

# The Impact of Sustainable Growth Indicators on Hotel's Financial Management

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Abstract <p>The aim of the thesis was to investigate whether there is a link between hotels' financial management and managerial decisions using a Sustainable Growth model and applying the Profit and Risks Graph, based on the DuPont equation. The hotel groups analyzed were the Marriott group, the Hilton group, and the Starwood group. The research objectives were to find out if sustainable growth indicators influence the manager's decisions at a hotel.</p> <p>The thesis applied the case study research method. A documentary type of secondary data from the annual reports of the hotel groups of 2012 and 2013 was used. The author used the return on equity part of the sustainable growth model to analyze this data. After the calculations were made, the share of the profit of each type of the hotel's business activity was determined. Then the Profit and Risks Graph instrument was applied to obtain a visual picture of a hotel's weaker points.</p> <p>The results show that there is a link between the managers' decisions and the financial management of the hotel. As the profit from each type of business activities was represented by a financial indicator, the author analyzed the relationships between them and described the decisions each of the hotel could make to increase their profit. In conclusion, the author described the areas of business decision-making, connected them to the hotels, answered the research questions, and indicated the action the hotels could take to promote their profitability.</p>		
Keywords/tags hospitality financial management, DuPont analysis, sustainable growth, business decision-making, profit and risks graph, business activities		
Miscellaneous		

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# 1 Introduction

The purpose of the thesis is to show relations between the financial management of the hotels and the managerial decisions made. People get used to think that only professionals can analyze the financial data and make decisions, based on it. Thus, the objective of the thesis is to show the connection between hotels' financial management and the types of decisions, which can be made, as well as to show that any manager can see the direction for a decision after making several calculations.

Accordingly, the research question is the following: Do sustainable growth indicators influence managers' decisions? Besides, to support the author with answering the research question, the following sub questions were set:

1. How do sustainable growth indicators influence a hotel's profitability?
2. Which decisions can managers make, based on the analysis of sustainable growth indicators?
3. Is the influence of sustainable growth indicators dependent on the hotel chain?

The objectives are achieved by analyzing three hotel groups' financial statements from 2013 and 2012. In the field of finance, like in any other field, there are lot of changes, updates, and improvements occurring all the time. Due to these changes, financial managers need to use different methods and tools to deal with their competitors, and with the changes both inside and outside the company. That is why it is important to see the connection between financial data and managerial decisions, which can be taken after analyzing this data.

There are plenty of tools and instruments of financial data analysis. One of the instruments used in this thesis is Profit and Risks Graph, created by Alexander Tildikov, based on the DuPont model and Sustainable Growth Rate model.

Basically, testing the Profit and Risks Graph tool is a sub objective of the research undertaken. The hotel groups chosen are the Marriott International Inc. group, the Hilton Worldwide Holdings Inc. group, and the Starwood Hotels & Resorts Worldwide Inc. group. These groups were chosen, because they are the top chain hotels in the world, they are famous and include plenty of other 4–5 stars hotels, resorts, and apartments. The choice can also be explained by the variety of the hotels in these chains.

The author chose this topic due to several reasons. One of them is a challenge and self-motivation, as finances is a quite complicated field of study and needs a lot of attention and time. Moreover, the topic is not common and is valuable to study, as the subject has been little studied, though it is essential to understand the importance of financial management in the hotel industry, the connection between financial management and managerial decisions, and to use new methods to succeed. One more reason is that there can be lot of further interesting and valuable researches made in this field.

The research strategy used is a case study. The study was organised in four stages: data collection, calculations, data analysis, and interpretation of the data, which, in the issue, put together the data collected and the objectives of the study eventually followed by the conclusions.

## 2 Hospitality Financial Management

Financial management is an essential part of every organization. It controls the business activities of the company and has a high impact on the company's strategy. The roles of financial management are to control costs, ensure cash flows, control the funds available to get the resources needed for the company's wealth, and control the profitability levels (Atrill 2006, pp. 25–28).

Hospitality financial management's main function is pretty same as in every organization. It is supposed to ensure that the financial resources of a hotel or other hospitality firm are controlled and well organized, as hotels have to balance their revenues with continuous expenses (O'Fallon & Rutherford 2005, 365; Wiesen, Shereen 2014). As stated by Van Horne and Wachowicz (2008), financial management is concerned with the acquisition, financing, and management of assets with some overall goal in mind.

There are some unique issues in hotel financial management. According to Guilding (2003), they are: a functions' interdependency, high sales volatility, high product perishability, high fixed costs, and labour-intensive activities.

There is a wide range of hotel functions strongly connected with each other, for example providing accommodation, restaurant and bar, spa and gym facilities. In addition to managing these services, a hotel has to coordinate a complex of separate support operations, such as building maintenance, laundry and housekeeping maintenance, information systems, marketing transportation and other daily operations. The difficulty is that the performance of one of these sections influences the others. It gives a high level of interdependency, which creates problems in controlling one functional area. For example, a restaurant manager will definitely see a lower profit if the occupancy decreased (Guilding 2003, 7).

The hotel industry perceives a significantly high sales volatility. Sales volatility at a hotel is mostly about the changes in the sales volume due to the seasonal sales changes, economic cycle-induced sales volatility, weekly sales variability or intra-day sales volatility (Andrew & Gallagher 2007, 163; Guilding 2003, 5).

A lot of hotels have a seasonal sales volatility during the different seasons of the year. For example, some skiing resorts are only open during the concrete seasons of the year. Economic cycle-induced volatility means that hotels are dependent on the ups and downs of the economics. For example, business hotels experience great losses during economic downturns, as companies are trying to save, reducing expenditures on business trips. The weekly sales volatility refers to the weekly changes of the occupancy. For example, business hotels have high occupancy from Monday to Thursday, as these are the typical days for business trips. Intra-day sales volatility is more common for the hotels' restaurants and bars. The restaurants are quite busy during the meal times, and the bars' busy periods are during evenings and nights (Guilding 2003, 6).

Product perishability means that a product cannot be stored, saved or returned after the usage. The hotel's main product is service. Obviously, it cannot be saved, resold or returned after having been used. Services are perishable. Another product of most of the hotels is food. Mostly, food inventory has been purchased within 24 hours before the usage, as well as the food preparation happens during minutes before the sale. Most of the products used in the preparation cannot be prepared in advance, as they are perishable (Guilding 2003, 6; Krider & Weinberg 2000).

Hotels have a high proportion of fixed costs. They mainly consist of the rent or loan taken to buy the building and land, the employees' salaries, reinvestments in the kitchen and laundry equipment, and the renovation of the rooms (Guilding 2003, 7).



Labour-intensive activities mean that the most hotels' activities include people's work, for example housekeeping, guest relations, front desk, bars and restaurants, etc. It is not a factory where most of the work is controlled by machines (Guilding 2003, 8).

Groppelli and Nikbakht (2000) explain in their book that the knowledge of finances is important for every department of the company, not only for controllers or financial planners. They think that in any company, if accountants or marketers understand the principles of finance, they are able to participate more effectively in the decision-making process. Thus, different departments of the company should take action in the final plans made by finance division (Groppelli & Nikbakht, 2000).

Guilding (2003, 12) explains the role of financial management for different managers of a hotel. For example, the general manager has to know every small detail about the hotel, in order to be able to deal with the financial data of the hotel. The rooms division manager has to determine the occupancy levels needed to make profit. To do that, the manager has to analyze the costs, volume and profits of the hotel. Every manager of any department has to control the budget of the department (Guilding 2003, 12).

As a consequence, the planning of all the financial needs of a hotel is as crucial as the planning of operations, marketing, human resources and administration.

Different companies use both physical and financial resources for implementing their business strategies. Everything that any business does is the result from its business activities. They can be divided into three types: operating, investment and financing activities. They are reported in the financial statements of the company, using its accounting system (Titman, Keown & Martin 2011, 58; Weygandt, Kimmel, & Kieso 2010, 9).

## **2.1 Financing Activities**

Financing is an essential part of financial management, which is needed to support assets of the company. Financing activities can show if the company borrowed a lot and if it has gone to investors to fund its operating or investing activities. The main purpose of financing activities is to fetch the cheapest financial resources to the company. Financial value of the assets or financial funds of the company can be called a capital of the company. Companies can use two sources of capital: Equity and Liabilities (Myers, Brealey & Allen 2012, 4).

### **Equity**

Equity can be defined as an amount of the funds made by the owners and the retained earnings or losses. Equity represents a part of ownership in the business and means the value of an asset after all the liabilities (debt) have been paid. Equity consists of an owner's capital, which is also called shareholders' equity and retained earnings. Retained earnings are the part of company's profits, which was not paid as dividends. They are the most important source of long-term financing for the companies (Fraser & Ormiston 2006).

The advantages of using equity are an ease of raising capital, relatively high return on invested capital, as company doesn't need to pay interest, relatively low financial risk and risk of falling financial stability, as the company is not dependent on anyone. The disadvantages of using equity are a limited amount of capital increase and the fact that growth opportunities of the return on equity through a loan are not used (Tildikov 2013, 42).

## **Liabilities**

Liabilities or *Debt* can be defined as obligations to pay. They can be divided by maturity: long-term liabilities with maturities of more than one year, and short-term or current liabilities that are due within 12 months. Long-term liabilities consist of loans, options, leasing, debentures and other similar activities. Short-term liabilities consist of accounts payable, accrued liabilities and other debts (Fraser & Ormiston 2006).

The advantages of using the liabilities are relatively good opportunities to fetch a large amount of capital, an increase of the financial capacity of the company, needed in case of an expansion, an opportunity of increasing the return on equity through the use of the liabilities. The disadvantages are a need to provide deposits, a higher financial risk and the fact, that raising additional capital is dependent on the resolution of other party, such as banks or other companies (Tildikov 2013, 42).

## **Capital**

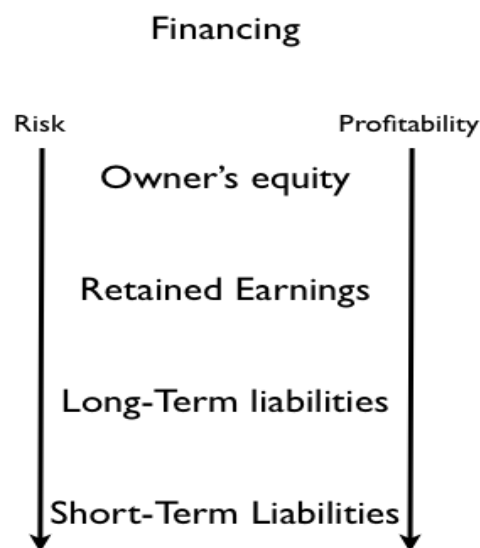
There are four ways of financing available for the companies. Two of them are coming from equity and other two- from liabilities: a company's long-term debt, short-term debt, owner's equity and retained profits. Each of them has definite characteristics.

