in Europe (mainly Spain, France, Germany and Portugal), LatAm (primarily Brazil, Argentina, Peru and Chile) and the Asia/Pacific/Africa region (Australia, South Africa and India). Prosegur owns a 72.5% stake in its recently listed subsidiary Prosegur Cash (CASH SM Equity) and has direct exposure to the Alarms and Security sectors. Prosegur hasn't shared any of its financial targets with the market. However, it has indicated that it plans to consolidate the Cash industry through both bolt-on and larger deals, aims to double its portfolio of subscribers in the Alarms segment and has established a 5% EBIT margin target for the Security division.

The Private Security services sector has very significant organic growth potential as well as the room for further consolidation. In addition to its solid financial capabilities, Prosegur Group has three distinct business lines: Cash (83% of 2016 EBIT), Security (14% of 2016 EBIT), and Alarms (3%). The shared services organization will provide IT, HR, real estate, etc, services to the three divisions, at a cost dictated by clearly defined contractual terms. As mentioned before, Prosegur currently owns 72.5% of Prosegur Cash and fully consolidates it in its accounts. Its high dividend pay-out should allow Prosegur to fund its alarms growth strategy. Prosegur Group intends to double its alarms business in the next three to five years whilst Prosegur Cash intends to consolidate the cash-in-transit industry. We attempt to quantify the impact on near term earnings and the medium-term cash flows of the business.

The business is present in 15 countries, with a market-leading position in 9 of them. Emerging markets accounted for 84% of Prosegur Group's EBITDA in 2016. In cash-in-transit, market leadership drives scale and is a key factor for profitability. The company has 7.6K armoured vehicles (including India and Africa joint ventures). The company's main customers are the banking and retail industries in Southern Europe and LatAm. Despite macro headwinds in its end-markets, the cash-in-transit business has demonstrated a resilient performance in sales growth and margins. Key volume growth drivers include velocity of money (inflation), high level of interest rate, and proportion of banked population, outsourcing and market share.

## 5.2. Industry overview and competitive positioning

The global security service sector is basically divided into three main different areas: Security and facilities management, Cash management and Electronic security services. The offer is fragmented (more than 250,000 private security companies); however, the industry is led by only a few competitors. There are 15 companies whose revenues are above 1M€ and only 5 of them are international. The most representative in terms of market cap are the following: G4S, Garda World Security Corporation, Loomis, Prosegur and The Brink's Company.

### Security and facilities management

It is the largest segment in the security services industry and consists in offering professional staff capable to ensure safety of goods and individuals, and all the complementary services such as monitoring and consulting. This service is oriented to provide guarding services under the client specific conditions in order to protect properties from unauthorized access or occupation, destruction and damage. The activities susceptible of being protected with this service are industrial, commercial and infrastructure goods, and people. In addition, manned guarding could be provided in a dynamic scenario as well.

There are some key aspects to take into account in order to predict the evolution of manned guarding companies and its demand in the future:

1. Change of regulations in terms of labour force conditions; wages, provident fund norms, gratuity, insurance, etc. might lead to an increase in security service competitors.
2. Potential investment in private infrastructures like shopping areas and office buildings, where a high number of security professionals are required, it is also an important driver for the projections of the industry.
3. It is also important to consider training as a principal aspect for the future of security companies. It is being more demanded in recent years and large companies are able to provide more training with a higher quality than small companies to their employees. As a result, it is expected that the main players increase their influence on the industry.

### Cash Service

Cash Services is not as big as the manned guarding segment, furthermore it supposes a growing opportunity for most of the companies especially in developing countries. This product is intended to provide safe logistics services for banks, financial entities and other large corporations to protect their cash or goods from point A to B. Some companies are specialized in this specific segment; however, it could be considered also as an extension of the manned guarding service.

The Cash Service is becoming a key and service for the private security services industry due to its growth rates in the last years. For example, in the particular case of Prosegur, cash in transit supposed a 44 percent of their business in 2014 and



increased a 4.5 percent in one year. Cash service could be divided into three different key services:

1. ATM replenishment, which consists in providing cash replenishment and maintenance services for ATM networks.
2. Cash in transit, consisting in movement of cash and goods within a bank's operating network.
3. Cash Pickup and Delivery, involving safe pickup and delivery of cash for large corporate houses and their business outlets.

### **Electronic security systems**

This division is composed by different services related to system integration, operations and maintenance of electronic security products always according to customer conditions. Segment includes a wide range of manufacturer equipment which suit for every security need that the client may demand. The main target for this type of services is basically office complexes, retail (houses and small businesses) and public infrastructure such as airports and shopping malls.

This service is given mostly by large international alarms and security solutions providers. They provide electronic security services as an extended service to their actual customers. They are also in charge of installation, monitoring and maintenance.

The Electronic security service sector is being influenced by a threat perception which is responsible of the increasing demand of these security systems closely linked with technology. In addition, investments in public and private infrastructure are being made, thus, new infrastructures require new security technology. Demand for security systems is also expected to increase equally to the increase in the role of retail and office infrastructure market.

### **Trends and market drivers for 2017 and beyond**

According to independent researches, world demand for security services could stand above 7% through 2017. This expected growth is driven by society's perception of increasing rates of crime and terrorism, while global safety measures are inefficient to fight against these threats. However, demand for security services is not only driven by perception of crime and terrorism and the measures to face them, it is also important to consider increasing urbanization rates, construction sector and the consolidation of the middle class, which means more assets to protect requiring different types of security services.

The service market will be also influenced by the economic environment; global growth rates lower than expected, recession in some important developing countries, currency volatility and uncertainty of a new global crisis. In fact, the World Bank lowered at the beginning of the year the forecast of the global economic growth by 0.4%.

The most attractive areas for the business in the future are of Asia, Eastern Europe, Africa, and the Middle East, where the security sector has a high developing potential. In addition, there are some countries like India, China or Mexico, are

expected to grow in double digits in the following years. Despite the fact that in China some of the most important security services are given by the Government, this situation is likely to change in the future and Prosegur is well positioned (it is the only international security company performing in the country). The main indicator used to discover the potential of these countries is the comparison between the intensity of security service use and the GDP and urban inhabitants. If results are low we could determine that the area has an attractive security service market potential.

