

MASTER IN FINANCE

MASTER'S FINAL WORK PROJECT

EQUITY RESEARCH - MELIÁ HOTELS INTERNATIONAL

ANA BEATRIZ JORGE CARNEIRO

OCTOBER - 2016

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Abstract

The purporse of this project is to estimate the intrinsic value of the Melia's shares using the most adequated valuation approaches to the features of the studied firm and trough a detailed analysis of the firm, the Group and its external environment. This valuation was based on the Free Cash Flow to the Firm method, which according to the Literature Review is the best methodology to evaluate the company.

In this research, Melia Hotels International is valued at €2 878M, which leads to a target share price of €12,53. Therefore, the theoretical price is above the quoted share price. Thus, a **buy** recommendation is given for this company shares.

Keywords: Meliá Hotels International; Lodging Industry; Discounted Cash Flow; Free Cash Flow to the Firm; Enterprise Value.

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ACRONYMS AND ABBREVIATIONS LIST

APV - Adjusted Present Value

ARR - Average Room Rate

BV - Book Value

CapEx - Capital Expenditure

COGS - Cost of Goods Sold

CPI - Consumer Price Index

CRP – Country Risk Premium

D&A - Depreciation and Amortization

DCF - Discounted Cash Flow

DDM - Dividend Discount Model

DecxxA – Actual figures as at 31 December 20xx

DecxxF - Forecasted figures as at 31 December 20xx

EBIT – Earnings Before Interest and Taxes

EBITDA - Earnings Before Interest, Taxes, Depreciation and Amortization

EBITDAR - Earnings Before Interest, Taxes, Depreciation and Amortization, Rental and Leases

EMEA – Europe, Middle East and Africa Region

EVA - Economic Value Added

FCF - Free Cash Flow

FCFE - Free Cash Flow to Equity

FCFF - Free Cash Flow to Firm

IMF - International Monetary Fund

LAC – Latin America & Caribbean

M&A – Mergers and Acquisitions

MEL – Meliá Hotels International

NWC – Net Working Capital

P – Price per Share

PER – Price Earnings Ratio

PwC – Pricewaterhouse Coopers

RevPAR – Revenue per Available Room

WACC - Weighted Average Cost of Capital

WTTC - World Tourism and Travel Council

1. Introduction

The purpose of this Master's Project is to estimate the price target of Meliá Hotels International (hereinafter the "Group", the "Company" or MEL). The International Valuation Standards Council define market value as: "The estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgably, prudently and without compulsion." In actual fact, this type of value is established on the average market conditions in a certain date and therefore, it is no concerned with the specific drives of the single investor. These motivations are defined by another type of value – The Investment Value.

If we accepted the market capitalization as the market value, once the Group is a public traded firm, the aim of this work would already have been attained. However, economic agents do not always act based on rational expectations and occasionally there is asymmetric information that must be taken into account. Besides, the valuation made by these economic agents, which is embedded in market capitalization, can be above or below the intrinsic value of the company (the estimated value in function of the firm's capacity to generate future wealth). In summary, this Master's Final Work will estimate the intrinsic value of the public traded company Meliá Hotels International.

Regarding the project structure, it will be presented in six different chapters:

- i. The first chapter contains a literature review, in order to gather pertinent information concerning the valuation methodologies available and applicable to the Group, based on textbooks, relevant scientific papers, and academic publications;
- ii. Next, in the second chapter of this project, a full description of the company will be done. This process aims to collect information related to the company's

profile, business model, economic and financial evaluation regarding the firm's operational and stock's market performance;

- iii. The third chapter will cover a brief analysis of the macroeconomic environment and hospitality industry in the main markets where Meliá Group operates;
- iv. With the conclusions of the analysis made on the second and third chapters, on the forth chapter it will be done a strategic analysis of the company, through a SWOT and a Porter's Five Forces analysis.
- v. Subsequently, the fifth chapter will rely on the company's valuation. It will be established some assumptions and then value the company based on the methodology more suitable, agreeing with the literature review;
- vi. Finally, the last chapter it will present the results and conclusions from the valuation and provide a recommendation for the investors.

2. Literature Review 2.1 Framework

Value is the defining dimension of measurement in a market economy. People invest expecting that when they sell, the value of the investment will have grown by an amount large enough to compensate them for the risk they took. Hence a company valuation is the process of determining the current worth / price of an asset or a company. According to (Damodaran, 2006) the value of any asset is a function of the cash flows generated by that asset, the life of the asset, the expected growth in the cash flow, and the riskiness associated with them.

Firm valuation comprises a process of major importance in the fields of finance, considered by many as the core of finance. During the past few years, firm valuation has

gained even more weight, playing a major role in M&A, IPO's, financial restructuring, strategic decision making process and portfolio management.

Despite the careful and detailed valuation in various areas of finance, at the end, there will be uncertainty about the final numbers and conclusions. That numbers are supported by assumptions that are made about the future of the company and the economy (Damodaran, 2012).

2.2 Valuation Methods

Depending on the company, the final goal and available time for the valuation (different models involve different variables and calculations that may consume too much time), there are a wide range of usable valuation methods. Although there is no general consensus, valuation methods are classified into three main approaches: i) Discounted Cash Flows Valuation method, ii) Relative Valuation method and iii) Contingent Claim Valuation (Real Options) (Berk, J., Demarzo, P., 2013).

Table I - Valuation Methods

Discounted Cash-Flow Valuation	Relative Valuation	Contigent Claim Valuation	Asset Based Valuation
Equity Valuation Models:	Multiples:	Option Pricing	Book Value
DDM - Dividend Discount Model	EV/EBITDA	Models:	Liquidation Value
FCFE - Free Cash-Flow to Equity	EV/EBIT	Binomial	Replacement Cost
Firm Valuation Model:	PER	Black-Scholes	_
FCFF - Free Cash Flow to the	P/BV		
Firm	P/S		
EVA – Economic Value Added	PEG		
APV - Adjusted Present Value			

Source: Damodaran, A. (2006), Valuation Approaches and Metrics: A Survey of the Theory and Evidence, Stern School of Business, New York University

2.2.1 Discounted Cash-Flow Methods

The purpose of this methodology is to provide an estimate of the intrinsic value of a firm at a certain period in time. This model defines that the value of an asset is equal to the present value of the expected future cash-flow on that asset, discounted at the rate that best describes its riskiness (Fernandez, 2007).

Value of an asset =
$$\sum_{n=1}^{n=\infty} \frac{CF_n}{(1+r)^n}$$
 (1)

According to Damodaran (2006), there are three distinct approaches of DCF valuation models: Firm Valuation, Equity Valuation and Adjusted Present Value.

2.2.1.1 Firm Valuation Models

These models developed an approach to valuation where the entire firm is valued, by discounting the cumulated cash flows to all claim holders (stockholders or creditors) in the firm by the weighted average cost of capital (cost of capital approach) (Damodaran, 2006) or by adding the marginal impact of debt on value to the unlevered firm value (adjusted present value approach) (Kaplan, S., Ruback, R., 1995). Within this category of evaluation, the main models are the Free Cash Flow to Firm – FCFF and the Economic Value Added – EVA. In this project is only referenced the first on it will be used to evaluate Meliá Hotels International (MEL).

Free Cash Flow to Firm (FCFF) - In this method it's possible to assess the overall firm value by discounting the after-tax free cash flow available from operations at a weighted-average cost of capital (WACC). Fernández (2007) describes free cash flows as the after-tax cash generated from a firm's operations assuming there's no debt. Damodaran (2006) also defines FCFF as a cash flow computed as "if the firm had no debt and no tax benefits from interest expenses". The author highlights that this cash flow is calculated before any sources of financing and hence, it is unaffected by firms' financial structure. While there are many versions of FCFF, the most common one is given as follows:

$$FCFF = EBIT (1 - T) - (Capital Expenditure - Depreciation) - \Delta NWC$$
 (2)

The firm value is given by discounting FCFF at WACC rate:

$$Firm's Value = \sum_{n=1}^{n=\infty} \frac{FCFF_n}{(1 + WACC)^n}$$
 (3)

$$WACC = \frac{E}{E+D} \times K_e + \frac{D}{E+D} \times K_d (1-t)$$
 (4)

Where, E is the market value of Equity, D the market value of Debt and T the tax rate. WACC is a weighted average of the cost of equity and debt, which are required by shareholders and debtholders, concerning the company's financial structure (Fernandez, 2007).

For some authors, WACC is the most common technique for valuing risky cash-flows. Its major strength is the simplicity from which deviations in the financing mix can be built into the valuation model (Damodaran, 2006; Ruback, 2000). Some authors, such as Luherman (1997) and Damodaran (2012) state that this model it is a practical choice when managers aim for a constant debt-to-equity ratio over the long run.

Despite the problems associated to its usage, WACC is still the most widely method used for firm valuation (Sabal, 2005). For other authors, the WACC is obsolete once it is affected by deviations in the capital structure, implicating some implementation problems with FCFF. This is specially true in high levered transactions and project financing in which capital structure changes over time (Esty, 1999).