The financial manager's role in this case is to find the best way of financing the company, at the same time taking into account shareholders' wealth and satisfaction. The way an organization finances its operations and growth by using different sources is called the capital structure of the company. Determination of capital structure of a firm is a key point in corporate financial management (Damodaran, n.d.).

Industry impacts on the capital structure, but most of all, the way of financing is dependent on two factors: profitability and risks.

Depending on the internal needs, the company regulates the way of financing to make risks lower or to get higher profitability. Glen Arnold (2006) states in his lectures, that debt finance is less expensive than equity finance, due to the lower rate of return required by finance providers, lower transaction costs of raising the funds and the tax deductibility of interest.

In the Figure 1 presented below, the author demonstrates that the most risky and most profitable way is to use short-term liabilities, as they are "cheap" money, but they need to be returned fast. And the least risky and the least profitable is owner's equity, as they are "expensive" money, but they belong to the company.



**Figure 1. Financing**

Main capital structure factors are a level of profitability, a threat of takeover, the risk level, the growth rate of the company's turnover, the structure of the company's assets, capital market conditions, company's tax exposure, and a need for financing a large-scale project (Myers et al. 2012, pp. 731–748).

## **Financial risk**

In order to fully understand the term of financing activities of the company, it is important to define financial risk. Financial risk is a risk that shareholders will lose the money they have invested, when they invest in a company, which has debt. It happens when a firm's cash flow can't meet its financial obligations. Normally, when a firm uses debt financing, the creditors are paid before the shareholders in case if this firm becomes bankrupt (*Capital Structure Decision: The Basis*, 2002).

## **Financial Leverage**

One of the ways to measure financial risk is to calculate *financial leverage* of the company. Tildikov (2013, 45) explains financial leverage as a characteristic ratio between debt and equity. It can be calculated applying the following formula:

$$\text{Financial Leverage (FL)} = \text{Assets} \div \text{Equity}.$$

Financial leverage is directly proportional to the degree of impact on the financial market of the company and the rate of return required by shareholders. The higher is the interest needed to be paid- the less is net income. Thus, the higher is financial leverage— the higher is financial risk of the firm (Bodie, Kane & Marcus 2013, pp. 452–454).

A company, which has significant share of debt, is a company with high financial leverage or financially dependent company. A company, which finances its activities using only equity, is called financially independent company. In fact, financial leverage is a careful use of debt with fixed payments to finance those investments (assets), which promise more income than the interest payment on this debt (Damodaran n.d, Myers et al. 2012, 578).

## **2.2 Operating Activities**

To describe operating activities of the company, it is important to think why the business was created. Operating activities can be defined as daily operations of the company that generate profit. They include production, sales and delivery of the company's product and collecting payments from the customers. They are supposed to provide a cash flow and to show if the company is profitable. The examples of operating activities are: receive cash from customers, pay cash to suppliers, pay cash for operating expenses (IAS7, 2001).

Operating activities of the company are responsible for the effective use of all the resources available in the organization. In terms of accounting, operating activities can be defined as cash a company generates from the revenues, excluding costs of long-term investment on capital items or investment in securities (Tildikov 2013, 3).

### **Profitability**

Profitability characterizes an efficiency of the company. Profitability indicators allow estimating how much profit a firm receives from each dollar, euro or other currency unit of invested funds. There are industrial and economic factors, affecting the level and the dynamics of the profitability, such as an organization's level of production and management, the capital structure and its sources, utilization of resources, the quantity, the quality and the structure of production, the production costs and the product costs, and profit from the activities and directions for its use (Bodie et al. 2013, 451; Guilding 2003, pp. 65–66).

## **Business Risk**

In order to have a complete picture of the operating activities, it is important to describe the business risk. A business risk can be defined as a possibility that a firm will have profits, which are lower than expected, or will have losses instead of a profit. The business risk in a hotel is dependent on many factors, including such basic as price per room, occupancy, expenses, competitors, economic environment, and government regulations. It can be influenced by changing the capital structure, and for example, increasing equity. (Davis n.d.; Harris & Mongiello 2006, 383; Myers et al. 2012, pp. 645–648).

## **Operating Leverage**

Force impact of operating leverage indicates the degree of business risk associated with this firm: the greater the force impact of operating leverage, the greater the business risk. Once the fixed costs are reimbursed by *gross profit* from the minimum sufficient number of units sold, profit grows faster than sales. However, the same effect is maintained also to reduce the amount of activity, causing profit falls, and loss grows rapidly, faster than sales decrease (Lee, 2013).

Gross profit is also called sales profit or gross margin. It can be defined as the difference between the sales of the company and the costs of goods or services. It can be calculated by applying the following formulas:

$$\text{Gross Profit} = \text{Revenues} - \text{Cost of Goods}$$

Or

$$\text{Gross Profit} = \text{Quantity} \times (\text{Price} - \text{Variable Costs})$$

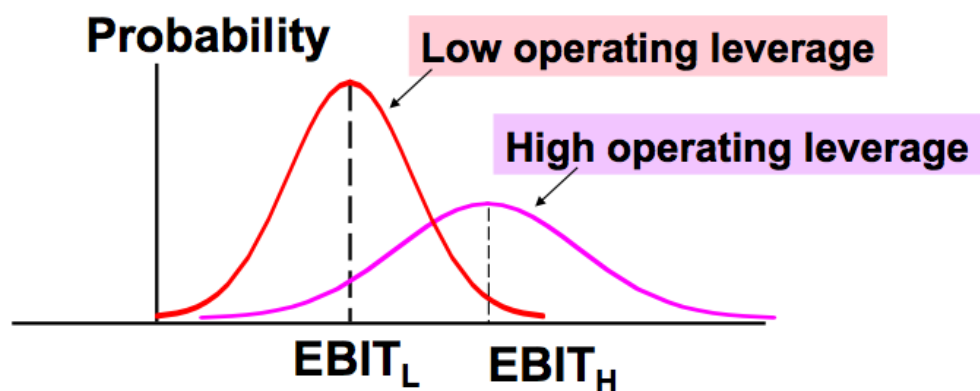
(Titman et al. 2011, pp. 42–43).

Operating leverage (abbreviation OL will be used for the convenience) is an element of business risk and expresses the relationship between the change in the volume of production and operating profit. Thus, operating leverage has a high impact on a company, as it is a good indicator of the risk level, and it allows selecting the optimal strategy to increase profits. According to Tildikov (2013, pp. 28–30), it can be calculated by applying the following formula:

$$OL = \text{Quantity} \times (\text{Price} - \text{Variable costs}) \div [\text{Quantity} \times (\text{Price} - \text{Variable Costs}) - \text{Fixed Costs}]$$

This equation can be transferred to the following:

$$OL = \text{Gross Profit} \div \text{Earnings Before Interest and Taxes.}$$



**Figure 2. Operating Leverage (Capital Structure Decision: The Basis, 2002)**

In Figure 2 presented above, graphics show that the higher is operating leverage- the higher Earnings before Interest and Tax will be ( $EBIT_H$ ). But it also leads to a higher risk.



## **Cost Management**

The definition of a cost can be as simple as this: A cost is what you have to pay to get what you want. The total value of the costs associated with the production and sales of goods or services, is called the cost. The cost of a product or service is one of the most important general indicators of the firm. It reflects the effectiveness of the use of resources, results of the introduction of new equipment and advanced technology, improving the organization of labour, production, and management (Sheffrin 2003, pp. 16–17).

Tildikov (2013, pp. 24-25) explains that the companies, which are engaged in production activities, determine the cost of production, and companies engaged in sales, procurement, trade and brokering activities—distribution costs.

Sheela (2002, chapter 6) explains that all the costs (total costs) can be divided into Variable Costs (abbreviation will be used for the convenience VC) and Fixed Costs (abbreviation FC will be used in further study).

*Fixed costs* are the costs, the amount of which does not vary with changes in sales or revenue. They are not dependent on the number of goods or service produced. Fixed costs are always high in the hotels, due to the industry type (Berry, n.d.).

A *variable cost* is the cost, the amount of which changes in proportion to the changes in the volume of the revenue from the sale of goods. Variable Costs are dependent on the number of goods or services produced and can vary due to changes of the production output. An example of variable costs can be the costs for materials.

According to Woodworth (2014), in the hotel industry operated department expenses tend to be highly variable, while the majority of undistributed expenses is mostly fixed in nature.

Pizam (2010, 664) defines undistributed operating expenses as the costs from operating departments' services. They involve:

- Administration and general expenses, including utilities, insurance, and manager's expenses (office, salary, etc.);
- Human resources expenses, including the employment office;
- Marketing expenses, including advertising, public relations and sales department;
- Repair and maintenance, including engineers and maintenance staff;
- Other expenses, which involve guest relations and entertainment, transportation and energy costs.

(Pizam 2010, pp. 663–664)

As explained before, a hotel has a significantly high proportion of fixed costs due to high rents, salaries, maintenance, etc. (Guilding 2003, 92).

Cost management is important for making decisions. According to Guilding (2003, 84), the information from a cost analysis can answer a lot of questions. For example:

- Should the shop in the lobby be closed?
- Should there be more outsourcing, for example for laundry or housekeeping?
- What should be the price rates per rooms?
- What should have more attention, marketing of single rooms or double rooms?

Thus, the role of cost management at the hotels is quite important and requires a proper control and analysis.

## **2.3 Investing Activities**

Investing activities of the company as well as financing activities are supposed to bring money into the company. In IAS7 (2001) they are defined as the acquisition and the disposition of non-current assets and other investments, which are not included in cash or cash equivalents. The goal of every company is to make the most profitable investments with the lowest risk.

Investing activities are presented in the balance sheet of the company as assets; in other words, assets show the investing activities of the company. Assets are economic resources of the company, representing value of ownership, which can be converted into cash. They can be divided into Current Assets and Fixed Assets or Non-Current Assets (Abad Navarro, 2013).

### **Current Assets**

Current Assets are liquid assets, which are expected to be converted into cash during 12 months. They are used to fund the daily operations and pay the expenses. They include accounts receivable, cash and equivalents, prepaid expenses, marketable securities, raw materials and inventory (Titman et al. 2011, pp. 49–52).