### **Comparing market potential**

In the security services industry, it is important to manage some specific information in order to evaluate and anticipate market performance. One important ratio used by security firms is the police-to-citizen ratio, which measures the number of police officers within a country's population. The global average of this ratio is 3:1,000, thus, the lower this ratio is, the higher potential of the market due to it indicates that security needs are unsatisfied. In most of the cases, this ratio is lower in developing countries, which are distinguished by high population density rates and a weak public security force.

There is another critical ratio for the industry is the ATM per adult rate. It indicates the penetration of ATM within a specific area and is particularly important for the firms which are highly dependent on cash management services like Prosegur or Loomis. The ATM networks are wider in western countries; however, they are gaining presence in developing countries.

The last ratio to be analysed in the report is the terrorism ratio. Countries with higher rates of crime or more likely to suffer terrorism attacks are demanding more services such as manned guarding in order to reinforce private (houses, office complexes, shopping malls) and public (airports, public events) security and show a safety image.

As in the Cash in Transit business, Prosegur also leads or co-leads in almost every Security market it operates. On top of this, the company has been able to shift its plain vanilla Security business (low margins) to a more sophisticated business model where technology, less human capital intensive and higher margins, progressively gains importance like for example in fields as electronic security, mobile/remote guarding, flow analytics, devices, etc. Prosegur's Security positioning in selected markets was a great business for the Cash unit but a deadweight for Prosegur's Brazilian Security business which, despite almost doubling its size, has been contributing operating losses ever since.

On top of the Brazilian Security business adds the local flair for labour claims that forces the company to employ a myriad of in-house lawyers and book important provisions (62 million € as of 2016 for all the Brazilian businesses). The company is already working on the restructuring of its Brazilian Security unit (reducing indirect costs, portfolio streamlining, bringing more technology, improving commercial productivity, etc.) although margins remain unstable. Beyond Brazil the company is also reviewing its strategy and restructuring its French, Mexican, Colombian and Chinese operations.

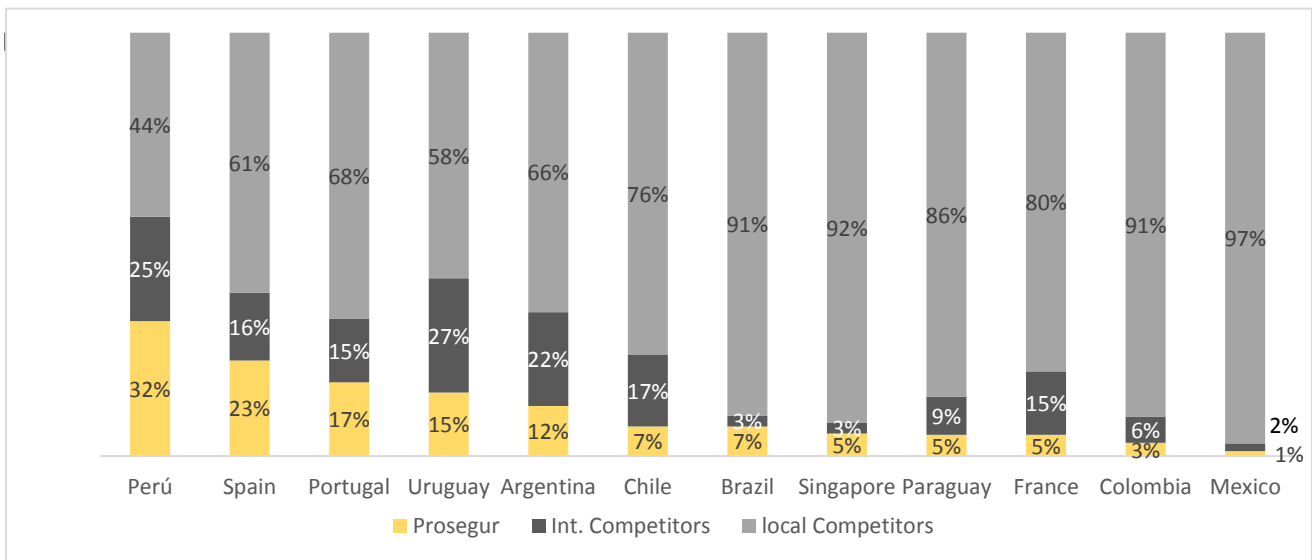


Table 3: SOURCE: Company Data. Own elaboration

	Prosegur	Int. Competitors	local Competitors
Perú	32%	25%	44%
Spain	23%	16%	61%
Portugal	17%	15%	68%
Uruguay	15%	27%	58%
Argentina	12%	22%	66%
Chile	7%	17%	76%
Brazil	7%	3%	91%
Singapore	5%	3%	92%
Paraguay	5%	9%	86%
France	5%	15%	80%
Colombia	3%	6%	91%
Mexico	1%	2%	97%

Table 4. SOURCE: Company Data. Own elaboration

### 5.2.1. LatAm<sup>3</sup>

Prosegur Cash has a strong position in the CIT business in Brazil, with a 45% market share, and holds an even bigger share in most of the less-populated regions, where competition is less intense than in São Paulo or Rio de Janeiro. From this point of view, we believe that it will be hard to concentrate the industry further, and thus the group's strategy should focus essentially on defending its market share, improving the quality of its portfolio (dropping less profitable clients and trading off higher pricing against better payment terms) and avoiding irrational pricing. The company also holds the top spot in the Security ranking, but with a smaller market share of 9%. Two main sources for additional market share have been identified: 1) further integration of Security services with CIT services; and 2) inorganic growth at accretive multiples.