2.2.1.2. Equity Valuation Models

According to Damodaran (2006), equity valuation models assess the value of the firm's equity stake in a business. This is done by discounting the expected cash flows that are considered belonging to the equity holders, at a rate that reflects the cost of equity financing.

Within this category it can be found two different models: i) Dividend Discount Model (DDM), in which the expected cash flow to the equity is equivalent to the expected shareholders dividends in perpetuity; ii) Free cash flow to the equity (FCFE), which are

considered all cash flows distributed to shareholders, as well as the potentials, i.e. those that the company generates, but for some reason chooses not to distribute.

Dividend Discount Model (DDM) - Based on the idea that, when an investor buys shares from publicly traded companies, he is expecting to earn two different types of cash flows: dividends during the holding period and an expected price at the end of that period (Damodaran, 2006). If one assumes that a publicly traded company lasts forever, which in theory is possible, then the price of a stock is equal to the expected dividends that stock will pay in perpetuity. The first to identify the connection between present value and dividends was Williams (1938). After that, several other variations of the model have been developed differing in assumption about future growth. Durand (1957) introduced the stable-growth model which was later on, further analysed and promoted by Gordon (1962). According to this model, the expected dividend of the next period and the cost of equity adjusted by the expected growth rate in dividends explain the value of a stock.

DDM: Value of Stock =
$$\frac{Div}{k_e - g}$$
 (5)

Where, Div is the expected dividend for the next period, k_e the cost of equity and g the constant growth rate.

Free Cash Flow to Equity (FCFE) – Traditional CFE represent what is available for distribution to shareholders after capital expenditures and net working capital needs have been met, as well as, financial obligations (Damodaran, 2002 and 2006). These obligations consist of debt payments as well as changes in working capital and preferred dividend payments. Therefore, FCFE is given by:

$$FCFE = Net Income + D&A - CapEx - \Delta NWC - (New Debt Issues - Debt Repayments) - Prefered Dividends$$
(6)

Once the future cash flows to equity are computed, they're discounted at the expected cost of equity, in order to obtain the equity value.

Equity's Value =
$$\sum_{t=1}^{t=n} \frac{FCFE_t}{(1+k_e)^t}$$
 (7)

Damodaran (2006) makes a comparison between DDM with FCFE, retitling the latter "potential dividend model"¹, it means that if a company was to pay out to its shareholders all its cash flows after debt payment and reinvestment needs, both DDM (considering company doesn't inflate dividends by borrowing) and FCFE methods would yield the same value for the company.

2.2.1.3 Adjusted Present Value

According to Fernandez (2007), this method computes the company's value by assessing the value of its assets. There are three main types of asset based valuation methods: book value, replacement cost and liquidation value (Damodaran, 2012). The book value approach, it uses book value as the measure of the value of the assets; replacement cost is the estimation of what would be the cost to substitute all of the assets that a company has today; liquidation value is achieved by combining the estimated sale profits of the assets owned by a firm. However, these methods do not take into account the company's possible future evolution, the money's temporary value or the industry's current situation (Fernández, 2002).

2.2.2 Relative Valuation

Relative Valuation is often used in the most of the equity research reports, not only because it can be a complement to DCF valuation (although the fact that it's precision is especially separate from the DCF valuation techniques), but also because it requires less assumptions and variables.

¹ Damodaran, A. (2006), Valuation Approaches and Metrics: A Survey of the Theory and Evidence, Stern School of Business, New York University

There are three essential steps in order to perform a relative valuation. The first one requires the analyst to identify a set of comparable companies priced by the market. In general, analysts often use companies belonging to the same sector or whose potential growth, profitability and perceived risk are similar. The second step, consists in standardize the prices to a common variable, since absolute prices cannot be compared. Therefore, the analyst must convert the prices into multiples so firms with different size and unit can be compared to their peers. According to Fernández (2002), the most used multiple is the Price Earnings Ratio (PER), though, some multiples can be more appropriate than others, depending on the industry (in hotel valuation processes it's generally used the price per room). Despite having the prices achieve the standardized form; one can still notice discrepancies between companies relative to growth, risk and cash-flows. Hence, the final step involves controlling for those differences.

According to Fernández (2002) there are three main types of multiples as we can see on the table below:

Table II - Relative Valuation Multiples

Multiples based on the market	Multiple based on the company's	Growth referenced multiples
capitalization (Equity)	value (Enterprise Value)	Growth referenced multiples
E.g.	E.g.	E.g.
Price-to-Earnings (PER)	EV/EBITDA	PEG
Price-to-Sales (P/S)	EV/Sales	EV/EG
Price-to-Book Value (P/BV)	EV/IC	
Price-to-Cash Flow (P/CF)		
Dividend Yield (DY)		

Source: Fernández, P. (2002). Valuation using multiples. How do analysts reach their conclusions?, IESE Research Papers D/450, IESE Business School.

Even with the easiness of relative valuation, it is difficult to implement when there is not a quite large number comparable firm in the sector. Moreover, the definition of comparable firms in itself is not always easy to establish and often leaves space for subjectivity. That is, relative valuation adds explanatory power and accuracy to DCF's estimates and thus, should be used in a second stage as a complementary tool to DCF.

2.2.3 Specific valuation methods for Hotels

In this case, the best model to evaluate MEL is the FCFF, discounted at WACC, not only because it is reasonable to consider a constant target debt to equity ratio, but also because it allow us to work with the company consolidated accounts without considering the value of each hotel or business unit. If we were valuing another lodging company with a different business model than Meliá, we could consider other valuation methods, more related to the intrinsic value of a company's real estate properties. If we were concerned about the value of the hotel, as a real estate asset, then the three most used methods² are: i) Market comparative method; ii) Income method; and iii) Cost method.

The market approach is similar to relative valuation, although the comparatives of real estate market are specific, like price per square meter, in general, or price per room, particularly in the hotel sector. The income approach is based on the same methods applied in corporate field, namely DCF, or the most simple and expedite yield, or cap rate method. Regarding cost approach, this one is not a driven market method, and so, only when it is not possible the other methods this one should be applied (also, it does not work in valuing companies)

3. Meliá Hotels International - Company Overview

3.1 Company Presentation

Founded in 1956 in Palma de Mallorca, Spain, MEL is one of the world's largest resort hotel chains, as well as Spain's leading hotel chain. It currently provides more than 350 hotels in 35 countries, on 4 continents.

² Source: International Valuation Standards Council

All over its history, the company has been involved in several M&A operations with other hotel companies, allowing the company to grow at a startling rate.

This evolution and the strategic focus on international growth has allowed Meliá Hotels International to be the first Spanish hotel company with presence in key markets such as China, the Middle East, or the US, as well as maintaining its leadership in traditional markets such as Europe, Latin America or the Caribbean.

In 1996, it was the first Spanish hotel company to be floated on the stock exchange, with the resulting requirement of transparency, regulatory control, and corporate social responsibility. Since then, the company's focus on maintaining a stable financial position has seen an increase in loyalty among its shareholders and investors.

MEL is the only company in the sector to be included in the Spanish Stock Exchange index of responsible companies, the FTSE4Good. The company is also a point of reference in the Spanish tourist sector when it comes to Sustainability and Corporate Social Responsibility. Its Global Sustainability Policy formally sets out its commitment to the environment, cultural and social integration and sustainable, responsible growth.

3.2 Business Model

The group has developed and implemented a new Organisational and Business Model in order to simplify the alignment with corporation's strategy. This new model Graph 1 – MEL's Business Model relies on four business areas: Hotels, Asia Pacific, Real

Source: Meliá Hotels International



Estate and Club Meliá. These four areas actively cooperate and are also highly complementary in their activities to achieve the company's strategic challenges: to become a more global company, with growth in the most

relevant brands and markets, (especially through management, lease and franchise agreements), with a special focus on Asia and maximising the profitability of its assets. It follows a brief description of the activities in each of the different areas:

Hotels

Responsible for the operations in the MEL hotels, this area includes all of the hotel brands and the wide range of experiences they offer guests, from the most *avant-garde* to the most family-oriented.

The Hotels area has evolved in 2011 towards a hybrid management model by both brand and region, which at the same time ensures the personality of the brand and the efficiency of operations.

Given the large number of hotels in the company portfolio, MEL developed three different systems for operating hotels as follows: **Ownership**: both the ownership and the management of the property are in the hands of MEL; **Management**: the management of the hotel is the responsibility of MEL, but the hotel is owned by a partner with whom the company has agreed conditions for its management services; **Lease**: MEL leases facilities to operate a hotel under one of its hotel brand name.

Given the Company's focus towards a low-capital model, it is desirable to manage and franchise hotels rather than own them. This allows management to do what they do best: selling rooms, offering their guests an experience and guaranteeing a solid control over operating costs. The emphasis of the company on the long-term management contracts and franchising tends to provide more stabilized earnings in periods of economic softness like that we are living through today, while adding new hotels to the system generates growth with small or even no investment.