For the hotels an example of accounts receivable would be guest ledger and city ledger. The cash can be cash in checking and saving accounts, house-banks and deposits. In hotel management, prepaid expenses are expenditures paid in advance for the hotel services, which will benefit the hotel for one year from the date of a financial statement. Marketable securities include short-term investments, which can be converted to cash for potential gains. Inventory at the hotel can be operating supplies (guest room supplies, office supplies or housekeeping and laundry supplies), food and beverage inventory and some stock of furniture and equipment (Guilding 2003, pp. 21–25).

## **Fixed Assets**

Fixed Assets are assets, which companies own and use in generating its income. They are not expected to be converted into cash during next 12 months. An organization gets benefits from fixed assets for more than a year. They include non-current receivables, property and equipment, investments, deferred charges and intangible assets (Titman et al. 2011, 49–52).

Non-current receivables are receivables, which do not need to be converted to cash during the following year. An example of the hotel property or the equipment is the building of a hotel itself, the furniture, the kitchen equipment, the offices equipment, the housekeeping equipment and everything what is needed for the hotel operations and will be used for more than a year. Intangible assets at a hotel are the organization costs, the corporate reputation, the franchise rights, the goodwill, the trademarks and the trade-names, pre-opening expenses, security deposits, the patents, know-how or tacit knowledge, the copyrights and the insurances. Deferred taxes are prepaid expenses, which won't be relevant during the next year (Guilding 2003, pp. 21–25).

## **3 Defining Financial Statements**

Financial statements are the conclusive output of the accounting process in the organization. They normally consist of the Balance Sheet, the Income Statement, the Cash Flow Statement and the Statement of Changes in Equity. They are supposed to show the information about the financial position of a company, changes of this position and its performance. They are often used in making economic decisions (Fraser & Ormiston 2006, pp. 1–6; IAS1 2001). In the research, the author used only the Balance Sheet and the Income Statement of the hotels to achieve the objectives and answer the research question.

### **3.1 Balance Sheet Statement**

The Balance sheet is a financial statement that shows financing and investing activities of the company at a specific point of a time and consists of assets and equity and liabilities (Fraser & Ormiston 2006, chapter 2). The Balance Sheet must follow the formula:  $\text{Assets} = \text{Liabilities} + \text{Equity}$ . It's fundamental accounting equation (Myers et al. 2012, pp. 704–706).

The left-hand side of the balance sheet relates to the resources controlled by a company, or assets. These resources are investments that are expected to generate future earnings through operating activities. As discussed before, to engage in operating activities, a company needs financing to fund them. The right-hand side of the balance sheet identifies funding sources (Titman et al. 2011, pp. 48–53).

### **3.2 Statement of Operations**

The statement of operations is also called the income statement or the statement of profit and loss. The Income statement reports the profits and losses that the assets have produced. The main purpose of the income statement is to explain how income is determined, with its important components reported as separate line items. It summarizes the revenues and the expenses. The basic income statement equation is:  $\text{Revenues} - \text{Expenses} = \text{Net income}$

(Myers et al. 2012, pp. 706–708).

#### **Revenue**

Revenue is the amount of money the organization gets during a concrete period of time. It can be calculated by multiplying the price of the goods or the service by the amount sold. There is an abbreviation for revenue— REV. It will be used in further research.

Therefore, the formula to calculate it is:

$$\text{Revenue} = \text{Quantity} \times \text{Price}$$

(Sheela 2002, pp. 155–158).

### **Net Income**

According to Titman et al. (2011, 63), net income is an income that a firm has after subtracting costs and expenses from total revenue. Normally, it is showed in Income Statement's bottom line.

### **Expenses**

Expenses represent an outflow of economic benefits during the accounting period in the form of reduction or use of assets, or increase its obligations resulting to a reduction of capital other than capital allocation between the parties of the organization (Atrill 2006, 56). According to International Financial Reporting Standards Board's framework (2010, paragraph 70b), expenses are decreases in economic benefits during the accounting period in the form of outflows or depletions of assets or incurrence of liabilities that result in decreases in equity, other than those relating to distributions to equity participants.

All the expenses can be divided into operating expenses and non-operating expenses. Operating expenses are the expenses, which a company has as a result of its normal business operations. The abbreviation for them is OPEX, which will be used in further formulas. Examples of operating expenses are the employees' salaries or the production costs. Non-operating expenses are the expenses, which are not related to the core operations in the company, for example currency exchange or the employee benefits (Damodaran 1999, 2).

Operating expenses can be divided into the cost of goods sold and selling and general administrative expenditures, which are needed to carry out the business operations, such as the rent expense or the salary expense, during the period (Fraser & Ormiston 2006, 57). Wiesen and Shereen (2014) state that operating expenses can be a concern for a hotel, as rent or taxes paid on the physical location can be relatively high.

## **4 Sustainable Growth**

In order to explain sustainable growth, it is important to mention that growth in general is not always a good thing. A company has to grow at a sustainable rate, not to get into troubles with financing. Any firm has to have enough capital, no matter whether it is equity or liabilities, to finance its growth. Thus, there is such a term as sustainable growth. Sustainable growth can be defined as the capability of a company to grow without changing its capital structure. Sustainable growth can be used to forecast the future performance of the company. The way to measure the level of sustainable growth is to compute a sustainable growth rate (Peavler, n.d.; Van Horne & Wachowicz 2008, pp. 190–192).

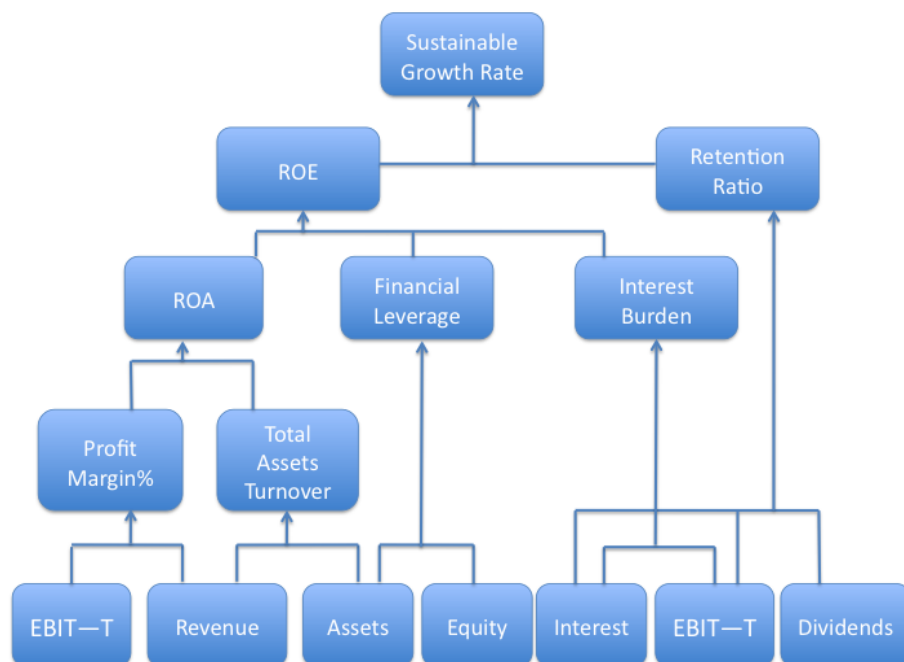
### **4.1 Sustainable Growth Rate**

Sustainable growth rate (SGR will be used in the formulas, figures, and tables) is an indicator of sustainable growth. This is the maximum annual sales growth (as a percentage), which may be based on the projected business ratios, ratios of debt and payment of dividends (Tildikov 2009, 31).

Van Horne and Wachowicz (2008, 190) explain that the management of growth demands thoughtful balancing of the sales goals of the company with its operating performance and financial materials.

The main part here is to determine which sales growth rate is compatible with the realities of the firm and of the financial market. In this case a sustainable growth model is a significant planning tool. By using a sustainable growth rate, it is possible to model the process of growth, which will give a company a possibility to plan intelligent trade-offs (Van Horne & Wachowicz 2008, pp. 190–192).

Tildikov (2009) systematized a sustainable growth model as shown in the Figure 5 below. Abbreviations were used for the visual convenience. ROE is return on equity, ROA means return on assets, EBIT is an abbreviation for earnings before interest and tax, and T is an abbreviation for taxes.



**Figure 3. Sustainable Growth Rate (Tildikov, 2009)**



A Sustainable Growth Rate can be calculated by applying the following equation:

$$\text{SGR} = \text{ROE} \times \text{Retention Ratio}$$

(Tildikov 2009, 31).

The formula for financial leverage was given in financing activities part, while return on equity will be explained in connection with the DuPont analysis further.

*Retention Ratio* is a proportion of earnings, which were reinvested in the business as retained earnings. It can be calculated by using the equation demonstrated below.

$$\text{Retention Ratio} = (\text{EBIT} - \text{Tax} - \text{Interest} - \text{Dividends}) \div (\text{EBIT} - \text{Tax} - \text{Interest})$$

(Merkel 2013).

## **4.2 Sustainable Growth Indicators**

The Sustainable growth rate concludes different components, demonstrated in the Figure 5. There are seven main indicators, needed to calculate SGR: earnings before interest and taxes, revenue, assets, equity, taxes, interest rate, and dividends.

Assets and equity were described beforehand in the explication of business activities. Revenue was explained as well, in the Income Statement part. Thus, there will be a description if four other indicators presented below.

### **Earnings before Interest and Tax**

EBIT is an abbreviation for Earnings Before Interest and Tax, and it will be used in further research. It can be called operating profit. It is an indicator of any company's profitability.

EBIT is all the earnings company got before excluding interests and taxes. It is calculated by applying the following formula:

$$\text{EBIT} = \text{Revenue} - \text{Operating Expenses}$$

(Titman et al. 2011, 41).

As the revenue equals a multiplication of quantity and price, and operating expenses are actual costs, the formula for the calculation of EBIT can look as following:

$$\text{EBIT} = \text{Quantity} \times (\text{Price} - \text{VC}) - \text{FC}$$

As variable costs per unit term is used, it is needed to multiply variable costs to quantity of goods sold. It means that there are 4 factors, influencing a way that the company can make profit: variable costs, fixed costs, price and quantity of goods sold (sales volume).

### **Dividends**

Dividends are the payments, which a company makes to its shareholders. Normally, when a company gets profit, it can reinvest it (retained earnings) or distribute it to the shareholders.

Van Horne and Wachowicz (2008, 476) explain, that the dividends are received on a current, ongoing basis, whereas the prospect of realizing capital gains is in the future.

### **Corporate Income Tax**

Corporate Income Tax is presented as Tax in Financial Statements. Corporate income taxes are against profits, which were made by a company during a certain taxable period.

Normally, they are applicable to the company's operating income, after the expenses like the cost of goods sold, general and administrative expenses and depreciation have been taken away from the revenues (Myers et al. 2012, 440; Van Horne & Wachowicz 2008, pp. 19–21).