<sup>3</sup> Source: Prosegur Strategic Business Plan

Prosegur Cash also leads the CIT business in the Argentina area (comprising Argentina, Uruguay and Paraguay) with a 60% market share. Here too, we believe that it will be difficult to concentrate the industry further and thus we expect the group to focus mainly on defending its market share, improving the quality of its portfolio (dropping less profitable clients and trading higher pricing off against better payment terms) and avoiding price wars. The company also holds the top spot in the Security ranking, but with a smaller market share of 13%. We identify two main sources for additional market share: 1) further CIT/Security integration; and 2) inorganic growth at accretive multiples. Prosegur holds a 10% market share in Alarms in the region, only second to ADT's massive 50%. Despite the region's high alarm penetration (7.4% in Argentina, 6.2% in Uruguay), we believe that double-digit organic growth can still be achieved in the next few years, driven by international real estate investors and better technology being more cost-effective than human security. The Alarms business, we expect the company to increase its commercial efforts (expanding the commercial headcount, higher A&P expenditure and partial equipment subsidies), driving organic sales to grow at an 11% yearly rate, mostly explained by new net subscriptions. As in other areas of LatAm, Prosegur Cash is the leader in the CIT business in Chile, with a 45% market share. With greater industry concentration difficult to achieve, again we believe the group should focus on shoring up its market share, enhancing the quality of its portfolio and avoiding irrational pricing. The company is the runner-up in the Security sector, with a market share of 10%. We identify two main sources for additional market share: 1) further bundling of Security services with CIT services; and 2) inorganic growth at accretive multiples. LatAm is the fastest growth market across the industry, LatAm countries (Argentina, Brazil and Colombia) recorded the fastest pace of growth, followed by the US. Argentinian pricing growth is high, driven by high inflation. Prosegur Cash got an additional 3% growth due to a logistics contract in Argentina, which is unlikely to recur in the coming quarters. Even then, CASH's organic growth of 13% is materially ahead of its peers. Based on wage inflation rates, we estimate that the volume, price, and new product contribution to Prosegur Cash's growth rate are 6%, 3%, and 4%, respectively. We expect that the high level of price increase in Argentina is likely to ease in the second half. A continued Brazilian recovery, which was gaining momentum through Q1, may offset some of such pressures.

#### 5.2.2. Europe<sup>4</sup>

Spain represents 24% of the final year group sales and its main characteristics are some like mature growth or the stable margins for the period '16-'19. Alongside it is expected the sales to expand at a 3% compounded average growth rate. For the Cash in Transit unit, it is expected organic growth below domestic product plus consume price index growth, 1% vs. 3% per annum over the period '16-'19 after the FY16 bounce-back 6% following several years of contraction in which Spain's 2015 sales were at 2003 levels, due to the drastic reduction in the number

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<sup>4</sup> Source: Prosegur Strategic Business Plan

of bank branches -32% between 2008 and 2015, according to the Bank of Spain. In the Integrated Security Systems unit, is expected rather faster organic growth than at CIT 3% vs. 1% per annum, helped by price increases, the addition and recovery of significant contracts like RENFE or Madrid Airport. In the Alarms business, is expected the company to focus more on its commercial efforts.

Prosegur Cash leads the CIT business in Spain, with a 48% market share (vs. 43% for its nearest competitor, Loomis). As in the majority of the LatAm markets, further consolidation of the market is unlikely, so we believe the group’s strategy should focus mainly on defending its market share, enhancing the quality of its portfolio (dropping less profitable clients, trading higher pricing off against better payment terms) and avoiding irrational pricing. The company also holds the top spot in the Security ranking, with a market share of 23% (vs. 19% for the runner-up, Securitas). Given its lead in the Security segment, we believe that further (small share gains) will come mostly from bundling Security services with CIT services. Prosegur holds a 10% share of the Alarms market in Spain, second to the market leader Securitas, which has 47% of the market. Going forward, we expect Prosegur to source most of its growth organically, as the country converges with alarm penetration in other developed markets (9.2% vs. 20.0% in the US).

Porter's 5 Forces Analysis – Security & Protection Services Industry.

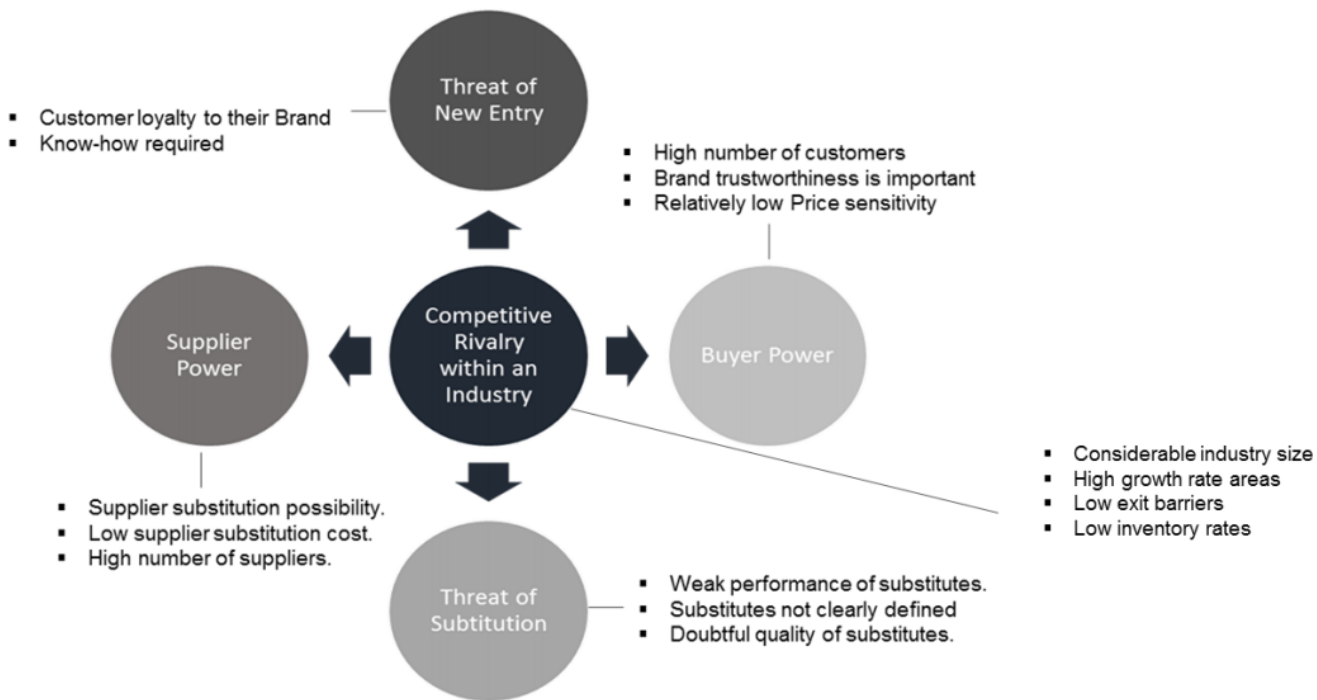


Figure 1. Porter Analysis. Own elaboration

Firstly, Prosegur Group still remains a controlling shareholder of Prosegur Cash and even as the holding reduces from the current 72.5%, PSG plans to retain at least 51.0%. The Cash business is generating solid cash flow and it is expected to be one of the key participants in market consolidation. Secondly, management

are keen to invest in the Alarms business, which should expand materially over the coming few years (profit to follow once the rate of investment slows down). Finally, we see a margin recovery story at Security, mainly in Brazil with some potential elsewhere. Prosegur offers three-business line investment case. Prosegur Cash, Alarms (an investment focus for management) and Security (a recovery line). We rate Prosegur Cash a Buy because of its strong position in markets which should continue to see cash services outsourcing, and importantly because of the view that the company will continue to participate in the consolidation of the cash management industry.