Asia-Pacific

The Asia-Pacific area was created with the aim of a growing presence of MEL in the continent, at the same time that promotes the role of Asia as a feeder market for company hotels. In order to achieve this goal, MEL has reinforced its sales, distribution and hotel development squads with the creation of a corporate office in Shanghai from which the company's Asia-Pacific strategy is managed.

Real Estate

Real Estate is another basic foundation for the MEL organisational structure with the dual goal of, not only maximising the profitability of the company's real estate assets, but also using those assets to widen the range of services available to clients.

Therefore, this area is responsible for enhancing the sustainable profitability of company assets, ensuring the quality of the real estate portfolio, optimizing the lifecycle of assets, planning medium and long-term investments, promoting and maintaining relationships with partners and real estate investors, and marketing and managing residential developments, shopping malls and golf courses. In order to get the most out of all the catering and sports facilities in hotels, the company has forged a number of strategic alliances with market leaders in each area.

Club Meliá

Created in 2004, with 27 000 members worldwide, Club Meliá is the vacation club of MEL, with the aim of completing the company's range of holiday products.

Club Meliá guarantees its members one week's vacation a year, for 50 years. Members purchase a "holiday currency" named Options, which they can swap for annual vacations in a large selection of company hotels or in a network of more than 4,000 affiliated resorts worldwide.

3.3 MEL Future's Strategy

Regarding the future strategy of the Company, MEL aims to keep working based on the same values, but with a larger and growing hotel chain. The main goal is to consolidate the brand in the mature markets and to grow in the emerging ones.

In 2015 the Company signed 25 new hotels of which 5 already opened in 2015 and therefore they are not included in the pipeline (pipeline data details existing hotel supply and projected growth globally) at the year end. As a result, the pipeline reached 62 hotels (16 085 rooms) due to the efforts to reinforce internationalization while also boosting presence in those traditional markets that generate value for Meliá and its brands.

82% of the pipeline will be incorporated under management formulas, while only an 18% are lease contracts, all this lease contracts are located in strategic markets that meet Company's requirements in terms of quality, productivity and safety, such as Germany, U.K, United States or Italy. On the other hand, the focus will be the maintenance of Melia leadership in the resorts segment while reinforcing the presence in leisure destinations.

Of these 62 hotels, 2 hotels have opened in January 2016: the Sol Costa Atlantis in Tenerife (289 rooms under lease agreement) taking advantage of the strong momentum in Mediterranean resorts and the Company expertise in the Canary Islands; and the Meliá Braco Village in Jamaica (226 rooms under management) that extends the Meliá footprint in the English-speaking Caribbean.

On the other hand, in 2016 the pace of new agreements is expected to remain the same, with 25-30 new hotels being added to the pipeline, which implied one new signature every two weeks. In terms of hotel openings, the forecast based on the pipeline as it stood on 31st December is for Meliá to open 20-25 hotels over the year:

America (12 hotels / 2 325 rooms): Of the 13 hotels in the pipeline, 5 are scheduled to open in 2016 including: the Meliá Cartagena (154) in Colombia and 3 hotels in

the United States: the ME Miami (129) and Meliá Costa Hollywood (227) in Miami, and the Innside New York NoMad, the only lease contract in the pipeline in the Americas.

Asia (20 hotels; 4,827 rooms): Within the framework of the new Strategic Plan 2016-2018 one of the most important objectives for the company is to increase its presence in Asia, as reflected in the current pipeline in the region which makes up 27% of the global rooms pipeline. In recent years, the Company has made great efforts to detect strategic partners which could contribute to the consolidation of Meliá's presence in the region, the fruit of which is a current pipeline which includes the opening in 2016 of 8 hotels (1.823 rooms) all under management agreement.

EMEA (20 hotels; 4,006 rooms): The pipeline in EMEA is well balanced between lease and management agreements. Going into 2016 the current pipeline includes the opening of 3 leased hotels under the Innside brand in Germany) and 2 managed hotels in Italy and Morocco.

Mediterranean (3 hotels; 1725 rooms): One of the agreements has been already opened (the Sol Costa Atlantis), while another 2 hotels in Cape Verde are expected to open (one of them in 2016).

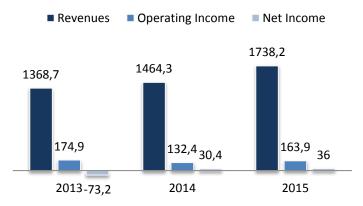
Brazil (4 hotels; 1178 rooms): Including 2 hotels which are expected to open in 2016 before the Olympic Games in Rio de Janeiro.

Cuba (3 hotels; 2024 rooms): Cuba where Meliá currently operates 39% of hotel rooms in the island remains one of the key markets for the Company.

3.4 Operational and Financial Performance

Despite the losses in 2013, MEL has been growing through the past three years. This is due to the fact that the Company continued opening new hotels each year and expansion of several MEL brands.

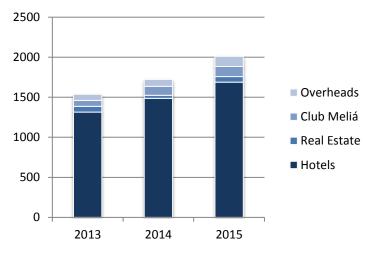
Graph 2 - MEL Results (2013-2015; millions of euros)



Source: Meliá Hotels International

Graph 3 - MEL Revenues per Segment; (2013-2015; millions of euros)

Regarding the results presented by the Group in 2015, it is important to note that the main indicators have grown compared with the previous year. These results are due to consolidation of the improvement in all divisions of the



Source: Meliá Hotels International

hotel business, generating a record increase of Revenue Per Available Room (RevPAR³). A result of an improvement in the business environment and economy in key markets, a brand strategy and product repositioning and rise of 13,4% in the prices. This trend should continue in 2016, where macro and international instability come together with good repositioning results in mature locations.

The maturity in the hotel management has lead MEL to outperform results when compared with the benchmark, registering 19 consecutive quarters of RevPAR growth. The differences between MEL's results and the benchmark are expressed on the next figure. ~

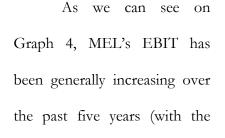
³ Hotel guestroom revenue divided by the room count

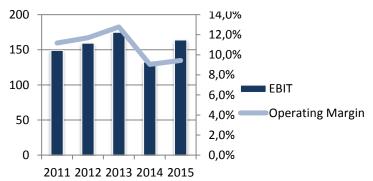
Figure 1 - MEL vs Benchmark



According to MEL annual report 2015, there were improvements in the sales of every region: In the Americas, RevPAR increased by 20,6% thanks to a rise in Average Room Rate (ARR4) of 21,3%; In EMEA (includes Premium Hotels in Spain), RevPAR in owned and leased Hotels grew by 11,2%, 100% explained by increases in prices; In the Mediterranean Division, RevPAR grew by 8,7%, almost all (7,5%) due to price increases. The geopolitical situation in other destinations also had an impact on the hospitality industry in Cape Verde, where Meliá manages about 1 500 rooms; The division Spain (City hotels) reports an increase in RevPAR of 13,1%, mainly attributable to the consistent recovery in all market segments which allowed Meliá to maintain its leadership in the most tourist cities, where the Company takes advantage of its experience and expertise in the Urban and Leisure segments, to develop its successful "bleisure" strategy (business + leisure), focused on both the business and leisure travellers, to optimize occupancy and ARR.

EBIT & Operating Margin Graph 4 - Operating Margin & EBIT (2011-2015; millions of euros)





⁴ Hotel guestroom revenue divided by the number of rooms sold

Source: Meliá Hotels International

exception of 2013-2014). In 2015, EBIT increased by, approximately 25% when compared with 2014.

Regarding the Operating Margin, it increases 4,3% from 2014 to 2015. This is due to the fact of the Group increased the management fees in 19,5M€, when compared with 2014, including hotels owned, leased and under management to third parties.

Graph 5 - Net Income (2011-2015; millions of euros)

Net Income

In 2015, the net income was up 18,3% in comparison with 2014. Despite the impact of higher taxes resulted of an

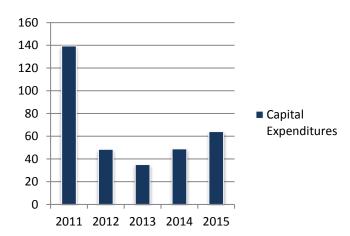


inspection to verify compliance with tax obligation and duties over the period of 2009-2012. Excluding the impairment and the extra-taxes, net income increased more than 200%.

Capital Expenditures

Graph 6 - MEL Capital Expenditure (2011-2015; millions of euros)

In 2015, the Group invested around 64M€, mainly in the development of new hotels, rehabilitation and modernization of existing ones. For 2016, MEL is expecting to continue the investment through refurbishing of new hotels in order to increase the number



of rooms and hotels under management, aligned with the

Source: Meliá Hotels International

Working Capital

Strategic Plan for 2016-2018.