### **Interest**

Interest is a percentage, showing the amount of the shareholder's ownership at the company. Normally interest is charged for the advantage of borrowing money and is expressed as an annual percentage rate.

There is a formula showing the role of interest presented below.

$$FV = PV \times (1 + i)^n ,$$

Where FV is future value of a sum of money, PV is present value of this sum,  $i$  is interest and  $n$  is the number of periods (Gelinias 2009; Kellison 2009, 2).

### **4.3 DuPont model**

The DuPont model is also called the DuPont analysis. It is a tool, which can be used for the profitability analysis of a company. It combines the data from the Balance Sheet and the Income Statement of the company (O'Brien & Srivastava, 2011).

It was created by F. Donaldson Brown, who was working in DuPont's corporation. There is a theory that DuPont made a task for his managers during one of the meetings. The task was to answer three questions.

1. Does the market need me?
2. Do I have good managers?
3. Have I sold the soul of the company to the devil?

Next morning Brown gave him the following formula:

$$\text{Return on Assets} = \text{Profit margin} \times \text{Total Assets Turnover}$$

He explained, that profit margin is an indicator of the profitability and can answer the first question. Total assets turnover represents work of his managers and is the answer to the second question. Return on assets shows if the company is using its assets effectively or is not borrowing too much, and answers the last question (Myers et al. 2012, pp. 715–716; Pinsent 2014; Wiegel n.d.). The components of the DuPont formula can be seen in the Figure 4 below. It shows the breakdown of ROA into the Profit margin and Total Asset Turnover.

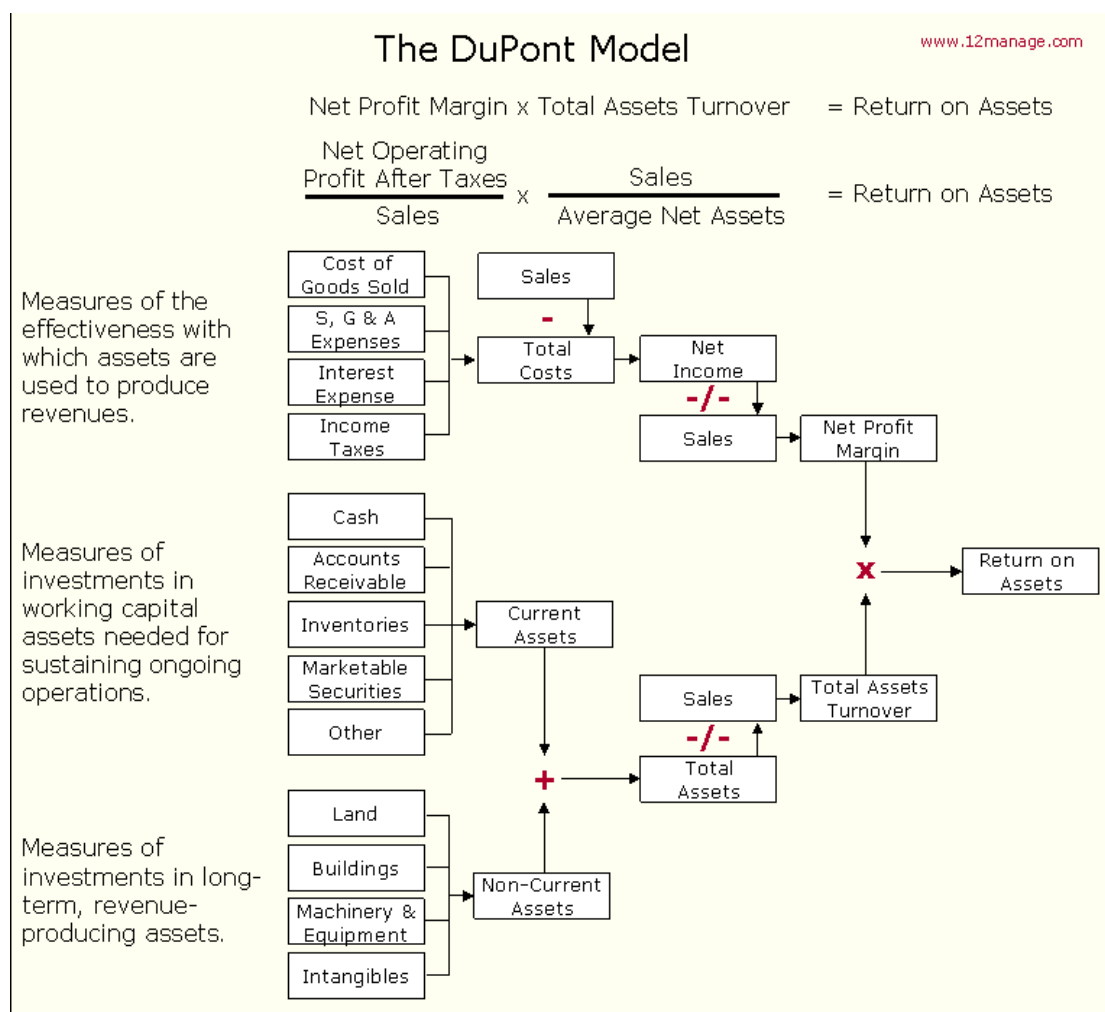


Figure 4. DuPont model (Wiegel, n.d.)

## **Return on Assets**

Return on Assets compares the benefits (profits) of the company with its cost of assets, and shows how much company earns from every dollar invested in the assets. There is an abbreviation used for Return on Assets— ROA, which will be used in the further study. The formulas to calculate ROA are:

$$\text{ROA} = [\text{Revenue} \div \text{Assets}] \times [(\text{EBIT} - \text{Taxes}) \div \text{Revenue}]$$

$$\text{ROA} = \text{Profit Margin} \times \text{Total Asset Turnover}$$

(Ducoff, n.d.; Myers et al. 2012, pp. 712–715).

## **Total Asset Turnover**

Total Asset Turnover (abbreviation TAT will be used further) shows the revenues, generated per each dollar of the total assets. It can be calculated using the following equation:

$$\text{TAT} = \text{Revenues} \div \text{Assets}$$

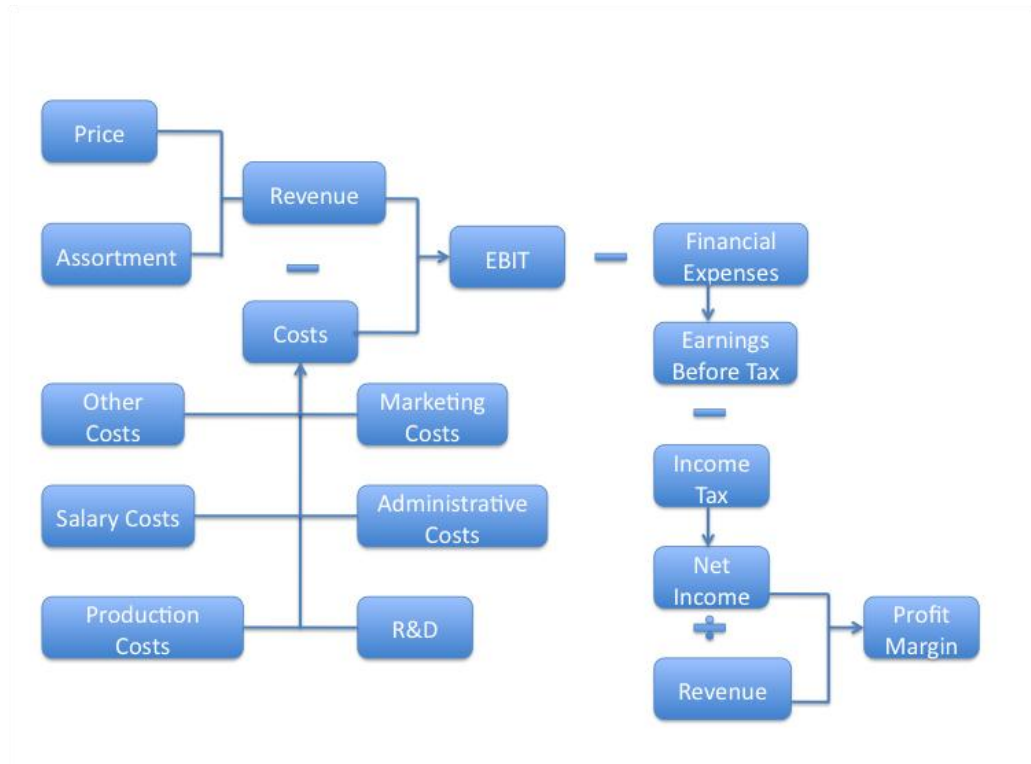
(Guilding 2003, 67).

## **Profit Margin**

The Profit Margin shows how much profit there is in each dollar of sales. Abbreviation PM will be used for the convenience. According to Guilding (2003, 66), the profit margin can be calculated applying the following formula:

$$\text{PM}\% = [(\text{EBIT} - \text{Tax}) \div \text{Revenue}] \times 100\%$$

The components of the Profit Margin are demonstrated in the Figure 3 below.



**Figure 5. Profit Margin (Tildikov, 2013)**

## Return on Equity

Return on Equity can be defined as the amount of net profit, returned as a percentage of shareholders' equity. Drawing on the borrowed capital, a company's management improves the efficiency of the company's shareholders' equity (Bodie et al. 2013, pp. 452–454.)

This is the result of the effect of tax savings of debt capital (attributing to the cost of interest payments products) and relatively low price (interest rate) in borrowings (Tildikov 2009).

Myers and colleagues (2012, pp. 712–719) state that return on equity can be calculated using the formula stated below:

$$\text{ROE} = \text{FL} \times \text{PM} \times \text{TAT} \times \text{Interest Burden}, \text{ as } \text{PM} \times \text{TAT} = \text{ROA},$$

$$\text{ROE} = \text{FL} \times \text{ROA} \times \text{Interest Burden}.$$

Guariglia, Spaliara and Tsoukas (n.d.) define *interest burden* as the ratio of a company's total interest payments to total debt.

Abbreviation for interest burden is IB. It will be used in the following formulas of the thesis. According to Tildikov (2009, 31) interest burden can be calculated by applying the following equation:

$$IB = (EBIT - Taxes - Interest) \div (EBIT - Taxes).$$

## **5 Research Implementation**

The research question is to find out if sustainable growth indicators can influence on the managers' decisions. In order to help the author to answer the research question the following sub questions were set:

- How do sustainable growth indicators influence the hotel's growth?
- Which decisions, based on the analysis of SGR indicators, can managers make?
- Is sustainable growth indicators' influence dependent on the hotel chain?