“Prosegur Group owns 72.5% of Prosegur Cash and fully consolidates the results of Prosegur Cash into its own. **Cash** Solid cash flow funding consolidation. We forecast the results of Prosegur Cash separately and feed those into the Prosegur Group model. Alarms: Investing in growth: **Alarms** accounted for 5% of revenue and 3% of EBIT in 2016A pre-central costs. Management has ambitions to grow the number of connections from 443k in Q1 2017 to a million over the next 3-5 years including through M&A. **Security**: Upside from the margin: The guarding business excluding Brazil represented 40% of revenue and 15% of pre-central cost EBIT in 2016A. With a margin of 2.0% (3.5% including the losses in Brazil) in 2016A, the business underperforms Securitas Ibero-America at 3.8%.” (Kumar)<sup>5</sup>

Prosegur **Cash** is one of the global leaders in the security industry, focusing on providing total cash management solutions. Prosegur Cash had revenues of €1.7bn in 2016 and EBIT of €320m, with an implied 18.6% EBIT margin. The company handles more than EUR 550,000 million per supported by a fleet of more than 4,800 armoured vehicles.

In the area of **Alarms**, Prosegur offers solutions to families and businesses, including the “standard” anti-intrusion alarms, as well as anti-inhibit and antisabotage alarms, mobility alarms, medical alarms, fire protection alarms, technical leak alarms, foggers and associated services. The largest geographies for Alarms are Spain and Argentina. Latin America has been an important growth driver for Alarms recently, but the proportion of sales from Latin America has been broadly stable over the past three years at 40-50% of total Alarm revenue. The average revenue per user has averaged around €36.5 in 2013-2016 and increasing in Q1 2017 to €38.9. The average revenue per user can be volatile due to the lumpiness of price increases, especially in higher-inflation countries in Latin America. The average revenue per user is significantly higher in Argentina than in Spain. Alarms represents 6% of 2016 sales and there are very low margins due to investments. This business is capital-intensive. Its key driver is scale. The company aims to double its installed based to 1m alarms in the next three to five years and invest EUR200-250m in the next three years, mostly in alarms. Some of that spend will be directed towards acquisitions in the cyber security model. It is worth noting that in the growth phase of the alarms business can be capital-intensive (both capex and opex). Given the company’s ambition to grow the segment, we expect depressed

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<sup>5</sup> JP Morgan Equity research.

operating margins in the near term. However, given the long duration nature of the business, we think any EV/EBITA or PE-based valuation methodology would undervalue it. Prosegur Cash, 49% Security, 45% Alarms, 6% Prosegur Cash, 83% Security, 14% Alarms, 3% The parent has split its businesses into Cash-in-transit, Security, and Alarms Cash-in-transit business has demonstrated a resilient performance of sales growth and margins

Prosegur's *Security* business area includes consultancy, manned guarding, electronic security systems, close protection, fire protection and cybersecurity. This division is basically a corporate security business. It is worth noting that the division does some monitoring similarly to Alarms – when an alarms client becomes too big (e.g. moving from several separate contracts on a site-by-site basis to an overall centrally procured contract), they might be transferred from Alarms to Security. This can result in the number of connections reported as part of Alarms reducing and revenues transferring over. The business' revenue is well balanced between Latin America and Europe & Asia-Pacific, but that includes the loss-making Brazilian security business which is currently in the process of being separated from Prosegur Cash. Security represents 45% of sales and 14% of EBIT in 2016, manned guarding is a low-margin from 3 to 5% EBIT margin business. The industry is going through a structural change. Guarding is becoming increasingly more commoditized. The key differentiator could be adaption of technology.

## 5.4. Valuation Methods

### 5.4.1. Sum of the Parts

We value Prosegur via a sum-of-the-parts analysis, despite the fact that we consider this valuation as a trivial exercise due to the non-transparent Prosegur's reporting analysis where we assess the value of the company's different businesses in each of the geographical units. The core hypotheses are as follows:

- Forecasting the explicit flows from 2017 to 2020.
- One flow obtained with 2020e sales and an EBIT margin assumption, then, calculate the terminal value.
- Cash flows are brought to present value in the following WACC ranges: LatAm 13.5% and Europe and Asia, Oceania and Africa (AOA) 7.5%.
- Normalized flows are calculated using the following EBIT margin ranges Security 4% and Alarms 10%.
- Terminal values are calculated using the following perpetual growth rates: LatAm 5%. Europe 1% and AOA 3%.
- For net debt, we have used the adjusted FY16 figure of –EUR7mn, which includes the net cash proceeds of the Prosegur Cash IPO.

- Provisions & others: provisions at book value while ‘others’ reflects the cost of endorsements and warranties (capitalization of the associated financial cost of the warranties/endorsements).
  - The present value of tax credits (EUR44mn) is calculated assuming: 15-year depletion period. A 36% effective tax rate; and a 12% discount rate.
- The resulting valuation equates to the following multiples: 9x EV/EBITDA, 13-11x EV/EBIT, 21x P/E, 4-5% Free Cash Flow to Equity and 2% DY FY17e, which seems appropriate for Prosegur’s growth/risk/profitability profile.