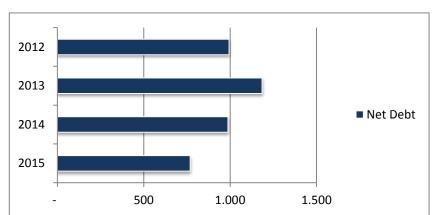
At the end of 2015, MEL had negative working capital as the current liabilities were approximately 869,3M€, while the current assets were around 767,2M€. The fact that the

company has negative working capital could indicate that it could experience problems expanding. However, negative working capital is not necessarily a bad thing, once it could indicate that the company is very efficient at running over inventory or that MEL has large financial subsidiaries and institutions.

Graph 7 - Evolution of Net Debt (2011 -2015; millions of euros)

Debt Structure

2015 was the second consecutive year of debt reduction, reaching a total Net Debt of 768,8M€, minus 216M€ than the previous



year. Current debt levels are now similar to the ones in

Source: Meliá Hotels International

2007, one of the best years in MEL history. There were a successful evolution of Financial Expenses account with 36M€ savings, when compared with 2014, due to the lower value of debt and a decrease in the average cost of debt, that now stays at 4,36%.

Essentially, its debt structure is mainly composed by simple and convertible bonds, bank loans, mortgage banked-loans, credit facilities and leases.

3.5 Stock Performance, Dividend Policy and Shareholder's Structure

Stock Performance

MEL is quoted since 1996, when the company became public at the initial price of 6,42€. The stock price decreased by 2,1% during the fourth quarter of 2015, while the IBEX Medium Cap rose by 5,5% and the IBEX 35 decreased by 0,2%. For the 12 months of 2015, the stock price rose by 37,5%.

Over the last 3 years, the market capitalization of the company has been increasing in average, as can be seen in the graphic at Appendix A. This recent trend and valorization

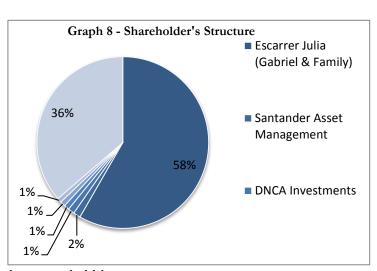
of the Group reflects the company's strategy of managing and developing a larger number of rooms around the world and the intention to invest in the next few years, in order to scale the business and enlarge the number of hotels under management.

Dividend Policy

MEL has the objective of ensure a satisfactory remuneration to the shareholders through the distribution of dividends. In order to achieve that the Company has been paying about 20% of the Parent Company's consolidated profits in dividends. The last dividends were paid out on August 5th, 2015 with a gross value of 0,03€ per share.

Shareholder's Structure

MEL's capital, in 31 of December of 2015, was accounted for 199 053 048 shares of common stock outstanding, of which 58,32% are held by the group and 41,68% correspond to floating stock.



The majority of these non-floating shares are held by *Source: Meliá Hotels International*Gabriel Escarrer and his family, the founders of MEL. The top 5 shareholders of MEL hold together around 63% of the Company, with the remaining 37% widely scattered.

4. Macroeconomic environment and lodging industry overview

This section comprises an analysis of the macroeconomic outlook in 2016 and for the subsequent years, in the main regions where MEL operates and a global lodging industry overview. This macroeconomic perspective will be done across regions rather being country-specific due to the MEL own strategy.

4.1 Spain

Spain economic crisis lasted more than five years. Though, a robust economic recovery in Spain is projected to continue into 2016 and 2017. 2014 was the first year of recorded growth for the country since the crash of 2008. The positive impact of the depreciation of the euro, lower oil and other commodity prices, low borrowing rates for businesses and households will also continue to provide support together with the fiscal stance, which is projected to be mildly expansionary over the following two years. These factors, together with the execution of significant structural reforms, are increasing business confidence.

Tourism has been a strong contributor to Spain's economy and it's playing an important part in the nation's recovery. The scale of tourism's contribution in the first two months of 2015 was unprecedented. Tourism figures for January and February smashed previous records, with 6,5 million international tourists spending €6,6 billion—an increase on the previous year of 4.5% and 8% respectively.

Table III - Spain Economic Figures (2014-2021; % change)

	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Real GDP	1,358	3,213	2,644	2,258	1,972	1,855	1,772	1,582
Consumer Price Index	-1,042	0,017	0,666	0,681	1,035	1,487	1,514	1,580

Source: IMF, World Economic Outlook Database

4.2 European Union

In Europe, the last years have been disturbed due to the global financial and economic crisis, what leed some countries to the need of assistance from the IMF. In the coming years, IMF predicts that the GDP will grow above 1,8%, per year.

Table IV - European Union Economic Figures (2014-2021; % change)

	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Real GDP	1,445	1,986	1,841	1,949	1,871	1,868	1,834	1,801

Consumer Price	-0,034	0,191	0,977	1,459	1.670	1 761	1.822	1,895
Index	-0,034	0,191	0,977	1,439	1,070	1,761	1,022	1,693

Source: IMF, World Economic Outlook Database

Geopolitical uncertainty in the Middle East appears to be having a strongly positive effect on some cities, as travellers choose perceived 'safer'European resorts over destinations in the Middle East and North Africa. However, the refugee crisis across Europe and terrorist attacks in Istanbul, Paris and Brussels have affected these cities.

According to the Pricewaterhouse Coopers (PwC) (2016), Europe (+5%) led global growth in absolute and relative terms supported by a weaker euro vis-à-vis the US dollar and other main currencies. Arrivals reached 609 million, 29 million more than in 2014. Central and Eastern Europe (+6%) rebounded from last year's decrease in arrivals. Northern Europe (+6%), Southern Mediterranean Europe (+5%) and Western Europe (+4%) also recorded good results, especially considering the number of mature destinations making up the region.

4.3 Middle East and North Africa

This particular region presents some of the most actual and expected growth rates, in what concerns real GDP and inflation, which is explained by the oil exportations. Last year, the real GDP growth rate in the region was 2,336% and the inflation was around 5,53%. For the following years, these economies are expecting sustainable growth, with a real GDP growth rate of 3,593% in 2021.

Table V - Middle East and North Africa Economic Figures (2014-2021; % change)

	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Real GDP	2,613	2,336	2,942	3,301	3,390	3,588	3,712	3,593
Consumer Price Index	6,552	5,526	5,782	4,765	4,073	3,918	3,956	3,968

Source: IMF, World Economic Outlook Database

PwC on a Middle East Hotel Report (2014), states that there is a opportunity and growth potential at this region, with the upcoming of Mega Events, such as Expo 2020 and

Qatar World Cup 2022). However, the same report refers that the current political instability and impact from the Arab Spring leaves many of the remaining Middle East countries facing declining occupancies and RevPAR.

4.4 Latin America & Caribbean

The region's growth average is weighted by the slowdown in vital economies such as Venezuela and Brazil. Optimistic spots include economies in the north, such as Mexico, Central America and the Caribbean, these economies are linked to the US.

For the second consecutive year the Latin American & Caribbean region (LAC) faces a continuing decline in growth, as a result of an external environment particularly adverse to commodity exporters.

Table VI - Latin America and Caribbean Economic Figures (2014-2021; % change)

	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Real GDP	1,302	-0,081	-0,472	1,510	2,140	2,613	2,724	2,771
Consumer Price Index	4,965	6,201	5,008	4,243	4,002	3,796	3,597	3,596

Source: IMF, World Economic Outlook Database

2015 was an significant year for LAC's image as a travel destination. For example, Brazil coasted on the achievement of a successful World Cup and in 2016 will host the Olympic Games. With LAC present in the minds of consumers as a destination, economic recovery in many source markets and better-than-ever tourism infrastructure, the region seems geared up to receive arriving visitors in 2016.

4.5 Emerging and Developing Asia

This is the region where real GDP growth rates are higher, mainly due to the large industries and exportations, with a growth rate always superior to 6,2%. CPI was 2,694% in 2015 and it is expected to reach 3,645% in 2021.

Table VII - Emerging and Developing Asia Economic Figures (2014-2021; % change)

	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Real GDP	6,764	6,587	6,396	6,316	6,260	6,324	6,344	6,367
Consumer Price Index	3,090	2,694	3,010	3,201	3,365	3,491	3,650	3,645

Source: IMF, World Economic Outlook Database

According to the World Tourism and Travel Council (WTTC) report of Economic Impact (2016), this region is the one that wil have higher growth rates of travel spending, not only in leisure but also on business travels. The same report also forecasts a rise of almost 5% in the tourism investment on this region, and a 5,4% per year up to 2016.

4.6 Global Lodging Industry Overview

The WTTC forecasts that the direct contribution of travel and tourism to the global GDP will be 3,3% and to rise 4,2% per year, from 2016 to 2026. This same study states that, for this year the leisure travel spending is expected to grow by 3%, while the business travel spending is going to grow 3,9%.