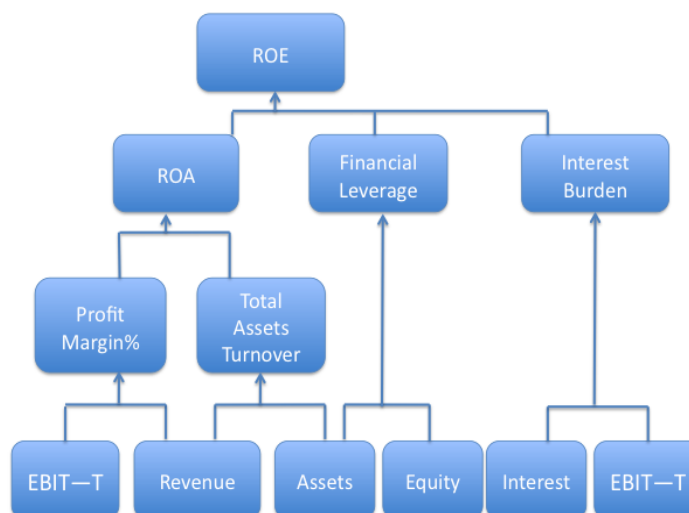
The strategy used in this research is the case study. This type of a research strategy was chosen, as it is more appropriate in order to find the answer to the research question, by analyzing business activities and applying the Profit and Risks Graph instrument. According to Yin (1994), the case study is a way of investigating an empirical topic by following a set of prespecified procedures. This method is principally helpful for testing theoretical models by applying them in real world situations.

The advantage of the case study method is that the researcher has to be focused on the questions set. A case study focused on one specific group can be a powerful and reliable tool. (Shuttleworth 2008, Yin 1994).

The author chose three hotel groups of the same level for the analysis, which makes these hotels a specific group and lets the author to make a more precise analysis (Wilson, 2010). As the research question has an empirical focus, the author believes that the case study is the best way to portray the research.

The research was conducted by analyzing the data, collected from annual reports and financial statements of the hotel groups, taken from their websites. Once the data was collected, the author has made calculations applying the SGR model to gather more data.

The author decided to analyze only the Return on Equity part shown in the Figure 6. An analysis of the Return on Equity indicators gives enough information to make reliable conclusions, reach the objectives of the thesis and answer the research question.

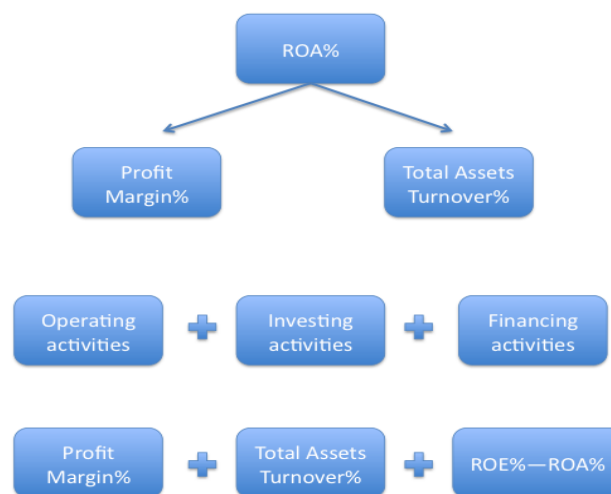


**Figure 6. Return on Equity Indicators**



The next step was to analyze the business activities of the hotels. As discussed before, a hotel's activities include operating activities, investing activities, and financing activities. They can be interpreted in financial management by indicators, as the author demonstrated in the Figure 7.

Operating activities are represented by a profit margin, investing activities are represented by a percentage of the total asset turnover, which equals the difference between the return on assets and the profit margin, and financing activities are represented by the difference between the return on equity and the return on assets (Tildikov 2009, pp. 30–33).



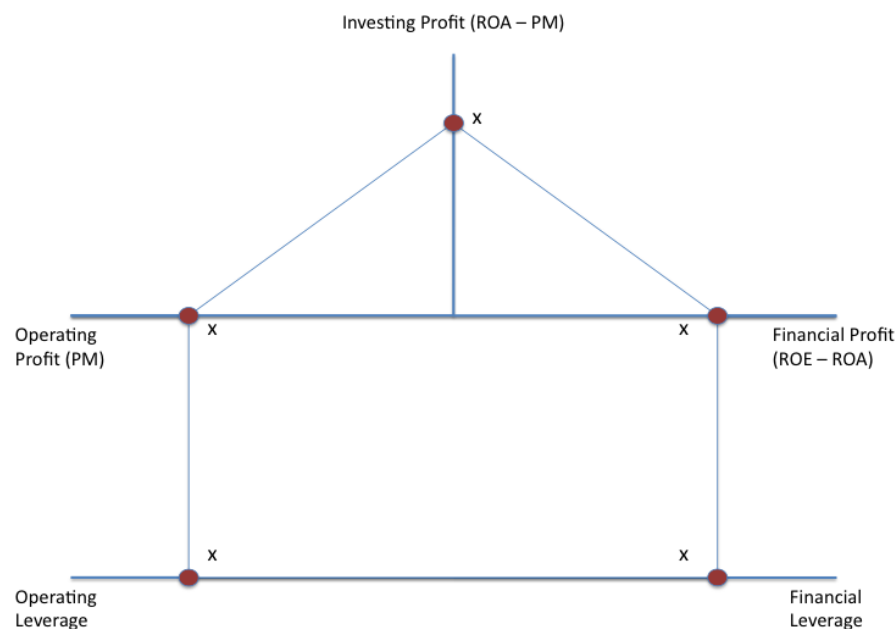
**Figure 7. Business Activities**

By analyzing the share of each kind of activities, it can be seen, if the company was making money with its financing, operating or investing activities.

After an analysis of the business activities, the author implemented the Profit and Risks Graph instrument. It is a tool, which can help to analyze the business activities of the company and to see the weak points.

The perfect version of the Profit and Risks Graph applied to a company looks like a house, as shown in Figure 8 below. As demonstrated in Figure 8, in the perfect case, the “house” is straight. It will be straight if the financial profit, investing profit, and operating profit are equal, as well as the operating leverage and financial leverage. Basically, it means that the hotel is making the same profit from its operating, investing and financing activities.

The financial profit represents the financing activities of the company, the investing profit shows the investing activities, and the operating profit—operating activities.



**Figure 8. Profit and Risks Graph (Tildikov, 2013)**

The Profit and Risks Graph instrument can give a visual picture of a company's business activities straight away, as any roughness can be easily determined.

## **5.1 Data Collection**

The research is based on the secondary data. Secondary data is the data, collected by someone else than a researcher, such as public information, documents or records. This data was not collected to answer the researcher's questions, but for some other purposes. The major of secondary data is that it is reliable, collected in a professional way and quite variable (Saunders, Lewis & Thornhill 2003, 256).

Secondary data includes both raw and compiled data. The author used compiled documentary data, which was summarized and put into financial statements by hotel groups' managers. According to Saunders and colleagues (2003, pp. 257–258), secondary data is more common in case studies.

The author used public information of three hotel groups, which can be accessed easily through the websites of the hotels due to several reasons. The first reason is that unlike public information, financial data is a secret and can not be used in the thesis, the second is the reliability and variability of the data found, and the third— time saving. The documents used were annual reports, including the financial data of 2012 and 2013. The main information was taken from financial statements and notes to the financial statements of the hotels. The author decided to analyze the data of 2012 and 2013 due to several reasons. The first is that it is a fresh data and shows the hotel groups' condition nowadays. The second is that during the last two years, the hotel industry has grown incredibly as tourism and travel industry has developed a lot. And one more reason is the relevance of the development ideas; the author came up with while using this data.

## **5.2 Calculations**

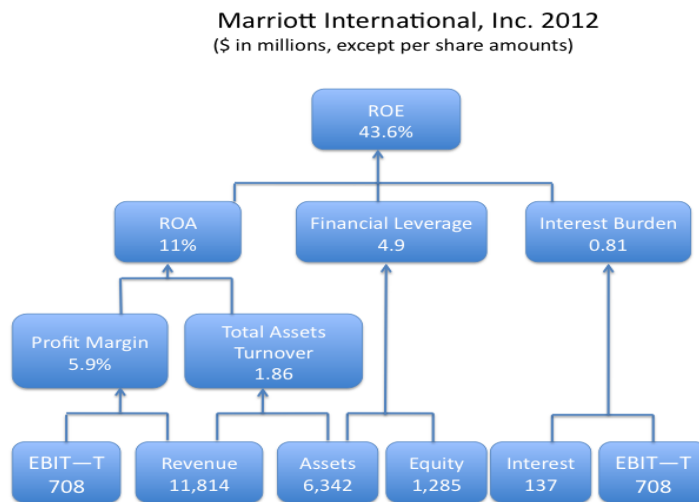
To analyze the data from the hotels' financial statements, the author needed to make two different kinds of calculations. The first part was calculating return on equity of the hotels in 2012 and 2013. The second part was calculating the operating leverage needed to apply the Profit and Risks Graph.

### **5.2.1 Calculating Return on Equity**

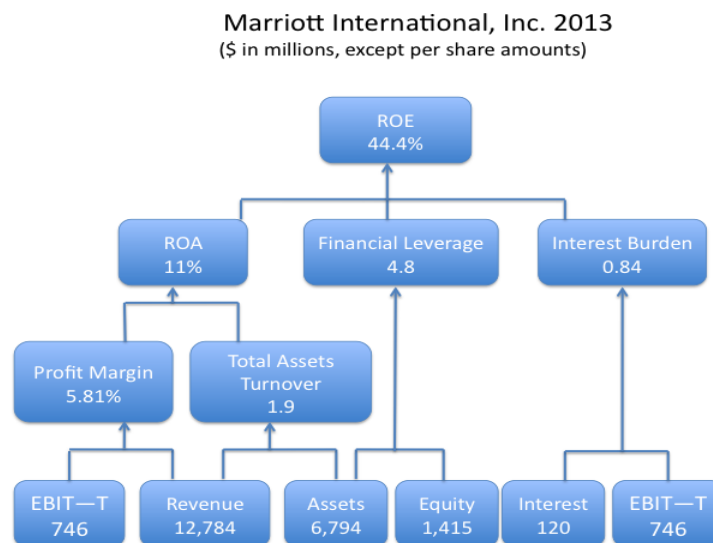
At first, the author has calculated the Return on Equity part of the SGR model for every hotel. The SGR indicators were taken from the financial statements of the hotels. EBIT, taxes, revenue, and interest were taken from the income statements. Assets and equity were taken from the balance sheets.