M€	EV	EV/EBITDA		EV/EBIT		P/E		FCFE		DY	
		2017E	2018E	2017E	2018E	2017E	2018E	2017E	2018E	2017E	2018E
LatAm security EMEA & AOA	193	7,9x	7,2x	23,9x	18,9x						
Security	219	4,5x	3,8x	10,3x	7,4x						
LataAm alarms EMEA & AOA alarms	100										
	34										
<b>Prosegur EV</b>	<b>546</b>	<b>6,6x</b>	<b>5,7x</b>	<b>19,9x</b>	<b>14,3x</b>						
<b>Prosegur Cash EV</b>	<b>4221</b>	<b>9,9x</b>	<b>9,9x</b>	<b>11,8x</b>	<b>11,8x</b>	<b>12,5x</b>	<b>15,1x</b>	<b>4,5%</b>	<b>5,7%</b>	<b>4,8%</b>	<b>4,0%</b>
<b>Prosegur Group EV</b>	<b>4766</b>	<b>9,3x</b>	<b>8,6x</b>	<b>12,4x</b>	<b>11,2x</b>	<b>22,9x</b>	<b>20,3x</b>	<b>4,1%</b>	<b>4,7%</b>	<b>1,7%</b>	<b>2,0%</b>
Net Debt	-7										
Provisions	-223										
Adjust tax	44										
Minorities	-992										
<b>Target equity value</b>	<b>3588</b>										
Adjusted Shares	598										
Target Price	6,0										
Current price	5,8										
<b>Upside</b>	<b>3,45%</b>										

Table 5. Cash Flow Analysis. Own estimates

#### 5.4.2. Free Cash Flow

The projection of the Prosegur 2017 revenues is based in an average of the past years (1.65%). The following information (GOGS, Gross Profit, EBITDA...) is projected as percentage of revenue estimated in the last available data (2016); reflecting a relative similar structure through years (stable company outlook). This revenue growth is fixed as an integrated floor value due to behaviour fluctuations of the different business units and markets. Prosegur has consistently delivered the highest organic revenue growth of the major security companies, and the recovery in Spain is helping to compensate for the weaker outlook in Latin America. Prosegur’s recent steps into new countries - Singapore, India and Germany - could form the basis of a push to make Prosegur more of a global security company.

On the negative side, the current outlook for Latin America is uncertain, and there could be risk from currency devaluation. We have considered to value.



From the €5,484m EV calculation, we subtract €712m of balance sheet net debt (YE 2016), €36m of pending payments for past acquisitions, provisions of €242m and other non-financial debts and short-term taxes payable (€178m). We also subtract Prosegur Cash’s 27.5% minorities at the implicit target price of €2.40/share. We add €110m of financial assets, a €54m tax shield (NPV of total assets adjusted for noncurrent liabilities) and the calculation of net proceeds from Prosegur Cash’s IPO (€775m net of taxes and advisory fees). Finally, we adjust for 617m shares of treasury stock that represents 3.04%.

It is expected the business to remain working-capital intensive. Over the last 10 years, Prosegur’s working capital over sales has averaged around 10%, but it is appreciable some volatility from year to year, appreciating a range from 7 to 13%, mostly attributable to the M&A activity and new Security contract intake in which the company incurs costs in salaries, training, administrative expenses, etc. for several weeks/months before getting some cash back from the client.

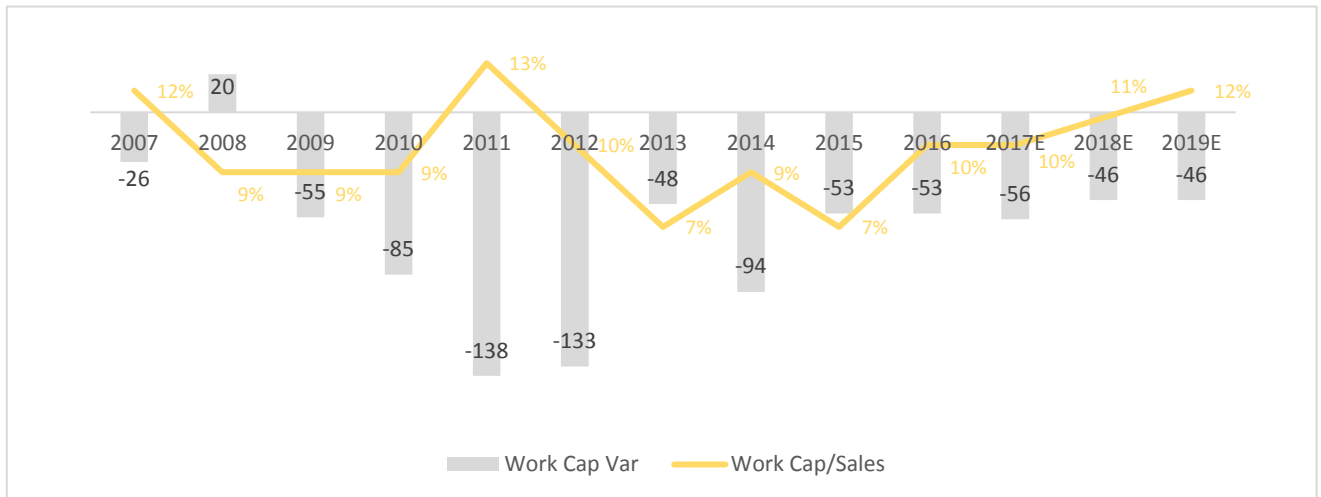


Table 6. CAPEX evolution. SOURCE: Prosegur FFSS

are fairly stable at around 150- to 160 million € / year, 1.2x depreciation a year on time. Note that neither the capex nor the P&L estimates factor in a transformational deal in the future, but we believe that the company has plenty of headroom should a good opportunity materialise.

	2016	2017E	2018E	2019e
<b>CAPEX</b>	-184	-152	-156	-164
<b>%Sales</b>	4,70%	3,60%	3,50%	3,50%
<b>D&amp;A</b>	1,6x	1,2x	1,2x	1,2x
<b>Maintenance</b>	-177	-152	-156	-164
<b>Acquisitions</b>	-11	0	0	0
<b>Disposals</b>	4	0	0	0

Table 7. Caompany Data. Own elaboration

For Prosegur, CAPEX is crucial for the expansion of the firm through new opportunities in different global markets. According to the model purpose, we have estimated the capital expenditure based on information provided by Annual

Reports and projected as a perpetual growth of 3 years CAGR. Capex/ Revenue of 3.68% regarding the revenue due to the renovation capex vision taken by Prosegur in the coming years. However, lower CAPEX means higher cash conversion. Taking into account the maintenance capex projections, we expect the group to improve its cash conversion (EBITDA less maintenance capex over EBITDA) to levels of 75% by 2019e. We expect recurrent Free Cash Flow to Equity to reach around 200 million € per annum. It is estimated that the reported Free Cash Flow to Equity could reach 850 million € in this year as a result of the Prosegur Cash IPO. For the following two years, is expected recurrent equity cash flow figures of around 200 million € per annum, assuming there is no material acquisitive growth. At current market levels, this cash generation equates to a 5% average recurrent Free Cash Flow to Equity yield for the following two years period.