As can be observed on the graph in the Appendix A, following the macroeconomic environment, the amount spent in business and travel tourism is, generally, growing around the globe. We can also see that the regions that are expected to grow the most, according to WTTC report (2016), are Spain, Middle East and Asia. This fact is favourable to MEL once it main operations and new investments are allocated to this areas.

5. Strategic Analysis

In this section we will lead a strategic analysis to MEL in order to identify its competitive position in the industry.

5.1 SWOT Analysis

In the current context it was possible to build up the Strenghts, Weakenesses, Opportunities and Threats analysis to the Company taking in consideration the external and internal environment of MEL in order to better understand its business position. (Consult Appendix C).

5.2 Porter's Five Forces

The Porter's Five Forces is an instrument that aims to identify the attractiveness of an industry in the long-term by analyzing the competitive intensity. This model is, however, designed for use at a line-of-business level. In that sense, in this work it will only be applied to MEL's business, the hotel industry. At Appendix C it can be found the full analysis of MEL's business.

6. Company Valuation

6.1 Methodology

The valuation of MEL will be based on the group consolidated accounts. According to financial literature, consolidated accounts can be used to evaluate a company that operates in the same sector and with the same business model. Although the Group is present in 40 countries alongside with many different brands, the industry in which it operates and the business model that it uses remains the same.

In valuing the Company we follow the Free Cash Flow to the Firm and the WACC as it is the most used model by general analysts in hotel companies valuation. From a theoretical point of view, the valuation period would extent to infinity, given the longevity of the industry in which MEL operates. However, due to practical reasons (including the difficulty of estimating parameters for longer periods), we considered a limited explicit project period of five years, from the base date 31st December 2016 up to 31st December 2021. The terminal value is then added at the end of this period. Additionally, despite of having business and associated transactions worldwide the currency of the estimated cashflows it will be euros, to simplify the calculations and because that is the currency presentend in the Annual Reports.

6.2 Assumptions

6.2.1 Revenues

MEL's revenue growth doesn't depend exclusively on the continued growth of the demand, but are also reliant on the general economic and business conditions worldwide and may fluctuate due to a wide diversity of risks. Due to these facts, to estimate the future growth rates from 2016 up to 2021, it was taken a more conservative approach.

First, we split the total revenues in revenues per region (Spain, EMEA, Asia and America), according to own MEL organization. Then, we used the growth rates forecasted by WTTC for each region and per segment (leisure and business) to forecast the total revenues of MEL, for the next five years.

We estimate, a annual growth, in average of 3,2% and that this year the total revenues will reach around 1 800 millions of euros and 2 100 millions of euros by 2021. These computations and estimates can be found at Appendix D.

6.2.2 EBITDAR

We will use the Earnings Before Interest, Taxes, Depreciation, Amortization and Rental (EBITDAR), instead of EBITDA, once is the parameter used in the valuation of hotel business, once there are significant rental and lease expenses. This parameter was estimated by looking at the average EBITDAR as a percentage of the total consolidated revenues of MEL. We concluded that EBITDAR-to-Sales ratio followed a constant pattern since 2012, so we considered remaining static over the following years as well. We will assume an EBITDAR margin of 25%.

6.2.3 Capital Expenditures, Amortizations and Depreciations

MEL is focused on lightening its asset ownership structure (increasing the weight of hotels under management and franchising) should allow the company to continue to deliver healthy growth levels without significant CapEx commitments. Due to lack of

information concerning the values to invest on the next years, capital expenditures were determined as a percent of revenues over the past four years. It is assumed that capital expenditures will converge to the mean, 3%.

While having little information concerning D&A, the future value was determined by averaging D&A as a percentage of the fixed assets from the previous year. It was assumed that D&A/Fixed Assets was 5,20% and remained constant over the forecasting period.

For detailed information regarding each year see Appendix E.

6.2.4 Minority Interests

In average, in the last 4 years, 7% of the net profit of the group is attributed to the minority interest and it is reasonable to assume that a similar percentage continues to be verified on the following years. For valuation purposes, and given the influence in the results of the Group, we will assume that 11% (percentage of the Group net profit of 2015 attributed to minority interests) of the future FCFF are attributed to minority interests.

6.2.5 Operating Expenses

This line includes all the expenses that are considered as result of operations MEL, such as Raw Materials (COGS), Personnel Expenses and Other Operating Expenses. Due to the lack of information regarding those items we assumed that for the following years these parameters will represent the same percentage of the sales as the mean of the past four

years.

Table VIII - Operating Expenses Assumptions

Item	Reference Value	Assumption
Raw Materials (COGS)	% Sales	12,46%
Personnel Expenses		28,28%
Other Operating Expenses		34,30%

Source: Author's Calculation

6.2.6 Net Working Capital

For the purposes of FCF and MEL's valuation, the calculation of the investments

Table IX - Net Working Capital Assumptions

in working capital was based on the

historical data and the company's management practices. The assumptions that follow on the next table are made with base on a 4 year average from the ratio between the item and the reference value. The values of each year of the forecast can be found

Item	Reference Value	Assumption		
Current Assets				
Guiteiit Assets				
Inventories	Sales	5,20%		
Account Receivables	Sales	18,40%		
Current Tax Assets	Sales	1,62%		
Other Current Financial Assets	Sales	2,10%		
Current Liabilities				
Accounts Payables	COGS	22%		
Current Tax Liabilities	COGS	11,83%		
Other Current Liabilities	Other Operating Expenses	18,40%		

Source: Author's Calculation

at the Appendix F.

6.2.7 Debt

As we refered on the CapEx and D&A topic, MEL is focused on lightening its asset ownership structure, what means lower CapEx committeents and it's financial strategy is now focused on debt deleveraging. We estimate a gradual decrease in financial leverage with Debt / EBITDAR to fall from 2,38x in 2016 to 1,64x by 2021. We included in Debt the fair value of derivative financial instruments that are used to hedge against foreign exchange and interest rate risks relating to finance debt.

The full calculation and forecast can be found at Appendix G.

6.2.8 Cost of Capital

Given the chosen methodology to value MEL, the cash-flows were discounted at the appropriate WACC rate. This rate was determined through the Equation 4 expressed in the Literature Review chapter.

6.2.8.1 Cost of Equity (k_e)

There are many approaches to estimate the cost of equity, the most practical and the most used is the CAPM theory. The CAPM postulates that the opportunity cost of equity is given by the sum of a risk-free rate plus an individual risk premium. The risk premium is the company's systematic risk multiplied by the market risk premium. We followed a modification of this model that includes the Country Risk Premium (CRP).

Risk-free rate: We have used a rate that refers to the 10 years treasury bond's yield for European AAA economies. Therefore, the rate observed at 1stJun16A of 0,418% was used. (Source: Bloomberg Database). In our point of view, this rate constitutes a reasonable proxy for a risk-free rate for a company established in any European Member State. These AAA rated European economies have traditionally been regarded as the entities least likely to default.

Beta: According to the Thomson Reuters database, MEL's beta is 1.11. In this project it is assumed that the Company's beta will converge to the industry average of 0.99.

CRP: We have considered a CRP of 2,84%, as presented in Damodaran's database. This is the premium associated to the spanish sovereign debt current credit rating of BBB⁺, as presented by S&P.

Market Risk Premium: Damodaran provides a spreadsheet with estimates of equity risk premiums which are updated regularly through the year. As of January of 2016, the equity risk premium for our country of reference, Spain, is 7,41%. Given a risk-free rate of 0,42%, this would imply a market risk premium of 6,99%.

6.2.8.4 Cost of Debt (k_d)

For this valuation purposes, and in order to reflect the reality of the company, we will use the average cost of debt stated in the last annual report, which is 4,36%.

6.2.8.3 Effective tax rate

For the valuation purposes, we have considered an effective tax rate of 28%. This rate was estimated taking into account the latest changes of the Spanish Laws, where the tax rate varies between 25% and 28%.

We do understand that the effective tax rate incorporated in the model differs from the one that MEL has been effectively paying through the past years. However, the methodology and effective tax rate used in this project are aligned with the generally accepted by financial analysis practioners.

6.2.8.4 Terminal Value

The terminal value of each business captures the estimated value beyond the projected period, brought to present value at the estimated discount rate. We assumed a perpetual growth rate of 3,162% that refer to the forecast of global GDP for 2016. Please consider that we are being conservative in our approach, once this rate is inferior to the one expected from WTTC to the growth of the industry for the next ten years, that is 3,30%.

6.2.8.5 Debt and Equity Weights

At the end of the year 2015, MEL's market debt-to-value ratio corresponded to 45,95% and the equity-to-value represented 54,05% of the total financing. Since the

company is in a deleverage ing process, it is assumed that these ratios will reach the industry average which, according to Damodaran, are 31,66% and 68,34%, respectively.