Then, following the formulas described in the theory part, the author has calculated the indicators and inserted them into the tables to support the reader's visual perception.

Marriott hotel group in 2012 has ROE equal 43.2%, as demonstrated in the Table 1. Interest burden equals 0.81. Return on assets equals 11%, given by a multiplication of the profit margin (5.9%) and the total assets turnover (1.86). Financial leverage is 4.9, given from the ratio of assets to equity.

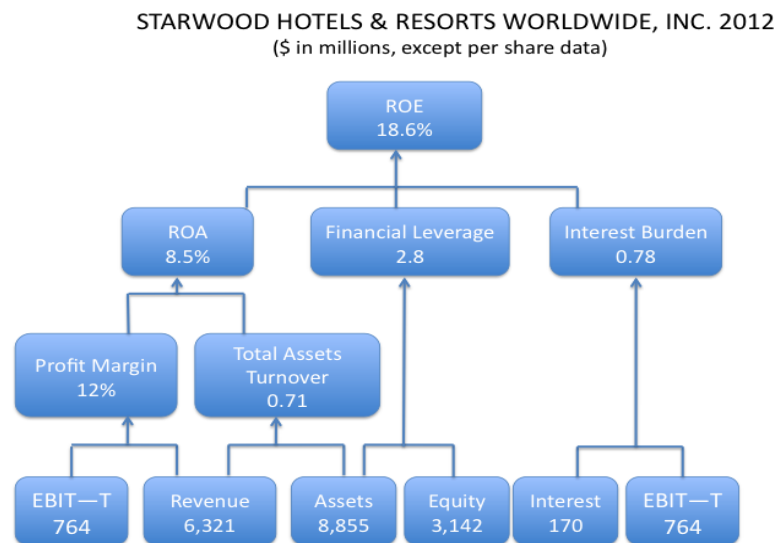
**Table 1. Marriott International, Inc. 2012**

In Table 2 the next year is demonstrated. Marriott in 2013 has a little higher return on equity equal 44.4%, which means that the hotel got more money from its equity than last year. Interest burden is higher as well and equals 0.84. Return on assets stayed without any changes, as profit margin got only 0.09% less, and assets turnover increased by 0.04. Financial leverage decreased by 0.1, as the company has increased equity by 130 thousand and assets by 452 thousand.

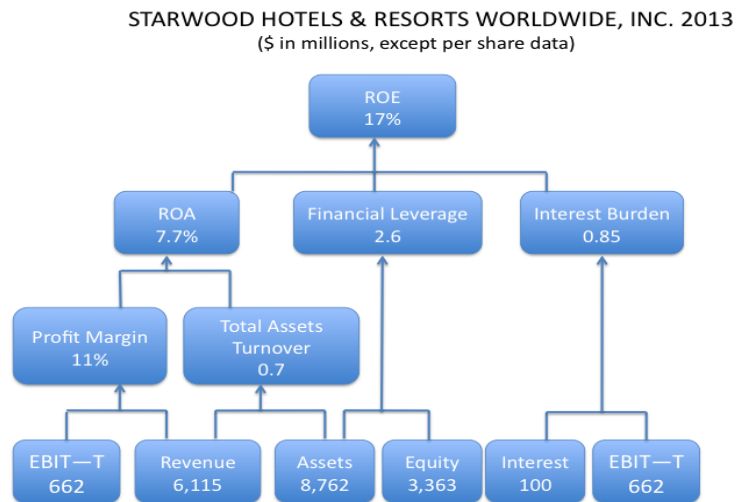
**Table 2. Marriott International Inc. 2013**

The second hotel group was the Starwood Hotels and Resorts Worldwide Inc., demonstrated in Table 3 and Table 4. In 2012 (Table 3), return on equity equals 18.6%. Interest burden is 0.78. Return on assets equals 8.5%, as the profit margin is 12% and assets turnover is 0.71. Financial leverage equals 2.8.

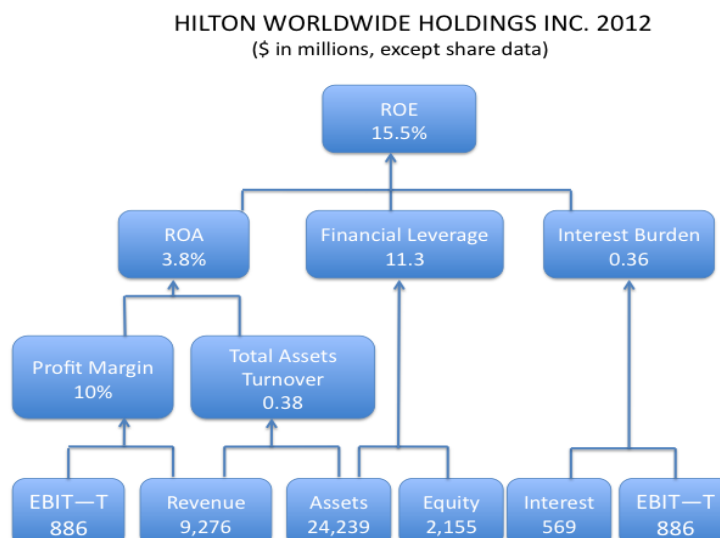
**Table 3. Starwood Hotels & Resorts Worldwide, Inc. 2**



In Table 4 the next year is demonstrated. Return on equity in 2013 decreased and equals 17%, because return on assets and financial leverage decreased. Interest burden is 0.85. Return on assets equals 7.7%, as the profit margin decreased by 1% and assets turnover— by 0.01. Financial leverage is 0.2 lower, as assets decreased and equity increased.

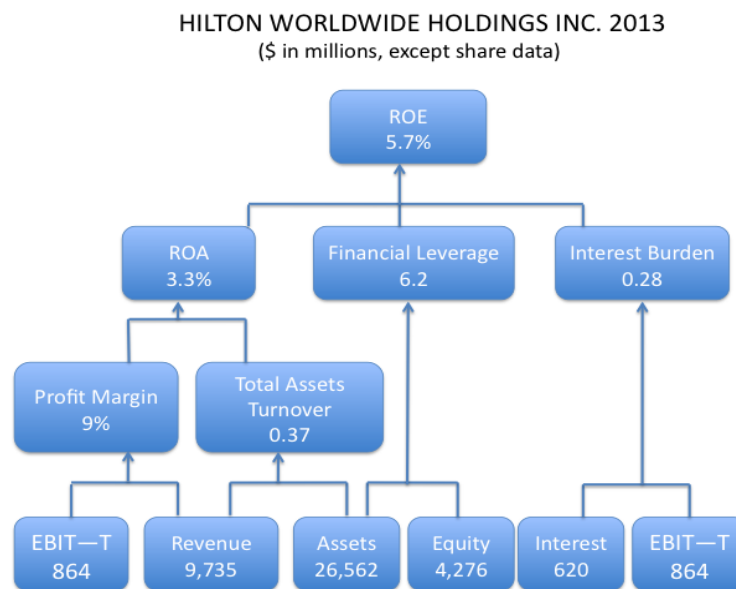
**Table 4. Starwood Hotels & Resorts Worldwide, Inc. 2013**

The last hotel group is Hilton, demonstrated in Table 5 and Table 6. Hilton in 2012 (Table 5) has return on equity equal 15.5%. Interest burden is quite low, compared to two other hotel groups, and equals 0.36. Return on assets is only 3.8%, as the profit margin is 10% and assets turnover is only 0.38. Financial leverage equals 11.3, which is quite high. It can be seen that company is using liabilities as main source of financing, as equity is quite low.

**Table 5. Hilton Worldwide Holdings Inc. 2012**

In Table 6, there are calculations for Hilton in 2013. Return on equity is much lower compared to 2012 and equals 5.7%. Interest burden is 0.28. Return on assets decreased by 0.5%, as the profit margin decreased by 1%, and assets turnover is almost same and equals 0.3.

**Table 6. Hilton Worldwide Holdings Inc. 2013**



### 5.2.2 Calculating Operating Leverage

The operating leverage of three hotel groups is demonstrated in Table 7 below. As the hotel groups do not publish the information about separate expenses and costs, the author separated the mentioned costs herself, using the description of the expenses in the notes to the financial statements. Thus, the calculations may not be entirely accurate, but in this case the error is insignificant. All the financial data for the calculations was taken from the financial statements of the hotel groups and the notes to the financial statements.



**Table 7. Calculating Operating Leverage**

Operating Leverage

Hotel Group	Marriott	Starwood	Hilton
Year			
2012	11	4.7	4.6
2013	11.4	4.5	4.8

In order to conclude calculations part, it is important to mention, that using this kind of analysis, it is easy to see how the company makes the profit, and which activities it uses. The Marriott hotel group works as a bank, getting a greater profit from its financing activities, than investing or operating. The Starwood hotels and resorts group works as a hotel, generating a greater profit from its operating activities, though the financing profit is quite high as well. Starwood's investing profit is negative, what can be changed by adopting the relevant decisions. The Hilton hotel group in 2013 is pretty different from the hotel group in 2012, as it has changed its way of being profitable. It has lost quite much, but the company might be changing its strategy, as from making the profit from its financing activities (being a bank), it came to getting the profit from its operating activities (being a hotel).

## **5.3 Data Analysis**

The data, which the author collected from the calculations, has been analyzed through the Profit and Risks Graph tool as well as by analyzing the business activities' shares.

After the calculations of return on equity indicators, the next part of the research was to find out a share of each type of the activities in every company. Then, the Profit and Risks Graph tool was applied to the hotels.

### **5.3.1 Business Activities Analysis**

As explained before, all of the business activities are represented by financial indicators. The profit margin represents operating activities or operating profit, the percentage of the total assets turnover represents the investing activities or investing profit, and the difference between return on equity and return on assets represent the financing activities or financing profit.

In Table 8, there is an analysis of Marriott in 2012. As the profit margin equals 5.9, the operating profit of the company is 5.9 as well. The investing profit is 5.1, and the financing profit is 32.6. A sum on the bottom of the table demonstrates the share of each type of activities. It means that the hotel functions as a bank, because the highest profit is from its financing activities.