<b>DCF Valuation</b>	<b>2017e</b>	<b>2018e</b>	<b>2019e</b>
EBITDA	511	554	621
non-cash EBITDA	0	0	0
WC Var	-56	-46	-46
CAPEX	-152	-156	-164
Free Operating CF	303	352	411
Net financial result	-45	-45	-31
non-cash financial Result	0	0	0
Taxes	-132	-136	163
Dividends minorities	0	0	0
Other	721	-7	0
<b>Free Cash Flow to Equity</b>	<b>847</b>	<b>163</b>	<b>217</b>
Dividends	-61	-66	-79
<b>FCFE after Dividends</b>	<b>786</b>	<b>97</b>	<b>138</b>
FX	0	0	0
Change in net Debt	786	97	138

Table 8. FCF Estimations '17 - '19. Comapny Data. Own estimates

Although there is no specific policy regarding dividends, the company has maintained a rather stable pay-out ratio of around 40-50% (41% average from 2004 to 2015), which has translated into double-digit dividend growth (13% Compounded Average Growth Rate for the period 2004 - 2015). Going forward, we expect the company to distribute at least 40% of reported net profit, thus driving ordinary DPS to grow in line with EPS (18% Compounded Average Growth Rate for the following period 2016 - 2019).

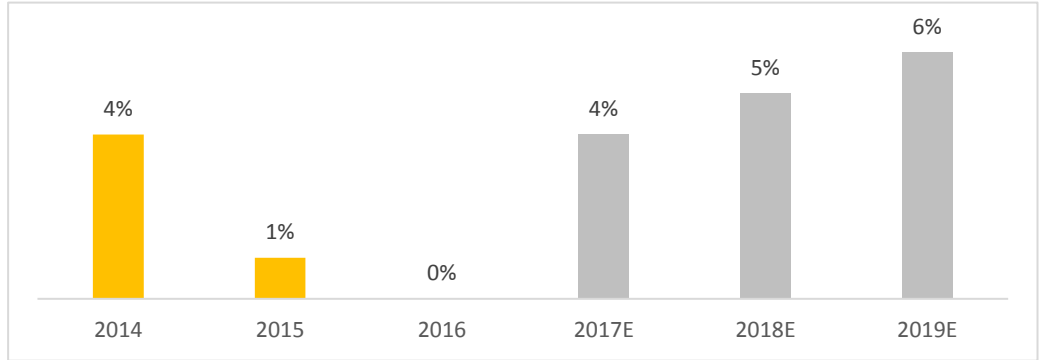


Figure 2. FCF evolution % '14 - '19E. Company Data. Own estimates

### 5.4.3. Multiples

	EV/Sales	EV/EBITDA	PE	Dividend Yield
Prosegur	0,9	7,7	16,8	2,1%
Brinks	1,0	7,4	22,1	0,7%
Loomis	1,5	8,1	17,1	2,8%
<b>Cash holding Peers</b>	<b>1,2</b>	<b>7,8</b>	<b>19,6</b>	<b>1,7%</b>
G4S	0,9	10,0	16,9	3,0%
Securitas	0,6	9,5	15,6	2,9%
<b>Security peers</b>	<b>0,7</b>	<b>9,7</b>	<b>16,2</b>	<b>3,0%</b>
ISS	0,8	11,3	16,5	2,9%
Compass	1,2	12,8	21,4	2,1%
Sodexo	0,9	10,7	21,1	2,2%
<b>Other Services</b>	<b>1,0</b>	<b>11,8</b>	<b>21,2</b>	<b>2,2%</b>

Figure 3. Peers Comparables. Source: Santander Equity research.

We derive the target price by summing the valuation of the different parts: security, alarms and cash business. For security and alarms, we assume a 10% discount to peer companies' average multiple of 13.5x to account for weakness in Brazil and lower margins in rest of the man guarding business (compared to peers). For alarms, we take a 30% discount to Industry benchmark recurring monthly revenue from 40 to 60x times which equates to EV/sales of 3.3x to 5.0x. There is greater clarity on the regarding overhead expense. We had used EV/sales of 1x for the Alarms business valuation. We have now separated that multiple into (1) 2x EV/sales for alarms and (2) capitalised overhead costs. In essence, the underlying multiples are unchanged. For Prosegur Cash, we take

the EV at the current target price of 2.8 € Combined we arrive at 7.35 € which implies a 28% upside. Hence, we reiterate the Buy rating. On the face of it, Prosegur Group currently trades at a PE multiple of 17x (compared to Prosegur Cash's implied PE multiple of 14x). Many investors would read that as Prosegur group shares are fairly valued relative to peers. However, since the IPO of Prosegur Cash, the estimates suggest that the parent company should end up virtually debt-free in 2017 (assuming 750 million € proceeds from the IPO and no acquisitions in 2017). On an ungeared basis, that would put Prosegur Group shares at a PE multiple of 13x.

This implies the market is putting Prosegur's Security and Alarms businesses on a 13x PE multiple, or a 20% discount to the manned guarding peers. What makes this more complicated is that the company's chosen strategy means the Alarms business is not generating any EBIT/EBITA in the growth phase. Any valuation method based on EV/EBITA or PE basis would discount the division's cash flows. In addition, the security business (manned guarding) in Brazil is cyclically at a low point. The combination of these two factors can be a source of valuation anomalies. Target price increased to EUR7.35 The Security business has many listed peers. Prosegur's security business in Brazil is cyclically depressed and the margins of the rest of the manned guarding segment are weaker than those of peers. However, we expect a recovery in Brazil, suggesting to us that a steep discount to peers is unjustifiable. We use an EV/EBIT of 12x (10% discount to peers, unchanged) to reflect the lower margins of the manned guarding business. We have presented the detailed assumptions and the rationale in Exhibit 7. We arrive at the target price of EUR7.35 for Prosegur Group shares using the Sum of the Parts calculations and summarise the assumptions in the table below. The target price was EUR7.3 previously. We continue to use a Sum of the Parts. The valuation methodology reflects (1) the target price of Prosegur Cash (now 2.8 € up from 2.75 € since the last time we published on Prosegur), based on applying a of 17x (lower end of peer set multiple range, average over the last three years) to the rolling 12-month forward EPS estimate of 0.17€; (2) more information about the profitability and returns of the various business lines and (3) an acceleration of investment in alarms to drive growth as a result of available capital to do so. In the near term, we see a re-rating of Prosegur Cash shares as a driver for Poseur's share re-rating. In the medium term, a return to profitability of the alarms division could also drive a re-rating. The target price increases in line with changes to the underlying estimates. It implies 28% upside. Hence, we **reiterate the Buy rating on Prosegur**.