6.3 Valuation Results

Taking into consideration all the parameters estimated in the previous section, the discount rate (WACC) was estimated for each year of the forecast. The table that follows that components underlying the WACC rate for each year and respective estimated discount rates.

Table X MEL's WACC

COST OF EQUITY	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Rf	0,418%	0,418%	0,418%	0,418%	0,418%	0,418%
CRP	2,84%	2,84%	2,84%	2,84%	2,84%	2,84%
MRP	7,0%	7,0%	7,0%	7,0%	7,0%	7,0%
Beta	1,11	1,09	1,06	1,04	1,01	0,99
Cost of equity [Rf + β (Rm-Rf) + CRP]	11,02%	10,85%	10,68%	10,52%	10,35%	10,18%
COST OF DEBT						
Cost of debt	4,36%	4,36%	4,36%	4,36%	4,36%	4,36%
Marginal tax rate	28,0%	28,0%	28,0%	28,0%	28,0%	28,0%
After-tax cost of debt	3,1%	3,1%	3,1%	3,1%	3,1%	3,1%
WACC						
Weight of equity	56,4%	58,8%	61,2%	63,6%	66,0%	68,3%
Weight of debt	43,6%	41,2%	38,8%	36,4%	34,0%	31,7%
WACC	7,59%	7,67%	7,76%	7,83%	7,89%	7,95%

Source: Author's Calculation

Note that the discount rates are different from year to year. This reflects the assumption that some of the values will revert to the industry averages, such as beta and the weight of debt and equity. We assumed that this values will decrease over time, therefore the operational risk of the company will also decrease in the future.

Table XI Projected Cash Flow Statement

Currency €	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F	Terminal
EBIT(1-marginal tax rate)	151 860 431	161 182 403	169 423 978	177 764 870	186 279 525	194 981 607	194 981 607
D&A	94 440 893	91 073 774	89 507 764	88 113 801	86 798 212	85 552 051	85 552 051
Net increase in NWC	287 420 284	9 486 765	9 784 395	10 091 363	10 407 961	10 734 492	10 734 492
CAPEX	64 390 475	64 331 248	64 272 075	64 212 957	64 153 893	63 003 328	63 003 328
FCFF	(105 509 435)	178 438 164	184 875 272	191 574 351	198 515 882	206 795 837	206 795 837

The estimated enterprise value for MEL in 2015, is 3 727 million euros, where 659 millions results from the present value of future cash flows and 3 067 millions comes from the terminal value, as can be seen at Table XII. MEL's equity value is achievied by adding cash and marketable securities, subtracting total debt, minority interests, provisions and non-core assets.

Table XIII Enterprise, Equity Value & Share Price

Terminal growth rate	3,16%
Perpetuity WACC	7,95%
Terminal value	4 454 741 050
PV of terminal value	3 067 457 349
NPV of FCFF	659 783 868
Enterprise value	3 727 241 217
Enterprise value	3 727 241 217
Net debt	575 823 338
Minority Interests	12 561 992
Provisons	48 227 839
Non-Core Assets	211 971 548
Value of equity	2 878 656 500
No. of shares outstanding	229 700 000
Equity value per share	12,53
Price Target	12,53€

Source: Author's Calculation

Taking into account this outcome, the company appears to be undervalued. These results are in agreement with the general consensus estimated by analysts. The target share price obtained for 2016 indicates an undervaluation of 26% given the lastest stock price of €9,98 (18th July 2016).

The value obtained wasn't precise due to the valuation based in the determined economic and sector assumptions. Furthermore, a sensitivity analysis will then be performed to allow greater certainty estimations with a wide range of values in which the given price can take.

7. Relative Valuation

7.4.1 Methodology

In this section we perform a relative valuation in order to compare MHI with its peers and confirm the results obtained in DCF valuation. We applied the forward valuation for multiples as the future estimates are more accurate than the historical figures, incorporating more information in valuation. We used 2016 forecasted multiples from Thomson Reuters while MHI's multiples are from own estimates.

EV multiples are useful when comparing companies with different leverage positions. We will use also EBITDAR multiples, that are multiples currently used in business where there's significant lease and rental expenses, such as hotel companies.

7.4.2 Selection of Peers

According to Dittman and Weiner (2005), valuation errors are smaller if comparable are chosen from the same continent, particularly when valuing companies headquartered in Belgium, Finland, France, Germany, Italy, the Netherlands, Portugal and Spain. The EU15 and OECD is optimal minimizing the mean absolute error.

In order to guarantee that candidate companies have a business structure as similar as possible, they have to fulfil a number of eligibility criterions: European Company, Worldwide Operations, Quoted. Finally, the peers selected were the groups NH, Accor SA, Intercontinental, Millenium & Copthorne and Dalata.

7.4.3 Results

Peer companies follow different strategies and exhibit different capital structures. In order to address possible biased multiples, we average the price targets from different multiples, resulting in a more reliable relative valuation.

Table XIV Valuation with Multiples

	EV/Sales	EV/EBITDAR	EV/EBIT	P/E	P/CF
Multiple	2,67x	8,17x	13,48x	14,83x	9,72x
EV (EUR' 000)	4 796 818	3 677 474	2 843 618	N/A	N/A
Net Debt (EUR' 000)	575 823	575 823	575 823	N/A	N/A
Minority Interests (EUR' 000)	12 562	12 562	12 562	N/A	N/A
Provisions (EUR' 000)	48 228	48 228	48 228	N/A	N/A
Non-Core Assets (EUR' 000)	211 972	211 972	211 972	N/A	N/A
Market Equity (EUR' 000)	4 044 689	2 925 345	2 091 489	N/A	N/A
Target Price	17,61 €	12,74 €	9,11 €	7,37 €	6,14 €
Average Target Price		10,59)€		

Source: Author's Calculation

We can note large discrepancies in the values obtained for the target price using different multiples. Still, the average result of the relative valuation lead us to the same conclusion as in DCF's.

8. Sensitivity Analysis

To assess the robustness of the target price estimated in the previous chapter and how it is affected by changes in the main drivers established we runned a sensitivity analysis to the cost of capital, terminal value growth rate, market risk premium and country risk premium. This analysis is presented by showing the change in the price target due to a percentual change in the chosen variable. With the results obtained we can reinforce the idea that MHI's shares are quite sensitive to these variables.

In Appendix I, it is shown the impact on the price by changing, individually and simultaneously, the chosen variables.

9. Conclusions

Taking in consideration the role of valuation in finance, there are plentiful methods to determine the value of a firm. As considered all over the literature review, each technique finds its use suitable in different situations and depending on the characteristics of the firm. Nevertheless, the same value can be obtained from each model if consistent assumptions are considered.

In summary, and taking into account our valuation through the relative valuation and DCF model, we can conclude that Melia's stock price of €9,98 at 18th July, 2016 is undervalued. Therefore it is our belief and we would start a buy recommendation for Melia International shares. Probably, Financial Markets will recognize the company value and, consequently, its price per share are going to increase, offering returns of around 26%.

The results obtained are aligned with the general consensus of analysts' opinion – a buy recommendation. Nevertheless, it is important to mention, that this valuation was based on a conservative approach and therefore, some of the assumptions may be uncertain and not take place in the future.

10. References

10.1 Academic Literature – Papers and Books:

Berk, J., Demarzo, P., 2013. Corporate Finance. 3 ed. Boston: Pearson.

Damodaran, A., 2006. Valuation Approaches and Metrics: A Survey of the Theory and Evidence. Stern School of Business: New York University.

Damodaran, A., 2012. Investment Valuation: Tools and Techniques for the determining the value of any asset. Third Ed. ed. Hoboken, New Jersey: John Wiley and Sons.

Durand, D., 1957. Growth Stocks and the St. Petersburg Paradox. *Journal of Finance*, Volume 12, pp. 348-363.

Esty, B. C., 1999. Improved Techniques for Valuing Large-Scale Projects. *The Journal of Project Finance*, pp. 9-25.

Fernández, P., 2002. Valuation Methods and Shareholder Value Creation. San Diego CA: Academic Press.

Fernández, P., 2002. Valuation using multiples. How do analysts reach their conclusions?, s.l.: IESE Research Papers D/450.

Fernandez, P., 2007. Company valuation methods. The most common errors in valuations. s.l.:IESE BUSINESS SCHOOL, U.O.N. .

Gordon, M. J., 1962. The investment, financing, and valuation of the corporation. *The Irwin Series in Economics*.

Kaplan, S., Ruback, R., 1995. The Valuation of Cash Flow Forecasts: An Empirical Analysis. *Journal of Finance*, Volume 50.

Luherman, T. A., 1997. Using APV: A Better Tool for Valuing Operations. *Harvard Business* Review, pp. 1-12.

Ruback, R. S., 2000. Capital Cash Flows: A Simple Approach to Valuing Risky Cash Flows. Harvard Business School, pp. 1-27. Sabal, J., 2005. WACC or APV?: The Case of Emerging Markets, s.l.: s.n.