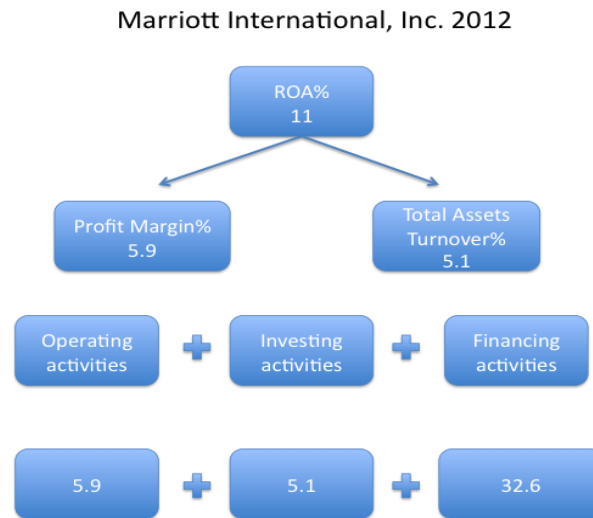
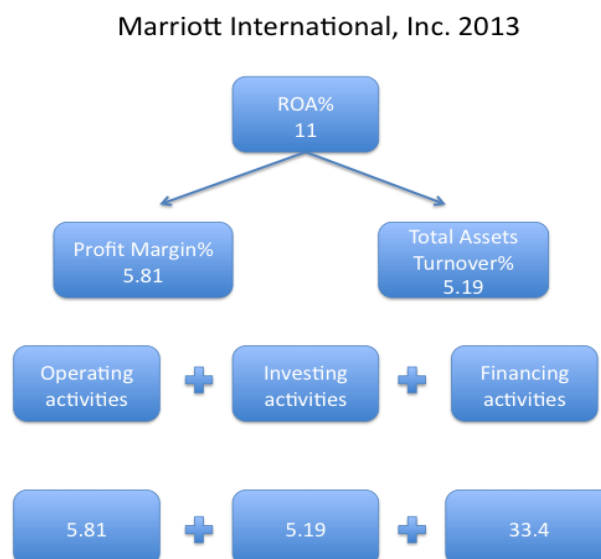
**Table 8. Marriott 2012. Results**

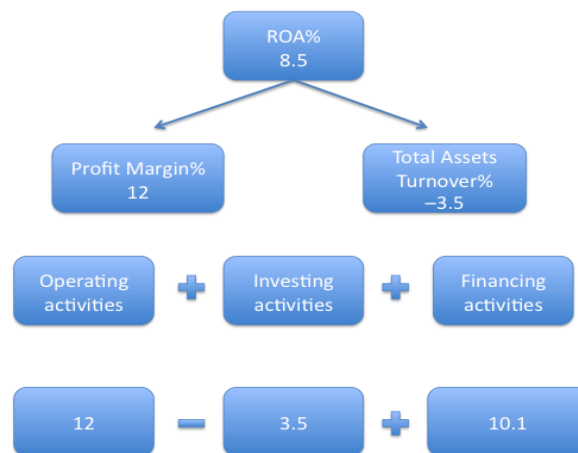
Table 9 presents the activities of Marriott of 2013. The operating profit is 5.81, investing profit is 5.19, and financing profit is 33.4. The hotel increased its financing profit, while the investing and operating profits did not change that much.

**Table 9. Marriott 2013. Results**

The next hotel group analyzed was the Starwood hotels and resorts. In Table 10, the year 2012 is demonstrated. The operating profit equals 12, as the profit margin is 12. The investing profit is -3.5, as the difference between ROA and the profit margin is negative, and the financing profit equals 10.1. The hotel makes profit, using mostly its operating profit, though the financing profit is relatively high as well.

**Table 10. Starwood Hotels & Resorts 2012. Results**

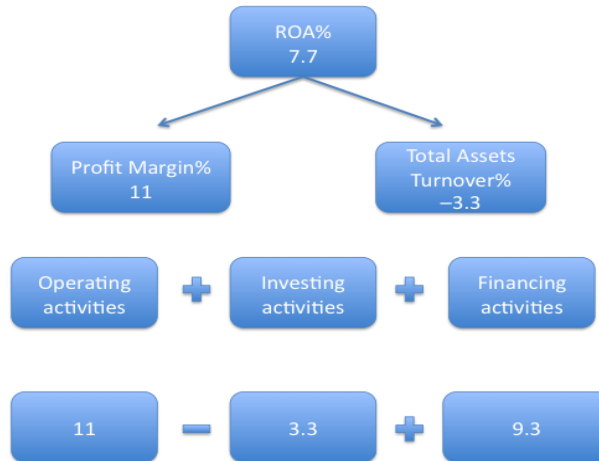
Starwood Hotels & Resorts Worldwide, Inc. 2012



In Table 11 Starwood in 2013 is shown. The profit margin is a bit lower and equals 11%, which means that the operating profit is 11. The investing profit increased per 0.2, but it is still negative. The financing profit decreased and equals 9.3. The hotel still makes money, using its operating and financing profits.

**Table 11. Starwood Hotels & Resorts 2013. Results**

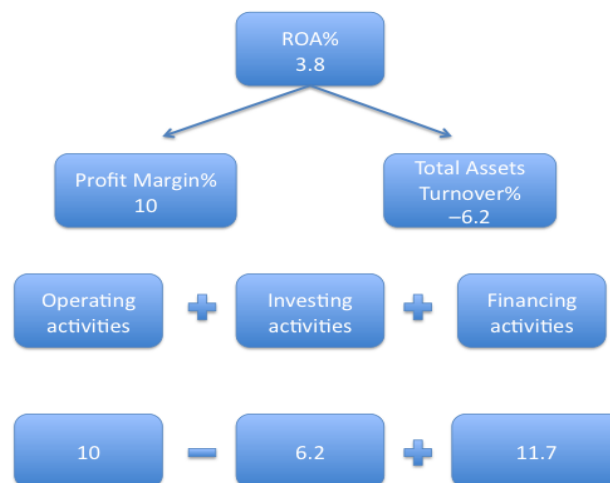
Starwood Hotels &amp; Resorts Worldwide, Inc. 2013



Hilton in 2012 and 2013 is demonstrated in Table 12 and Table 13 relatively. In 2012 the operating profit is 10. As the profit margin is higher than the return on assets, the investing profit is negative and equals -6.2. The financing profit is 11.7. The company makes profit, mostly using its financing activities.

**Table 12. Hilton 2012. Results**

Hilton Worldwide Holdings, Inc. 2012



In 2013 (Table 13), the profit margin is lower, thus, the operating profit equals 9. The investing profit is still negative, though it has increased per 0.5. The financing profit has reduced greatly, and equals 2.4. It means that the hotel changed its strategy and started to get more profit from the operating activities, than from the financing activities. Otherwise, the company started to function as a hotel, not as a bank.

**Table 13. Hilton 2013. Results**



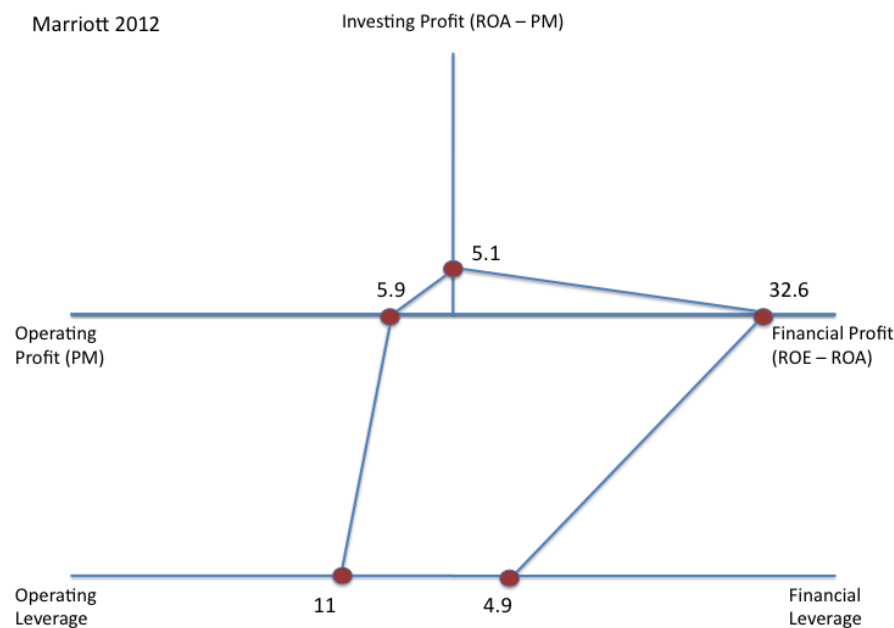
### 5.3.2 Applying the Profit and Risks Graph

As described before, in the Profit and Risks Graph, the “house’s” roof consists of the investing profit (ROA – PM), the operating profit (PM), and the financing profit (ROE – ROA). The basement is represented by operating and financial leverages, indicating the risks levels of the hotels. In the perfect version, the “house” is supposed to be straight. Roughness and irregularity can show what needs to be carefully reviewed, to see if it requires a change.

The first hotel group analyzed was Marriott. In Table 14 there is Marriott in 2012 demonstrated. The graphic of a house is not straight. The financial profit is much higher than the operating profit. This gives overbalance on the right side of the graphic. Besides, operating leverage is higher than financial leverage, what is shown by the overbalance on the left side of the basement.

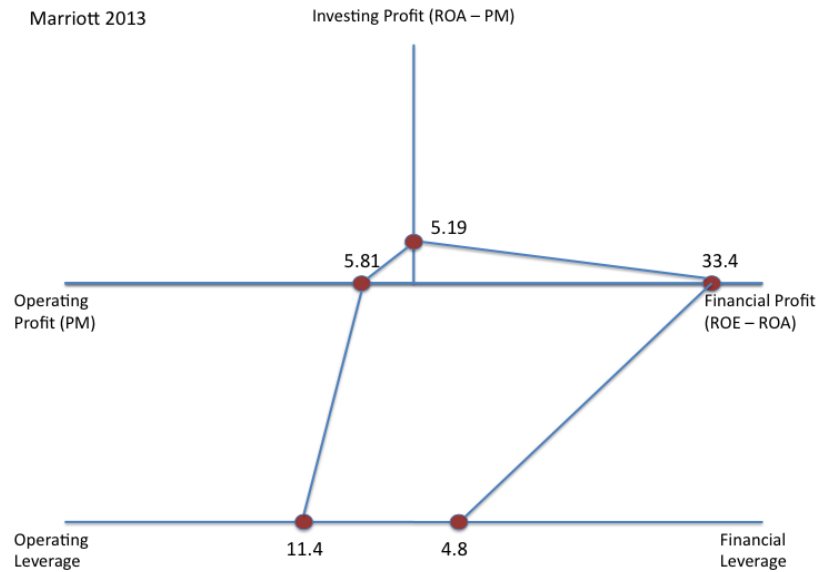
The situation itself is pretty good, but the company could pay more attention on its operating and investing activities, and that would help a lot in the future performance.