## 5.5. Investment Risk

The first challenge Prosegur has to face is how to manage economic slowdown in order to meet growth expectation. As it has been said in the report, Prosegur has mitigated this risk through geographical diversification; this means that

they are following a strategy of inorganic growth in order to gain presence in key areas (developing countries).

However, this strategy has negative aspects as well. Prosegur is highly dependent on the GDP evolution of these countries (revitalization of the economy led to an increase in cash transactions) as around half of the business comes from developing countries. The problem arises when GDP growth is negative due to the instability of the countries.

At the same time, this aspect led to another potential risk: exchange rates. Volatility of local currency could suppose a problem for the enterprise financial structure as devaluation of currencies implies a decrease in total revenues or even losses. Exchange rate is basically a reflection of the preferences and expectations of investors performing in open trading based on information available and an increase in these rates reflects some type of uncertainty related to the developing country. To control this potential risk, Prosegur is using different instruments to balance and mitigate the risks associated with monetary in- and outflows, considering market expectations.

Despite these factors, Prosegur had an organic growth of more than 10% along 2015 and in the developing countries of the area of Asia/Pacific (APAC) where the company is present; the organic growth reached a peak of 24%. Therefore, we can conclude that the diversification strategy in developing countries is being successful (financial flexibility).

Lastly, there is a challenge for the industry in the long term. In the last years cash has been losing importance due to other type of transactions and the creation of digital currencies, and there have been speculations with the possibility of its disappearance. Even Christine Lagarde, during 2016 DAVOS Forum recognized that cash could lose impact in society in the future.

### **Volatility of the Latin American currencies**

Latin American currencies could provide upside or downside risks. Nearly 60% of Group sales in 2016 came from Latin America. We see devaluation risk relating to the Argentinean peso given the upcoming legislative elections in Argentina on 22 October 2017. Besides the potential risk based on the non GDP recovery in key Latin American countries

### **Poor returns on the Alarms and Security investment**

Prosegur Group intends to spend €300-400m of its proceeds from selling 27.5% of Prosegur Cash (worth at the time c. €825m in total) to invest further in Alarms and in Security. Poor returns on this investment are a risk. For context, Prosegur Group had an overall cost base (COGS and SG&A) of €1.8bn in 2016 and capex overall for the Group including Cash was €166m (€94m of which relating to Prosegur Cash).

### **Competitive pressures in Alarms**

The Alarms market has seen many M&A transactions in recent years and some markets are consolidating (notably the US). Any increased competitive

pressure could negatively impact the Group's plans for expansion, or the "steady state" profitability of that business.

**Alarms left behind due to technological advances**

With an installed base of 443k alarms in Q1 2017, there is a risk of the existing alarm base being left behind in terms of available technology and customer demands.

**Competitive pressures in Security**

Manned guarding in particular can be competitive on a region-by-region basis. Prosegur Cash could lose contracts or have a reduced growth rate in a market with pricing pressure where it does not chase volume at low pricing points; or alternatively could see a negative impact on its margins.

**Additional investment needs in Security to keep up with technology**

Competitors like Securitas have invested in camera technology, among others, as part of their guarding offering. Securitas has made investments in Spain, one of Prosegur's key markets, and we see a risk of further investment needs if Prosegur Group needs to catch up.



## 6. CONCLUSIION

The study of different valuation methods has permitted me to obtain the application knowledge of a fundamental tool for developing a career in finance nowadays. Valuation is widely used in investment finance. The way of using valuation, however, is different depending the role it plays. As previously mentioned, valuation is also used for three different valuation purposes: Portfolio Management, Valuation for M&A and Valuation in Corporate Finance. Implicitly comes demonstrated its tremendous value for financial analysts. Through the study of Prosegur in the different chapters of this document, we have been able to obtain an overview of the Prosegur Group, as well as the operational recommendations for the group. Prosegur is a Company with a strong economic-financial structure, with a good historical track record in its sector. The performance of the company in the future presents interesting opportunities and there is room for growth and opportunities in the markets in which the group is operating nowadays. The company is solid, has a good governance team, uses a structure of conservative indebtedness, organic and inorganic growth is strong and the position in the market is dominant, having created more value for the shareholders than the main competitors. In addition, the company is undervalued because of the effect of exchange rates. For all this, the recommendation is the overweight for this asset, as recommended in this dissertation. The DCF is one of the most used methods by analysts when valuing companies of the sector. In this case it has been used taking into account some conservative variables. It is interesting to contrast the analysis and projection of the balance with the consensus of the analysts.

Finally, must be observed in the future whether the forecasts are met and whether strategies have been profitable in financial terms. Although there is not a single valuation method superior to the others, using several of them before an investment is key for success when investing, to obtain returns adequate to the profile of each investor operating in the financial markets.