Williams, J. B., 1938. The Theory of Investment Value. Cambridge: Harvard University Press.

10.2 Internet Based Sources

Aswath Damodaran, http://pages.stern.nyu.edu/~adamodar/

Bloomberg, http://www.bloomberg.com/

Meliá Hotels International, http://www.meliahotelsinternational.com/en/

Reuters, http://www.reuters.com/

Yahoo Finance, http://finance.yahoo.com/

10.3 Investor Relations - Company Consolidated Reports

Meliá Hotels International, Consolidated Annual Accounts and Management Report 2015

Meliá Hotels International, Consolidated Annual Accounts and Management Report 2014

Meliá Hotels International, Consolidated Annual Accounts and Management Report 2013

Meliá Hotels International, Consolidated Annual Accounts and Management Report 2012

10.4 Databases

Bloomberg Database

Damodaran – Spreadsheets

Thomson Reuters Database

11. Appendix

The data that follows in this Appendix is expressed in thousand of euros, except for the ratios and averages.

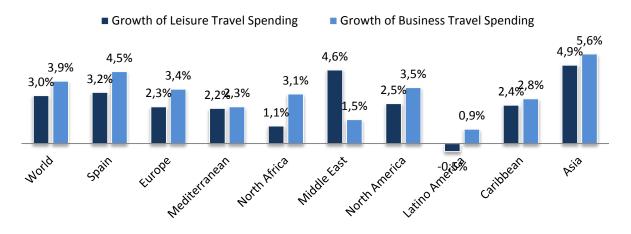
Appendix A – MEL Stock Price Evolution

Graph 9 Stock Price Evolution



Appendix B – Growth of Business and Leisure Travel Spending

Graph 10 Growth Rates per Segment 2016



Source: World Tourism and Travel Council

Appendix C – Strategic Analysis

Figure 2 Swot Analysis

STRENGTHS

- MHI strong brand recognition and diversified business;
- Strong management ability and operational expertise;
- The large number of brands, ranging from midscale to premium segments;
- Constant upgrade of business segments;
- Constant development and creation of innovative features and

OPPORTUNITIES

- High performance in emerging markets:
- Launching new brands with innovative features;
- Lodging industry word boom;
- Expansion of loyalty program;
- Digitalized media has gone big and become a new source of revenue;

Source: Author's Analysis

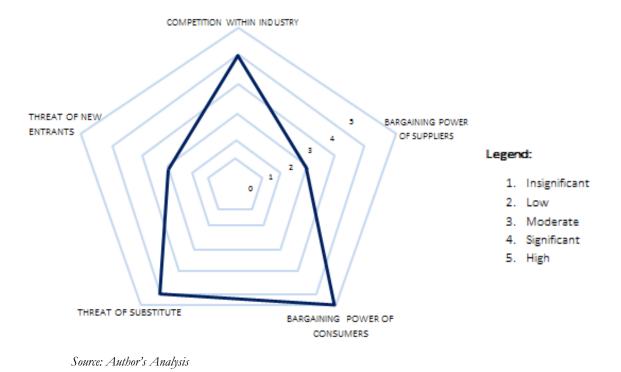
Figure 3 Porter's Five ForcesB

WEAKNESSES

- · Dimension of the company;
- Long established hotel chains meaning limited market share;
- IT Solutions;
- High loan rates;
- · Low investments in R&D;
- Operations are affected globally due to different Governmental policies and parameters.

THREATS

- Highly competitive industry that can lead to a reduced ability to remain competitive;
- · Low cash-flows;
- Business characteristics that imply a strong dependence of economies wealth:
- Changes in legislation and accounting.



Threats of new entrants

In the hotel industry there are some barriers which hinders new competitors for entering this market, as:

- High initial cost of establishing a hotel business;
- High proportion of fixed costs to total costs;
- Fierce competition among the existing hotel corporations;
- Economies of scale: existing large firms already benefit from the cost advantage with increased production;
- Marketing advantage to belong to a "chain of hotels" to benefit from brand image or loyalty.

For these reasons, the threats of new entrants in this industry remains **low** for MEL.

Threats of substitute products or services

The Hotel Industry in all major cities is not threatned by substitute products except that in times of economic recession, domestic travel might replace international or overseas travel and certain destinations. Services that can alter the choice of the consumers against MEL are small lo

dges, business hotels, boutique hotels or eco-friendly hotels. Although MEL holds a strong competitive advantage of wide range of branches this threat can be considered relatively high.

Having that said, substitutes represent a relatively high level of threat to MEL.

Bargaining Power of Suppliers

The hotel industry is characterized by a **low** bargaining power from suppliers. This generally results from the following reasons:

- The com pany have a large number of available suppliers for the resources to operate their business, offering a variety of goods at different prices;
- The suppliers of the industry are less concentrated than the Hotel Groups;
- This industry represent a significant share of the suppliers' business;

The only supplier which might exercise power over any company would be labor and experienced trained personnel.

Bargaining Power of Buyers

On the lodging industry, customers hold **high** bargaining leverage and are able to put companies under pressure. It follows several factors that increase this relevance for the industry:

- Buyer volume: customer based industry;
- Customers are price sensitive: companies whose brand loyalty is lower and offer no differentiation of goods motivate customers;
- Concentration of some buyer groups: Tour operators, domestic or international airlines and large customers, such as convention organizers.

MEL has diversified consumer segment. As the global hotel companies expanding their business rapidly, consumers are getting more opportunities to choose their desired services from different hotels.

Rivalry among existing competitors

In the lodging industry the competition is quite strong, mainly due to:

- Low/Non existing switching costs: Industry where customers can easily switch between products and suppliers;
- Number of firms in the industry: The Group is now facing hardship to win the battle against its competitors in the global hotel business. Marriot

International (MAR), Starwood Hotels and Resorts Worldwide (HOT), Wyndham Worldwide (WYN) and Accor S.A. are some of the names of the competitors.

In summary, MEL business is rapidly evolving and intensly competitive. The rivalry between competitors, for this industry, is considered **high.**

Appendix D – Assumptions & Forecast: Revenues

Graph 11 Historical Revenue per Region

	Spain	EMEA	America	Asia	Eliminations	Total
Dec12A	652 231	224 630	539 466	4 247	(90 703)	1 329 871
% Weight	49,04%	16,89%	40,57%	0,32%	-6,82%	
Dec13A	695 347	258 988	507 137	3 098	(95 892)	1 368 677
% Weight	50,80%	18,92%	37,05%	0,23%	-7,01%	
Dec14A	784 163	287 778	539 834	3 624	(120 407)	1 494 993
% Weight	52,45%	19,25%	36,11%	0,24%	-8,05%	
Dec15A	882 109	341 521	656 625	3 463	(145 511)	1 738 207
% Weight	50,75%	19,65%	37,78%	0,20%	-8,37%	
Averaged Weight	50,76%	18,68%	37,88%	0,25%	-7,56%	

Source: Statutory accounts

Table XV Estimated Growth Rates

	Resort		Ci	City		Meliá		Growth Rate
	2016	>2016	2016	>2016	2016	>2016	2016	>2016
America	2,00%	4,00%	3,20%	2,80%	2,42%	3,58%		
Asia	4,90%	5,70%	5,60%	5,70%	5,15%	5,70%	2 2 5 0 /	2 1 40/
EMEA	3,17%	4,13%	2,73%	3,87%	3,02%	4,04%	3,35%	3,14%
Spain	3,20%	2,10%	4,50%	1,80%	3,66%	2,00%		

Source: WTTC Reports and Author's Calculation

Table XVI Consolidated Revenues (2015-2021)

	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Non-Consolidated Revenues	1 883 718	1 946 781	2 007 858	2 070 851	2 135 820	2 202 828	2 271 937
Eliminations	(145 511)	(147 235)	(151 854)	(156 618)	(161 532)	(166 600)	(171 826)
TOTAL	1 738 207	1 799 546	1 856 004	1 914 233	1 974 288	2 036 228	2 100 111

Source: Statutory Accounts and Author's Calculation

Appendix E – Assumptions & Forecast: Capital Expenditure, Depreciation and Amortization

Table XVII Revenues and CapEx (2012 – 2021^F)

	Dec12A	Dec13A	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Revenues	1 329 871	1 368 677	1 494 993	1 738 207	1 799 546	1 856 004	1 914 233	1 974 288	2 036 228	2 100 111
CapEx	40 276	35 145	40 504	64 206	64 390	64 331	64 272	64 213	64 154	63 003
CapEx/Revenues	3,03%	2,57%	2,71%	3,69%	3,58%	3,47%	3,36%	3,25%	3,15%	3,00%
Average (4 years)	3,0%									

Source: Statutory Accounts and Author's Calculation

Table XVIII Net Fixed Assets and D&A (2012-2021F)