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- <https://www.informa.es/>

## 8. ANNEXES

### 8.1. Balance Sheet

Balance sheet (EUR mn)	2012	2013	2014	2015	2016	2017e	2018e	2019e
Intangible assets	891	858	856	740	785	785	785	785
Tangible assets	460	472	553	551	558	581	594	601
Financial investments	37	25	24	27	40	40	40	40
Other long-term assets	302	270	275	164	186	186	186	186
Assets classified for disposal	0	0	0	0	65	65	65	65
Current assets	1.025	978	1.009	976	1.177	1.287	1.345	1.399
Other current assets	0	0	0	0	0	0	0	0
Cash and cash equivalents	170	295	294	317	825	1.613	1.728	1.891
<b>Total assets</b>	<b>2.886</b>	<b>2.898</b>	<b>3.012</b>	<b>2.775</b>	<b>3.635</b>	<b>4.557</b>	<b>4.742</b>	<b>4.966</b>
Equity	732	655	853	700	751	816	907	1027
Minority interests	0	0	11	0	1	785	844	916
Prov. and other LT liabilities	439	550	537	303	351	370	389	409
Liabilities classified for disposal	0	0	0	0	0	0	0	0
Financial debt	1.033	961	891	956	1.582	1.582	1.582	1.582
Accounts payable	660	703	681	693	786	840	856	868
Other current liabilities	21	29	39	124	165	165	165	165
<b>Total liabilities</b>	<b>2.886</b>	<b>2.898</b>	<b>3.012</b>	<b>2.775</b>	<b>3.635</b>	<b>4.557</b>	<b>4.742</b>	<b>4.966</b>
Net debt	864	666	597	638	757	-31	-146	-309
Capital employed	2.019	1.875	2.013	1.738	1.920	1.999	2.053	2.102
Working capital	365	275	328	283	391	447	489	531

Table 9. BS Prosegur. Company Data

## 8.2. P&L

P&L (EUR mn)	2012	2013	2014	2015	2016	2017e	2018e	2019e
Net revenues	3.669	3.695	3.783	3.959	3.902	4.268	4.459	4.637
Other income	0	0	0	0	0	0	0	0
<b>Revenues and other income</b>	<b>3.669</b>	<b>3.695</b>	<b>3.783</b>	<b>3.959</b>	<b>3.902</b>	<b>4.268</b>	<b>4.459</b>	<b>4.637</b>
Growth in sales (%)	30,6%	0,7%	2,4%	4,7%	-1,4%	9,4%	4,5%	4,0%
Supplies	-157	-125	-136	-167	-190	-207	-217	-225
Personnel costs	-2.427	-2.473	-2.515	-2.712	-2.642	-2.695	-2.749	-2.804
Other operating expenses	-657	-683	-705	-632	-621	-853	-938	-985
<b>Recurrent EBITDA</b>	<b>427</b>	<b>414</b>	<b>426</b>	<b>448</b>	<b>449</b>	<b>512</b>	<b>555</b>	<b>623</b>
Non-recurrent items	0	0	0	0	0	0	0	0
<b>EBITDA</b>	<b>427</b>	<b>414</b>	<b>426</b>	<b>448</b>	<b>449</b>	<b>512</b>	<b>555</b>	<b>623</b>
EBITDA growth (%)	13,1%	-2,9%	2,9%	5,2%	0,2%	14,0%	8,5%	12,2%
<i>EBITDA/Sales (%)</i>	<i>11,6%</i>	<i>11,2%</i>	<i>11,3%</i>	<i>11,3%</i>	<i>11,5%</i>	<i>12,0%</i>	<i>12,5%</i>	<i>13,4%</i>
Depreciation and provisions	-115	-117	-118	-124	-116	-127	-130	-137
<b>EBIT</b>	<b>311</b>	<b>298</b>	<b>308</b>	<b>324</b>	<b>333</b>	<b>385</b>	<b>425</b>	<b>486</b>
EBIT growth (%)	9,6%	-4,4%	3,5%	5,3%	2,7%	15,7%	10,3%	14,4%
<i>EBIT/Sales (%)</i>	<i>8,5%</i>	<i>8,1%</i>	<i>8,1%</i>	<i>8,2%</i>	<i>8,5%</i>	<i>9,0%</i>	<i>9,5%</i>	<i>10,5%</i>
EBIT non-recurrent items	0	0	0	0	0	0	0	0
<b>Operating profit</b>	<b>311</b>	<b>298</b>	<b>308</b>	<b>324</b>	<b>333</b>	<b>385</b>	<b>425</b>	<b>486</b>
Net financial result	-61	-51	-59	-36	-59	-45	-45	-30
Equity-accounted earnings	0	0	0	0	0	0	0	0
<b>Ordinary income</b>	<b>251</b>	<b>246</b>	<b>249</b>	<b>288</b>	<b>274</b>	<b>340</b>	<b>380</b>	<b>456</b>
Ordinary income growth (%)	-0,6%	-1,9%	1,2%	15,5%	-4,7%	23,9%	11,7%	20,0%
Extr. result/discont. activities	0	0	0	0	0	-20	0	0
<b>Pre-tax profit</b>	<b>251</b>	<b>246</b>	<b>249</b>	<b>288</b>	<b>274</b>	<b>320</b>	<b>380</b>	<b>456</b>
Tax	-79	-91	-91	-105	-140	-132	-137	-164
Minorities	0	0	0	0	0	-63	-66	-72
<b>Net profit</b>	<b>172</b>	<b>156</b>	<b>159</b>	<b>183</b>	<b>134</b>	<b>124</b>	<b>177</b>	<b>219</b>
Net profit growth (%)	2,7%	-9,4%	1,8%	15,5%	-26,9%	-7,4%	42,7%	23,6%
<b>Ordinary net profit</b>	<b>172</b>	<b>156</b>	<b>159</b>	<b>183</b>	<b>134</b>	<b>136</b>	<b>177</b>	<b>219</b>
Effective tax rate (%)	31,6%	36,8%	36,4%	36,3%	51,1%	41,4%	36,0%	36,0%

Table 10. P&amp;L Prosegur. Company Data

### 8.3. Cash Flow Statement

Cash flow statement (EUR mn)	2017e	2018e	2019e
<b>EBITDA</b>	<b>512</b>	<b>555</b>	623
Non-cash EBITDA	0	0	0
Working capital variation	-56	-42	-42
Capex	-150	-144	-144
<b>Free operating CF pre-tax</b>	<b>306</b>	<b>370</b>	437
Net financial result	-45	-45	-30
Non-cash financial result	0	0	0
Taxes	-132	-137	-164
Div. from/to assoc. /minorities	0	0	0
Cash flow other	721	-7	0
<b>FCFE</b>	<b>850</b>	<b>181</b>	<b>243</b>
Dividends	-61	-67	-79
FCFE after dividends	789	115	163
FX	0	0	0
<b>Change in net debt</b>	<b>-789</b>	<b>-115</b>	<b>-163</b>

Table 11. CFS Prosegur. Company Data