	Dec12A	Dec13A	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Fixed Assets	1 987 687	1 856 635	1 900 124	1 815 813	1 751 073	1 720 964	1 694 162	1 668 867	1 644 907	1 621 113
D&A	83 812	92 738	96 664	129 130	94 441	91 074	89 508	88 114	86 798	85 552
D&A/Fixed Assets	4,14%	4,67%	5,21%	6,80%	5,20%	5,20%	5,20%	5,20%	5,20%	5,20%
Average (4 years)	5,20%									

Source: Statutory Accounts and Author's Calculation

Appendix F - Assumptions & Forecast: Working Capital

Table XIX NWC Forecast

	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Inventories	88 476	93 576	96 512	99 540	102 663	105 884	109 206
Account Receivables	309 397	331 117	341 505	352 219	363 269	374 666	386 420
Current Tax Assets	18 513	29 153	30 067	31 011	31 983	32 987	34 022
Other Current Financial Assets	17 561	37 790	38 976	40 199	41 460	42 761	44 102
Total Current Assets	433 947	491 636	507 060	522 968	539 376	556 297	573 750
Accounts Payables	297 288	49 316	50 863	52 459	54 105	55 802	57 553
Current Tax Liabilities	23 698	26 518	27 350	28 209	29 094	30 006	30 948
Other Current Liabilities	97 997	113 417	116 976	120 646	124 431	128 334	132 361
Total Current Liabilities	418 983	189 252	195 189	201 313	207 629	214 143	220 861
NWC	14 964	302 384	311 871	321 655	331 747	342 155	352 889
Δ NWC		287 420	9 487	9 784	10 091	10 408	10 734

Source: Statutory Accounts and Author's Calculation

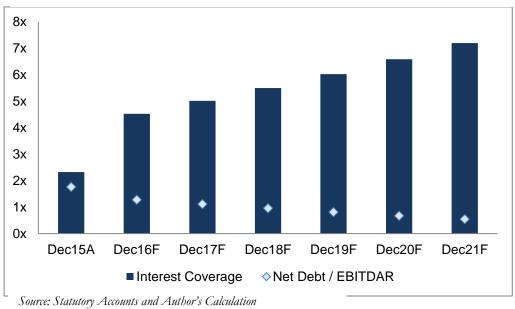
Appendix G – Assumptions & Forecast: Debt

Table XX Net Debt Forecast

	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Debt/EBITDAR	2,56	2,38	2,21	2,05	1,91	1,77	1,64
EBITDAR	436 810	450 015	464 133	478 695	493 713	509 202	525 178
Debt	1 117 412	1 069 612	1 024 991	982 233	941 258	901 992	863 657
Cash	348 617	493 788	509 280	525 258	541 737	558 733	576 262
Net Debt	768 795	575 823	515 711	456 975	399 521	343 259	287 395

Source: Statutory Accounts and Author's Calculation

Graph 12 MEL Leverage Evolution 2015-2021F



Appendix H – Forecast: Statement of Financial Position

Table XXI - Statement of Financial Position (Consolidated)

Currency €000	Dec12A	Dec13A	Dec14A	Dec15A	Dec16F	Dec17F	Dec18F	Dec19F	Dec20F	Dec21F
Total Consolidate Revenues	1 329 871	1 368 677	1 494 993	1 738 207	1 799 546	1 856 004	1 914 233	1 974 288	2 036 228	2 100 111
Raw Materials (COGS)	(161 097)	(174 490)	(188 446)	(214 823)	(224 163)	(231 196)	(238 449)	(245 930)	(253 646)	(261 603)
Personnel Expenses	(383 340)	(388 279)	(437 785)	(463 321)	(508 969)	(524 937)	(541 406)	(558 392)	(575 910)	(593 979)
Other operating expenses	(440 169)	(459 481)	(515 566)	(623 253)	(616 399)	(635 737)	(655 682)	(676 253)	(697 470)	(719 351)
Total Operating Expenses	(984 606)	(1022250)	(1141797)	(1301397)	(1349531)	(1391870)	(1435538)	(1480575)	(1527026)	(1574933)
EBITDAR	345 265	346 427	353 196	436 810	450 015	464 133	478 695	493 713	509 202	525 178
Leases	(103 096)	(105 719)	(125 707)	(143 733)	(144 657)	(149 195)	(153 876)	(158 704)	(163 683)	(168 818)
EBITDA	242 169	240 708	227 488	293 078	305 358	314 938	324 819	335 009	345 520	356 360
Restructurings	-	(3978)	-	-	-	-	-	-	-	-
Depreciation and amortization	(83 812)	(92 738)	(96 664)	(129 130)	(94 441)	(91 074)	(89 508)	(88 114)	(86 798)	(85 552)
Goodwill and negative consolidation difference	5 981	30 860	-	-	-	-	-	-	-	-
EBIT	164 338	174 852	130 824	163 948	210 917	223 864	235 311	246 896	258 722	270 808
Financial Expense	(92 445)	(111 644)	(107 102)	(70 708)	(48 719)	(46 635)	(44 690)	(42 825)	(41 039)	(39 327)
Other financial results	26 275	(43 038)	17 631	1 756	502	518	534	551	568	586
Exchange Rate Differences	(7490)	(24 138)	24 649	10 409	10 409	9 104	7 962	6 964	6 091	5 327
Other interest expense	(12 549)	(10 935)	-	-	-	-	-	-	-	-
Change in value of embedded derivatives	8 500	-	-	-	-	-	-	-	-	-
Total Financial Profit/(Loss)	(77 709)	(189 754)	(64 821)	(58 542)	(58 542)	(39 113)	(38 155)	(37 192)	(36 184)	(35 144)
Profit / (Loss) from Associates and JV	(19 288)	(15 536)	(9189)	(3787)	(3787)	(13 193)	(7956)	(4797)	(2893)	(1745)
Profit before taxes and minorities	67 341	(30 439)	56 814	101 619	101 619	158 611	177 754	193 322	207 819	221 833
Taxes	(18 440)	(9 045)	(24 951)	(61 103)	(61 103)	(44 411)	(49 771)	(54 130)	(58 189)	(62 113)
Continuing Operations	48 901	(39 483)	31 863	-	-	114 200	127 983	139 192	149 630	159 720
Discontinued Operations	(7406)	(34 252)	(315)	-	-	-	-	-	-	-
NET PROFIT	41 494	(73 736)	31 864	40 516	40 516	114 200	127 983	139 192	149 630	159 720
a) attributed to the parent company	36 727	(73 219)	30 406	35 975	35 975	101 638	113 905	123 881	133 170	142 151
b) attributed to minority interests	4 767	(517)	1 458	4 541	4 541	12 562	14 078	15 311	16 459	17 569

Source: Statutory Accounts and Author's Analysis

Appendix I – Sensitivity Analysis

Table XXI - Valuation Individual Sensitivity Analysis

MRP	5,99%	6,31%	6,64%	7,00%	7,34%	7,71%	8,09%
	15,26	14,3	13,4	12,53	11,75	11	10,29
CRP	2,43%	2,56%	2,70%	2,84%	2,98%	3,13%	3,29%
	13,54	13,21	12,87	12,53	12,21	11,88	11,55
Terminal Growth Rate	2,69%	2,85%	3,00%	3,16%	3,32%	3,48%	3,64%
	11,27	11,57	12,09	12,53	13,01	13,52	14,07
WACC	6,76%	7,16%	7,55%	7,95%	8,35%	8,75%	9,14%
	16,96	15,19	13,74	12,53	11,51	10,63	9,87

Source: Author's Analysis

Table XXII - Valuation Colective Sensitivty Analysis

					WACC			
		6,76%	7,16%	7,55%	7,95%	8,35%	8,75%	9,14%
te	2,69%	14,85	13,43	12,27	12,27	10,41	9,66	9,01
inal Growth Rate	2,85%	15,51	13,99	12,73	11,67	10,75	9,96	9,27
	3,00%	16,22	14,58	13,22	12,09	11,11	10,28	9,55
	3,16%	17,00	15,21	13,75	12,53	11,50	10,61	9,84
	3,32%	17,84	15,90	14,32	13,01	11,90	10,96	10,14
Terminal	3,48%	18,77	16,64	14,93	13,52	12,34	11,33	10,47
T	3,64%	19,79	17,46	15,59	14,07	12,80	11,73	10,81

Source: Author's Analysis

Table XXIII - Upside Potential Sensitivity Analysis

		WACC						
		6,76%	7,16%	7,55%	7,95%	8,35%	8,75%	9,14%
Terminal Growth Rate	2,69%	49%	35%	23%	23%	4%	-3%	-10%
	2,85%	55%	40%	28%	17%	8%	0%	-7%
	3,00%	63%	46%	32%	21%	11%	3%	-4%
	3,16%	70%	52%	38%	26%	15%	6%	-1%
	3,32%	79%	59%	43%	30%	19%	10%	2%
	3,48%	88%	67%	50%	35%	24%	14%	5%
$T_{\rm e}$	3,64%	98%	75%	56%	41%	28%	18%	8%

Source: Author's Analysis