**Table 14. Profit and Risks Graph applied to Marriott 2012**



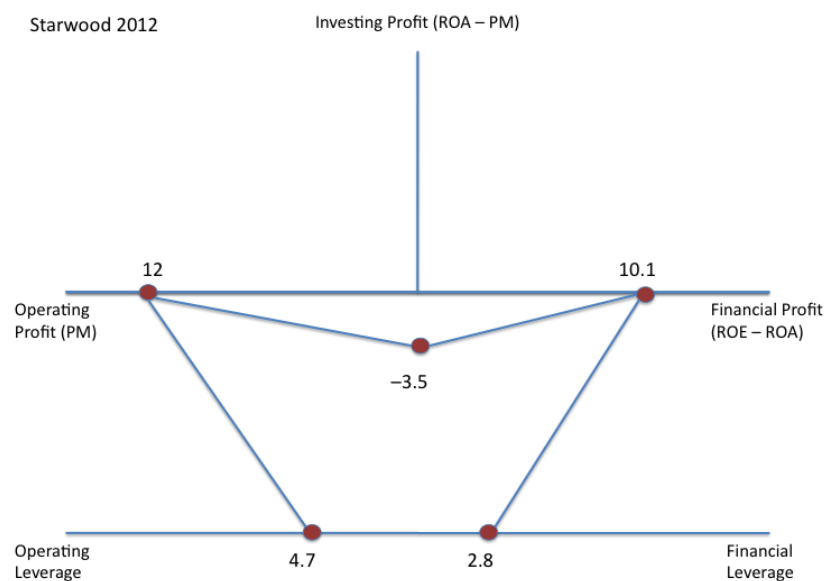
In Table 15 the situation did not change much. Marriott's graphic in 2013 is a little more overbalanced to the right side. It happened because the financial profit got higher, while the operating and investing profits did not change much. Operating leverage increased per 0.4 and financial leverage decreased per 0.1.

**Table 15. Profit and Risks Graph applied to Marriott 2013**



The next hotel group was Starwood Hotels and Resorts presented in Tables 16 and 17. In Table 16 Starwood in 2012 is presented. The “house” has a concaved roof, as instead of an investing profit, there is an investing loss. The roof sides are not too uneven though. The need for an increase of the investing profit can be seen straight away.

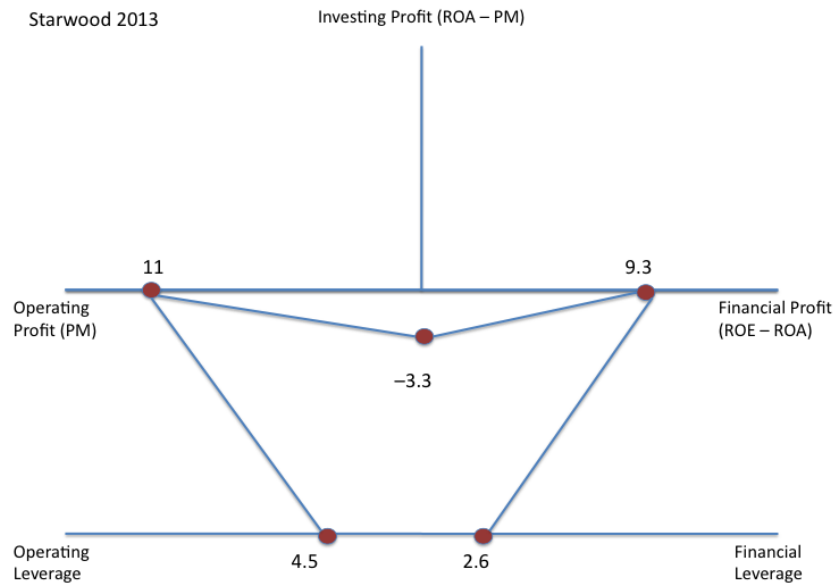
**Table 16. Profit and Risks Graph applied to Starwood 2012**





In Table 17 the next year is shown. The graphic did not get lot of changes. The hotel is still losing from the investing activities. The financial profit is a little lower than the operating profit. Leverages did not change much either.

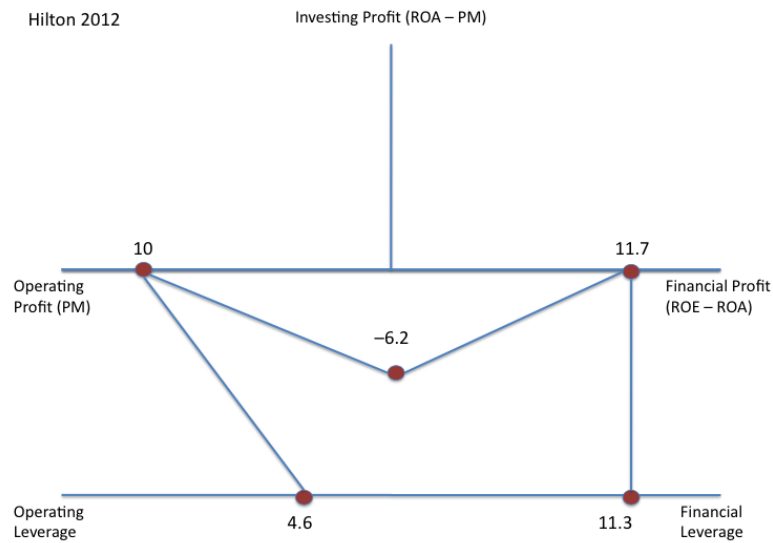
**Table 17. Profit and Risks Graph applied to Starwood 2013**



The last hotel group was Hilton. In Table 18 and Table 19, the graphics of 2012 and 2013 are presented relatively.

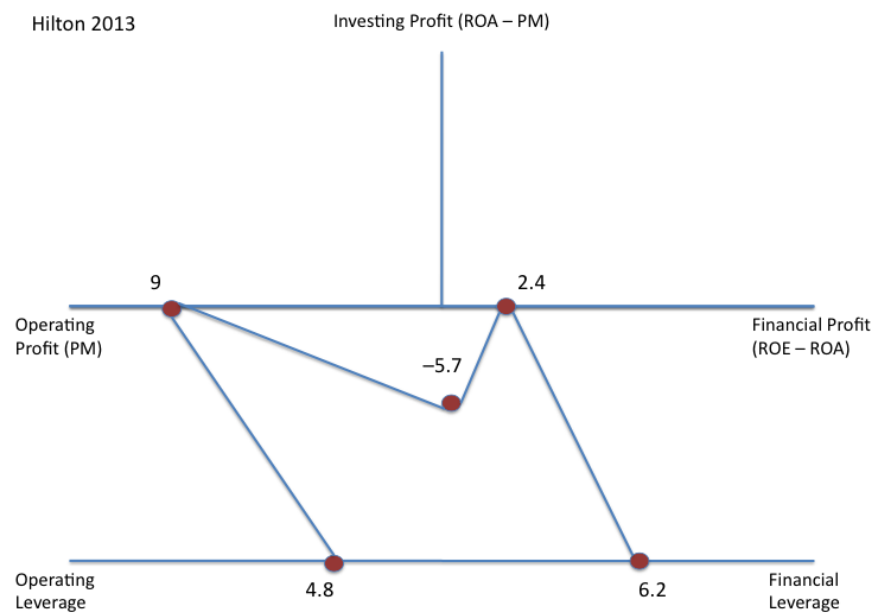
In 2012 Hilton has an investing loss. The roof is concave. The sides of the roof are not too uneven, as the difference between the financial profit and the operating profit is only 1.7. The basement is unbalanced, as operating leverage is low, compared to the operating income and financial leverage, which gives an obtuse angle on the bottom of the house. Thus, the weakest points for the Hilton hotel group in 2012 are negative investing profit and low operating leverage.

**Table 18. Profit and Risks Graph applied to Hilton 2012**



In Table 19, Hilton's "house" in 2013 can be seen. The graphic is pretty different from the graphic in 2012. The investing profit is still negative. The financial profit and financial leverage have reduced badly, while the operating profit and operating leverage did not change much.

As explained before, the company started to work as a hotel, making profit from its operating activities, but the investing profit is still the weakest point. Operating leverage didn't increase much either.

**Table 19. Profit and Risks Graph applied to Hilton 2013**

## 5.4 Results

The results from the analysis of the company's business activities show that simple calculations can tell a lot about a company's operations as well as that the influence of sustainable growth indicators is not dependent on the hotel chain. Moreover, it helped the author to find out the ways of sustainable growth indicators' influence on the hotels' profitability.

### 5.4.1 Business Decision-making Areas

Tildikov (2013) found out, that there are 7 areas of business decision-making: clients, suppliers, costs, investments, shareholders, creditors, and government.

These areas are divided into groups, which can be described with financial indicators. Managers can make a decision to change one of the indicators, leading to a greater profit.

Therefore, the client group can be divided into three parts: volume, price and deferral of payment, as the occupancy is dependent on the guests, the room rates set by a hotel are the prices the clients are ready and have to pay, and the deferral of payment is a possible way to influence the clients' willingness and their motivation to stay at the hotel.

As discussed before, the sales volume and the price are the components of revenue and EBIT, and changing them will lead to a change in the whole SGR model of a company. That, in turn, might lead to different results and therefore, to different decisions to be made.

Deferral of payment is a specific case for the hotel industry. Normally, it is not allowed for a guest to pay later. But there are groups, travel agencies and companies' contracts, which can be subject to a deferral of payment. For example, if there is a company, using a hotel several times per year for business trips, they can have a corporate contract with the hotel, which lets the company to pay all of the stays once a year.

The second group is suppliers. The indicators, dependent on suppliers, are the purchase volume, price and deferral of payment. It is obvious that the more the hotel needs—the more it has to spend. There are special contracts for hotels, which let them to have more products with a lower price. One of the ways to control the purchase volume is to buy less, for example through controlling labour costs. Suppliers can change the price, depending on the contract they have with the hotel. A reduction in the price, would lead to decreasing expenses, which, in turn, would influence the revenue.

In case of suppliers, deferral of payment means that the hotel can get special conditions for payment. For example, take first—pay later.

These decisions would influence the expenses a lot, and give the hotel a chance to use the money for financing, which would lead to a greater financial profit.

The costs group can be divided into fixed costs and variable costs. Both types of the costs are indicators themselves, as they influence EBIT, gross profit, operating leverage, etc. The decisions made concerning the costs, will influence the overall SGR model of the company.

The fourth area of business decision-making stated was investments. Based on the theoretical background of the thesis, it is evident that investments involve current and fixed assets. The changes in each group will lead to overall changes in the company. The increasing current assets mean that a company has more money to operate with.

The shareholders' group concludes equity and dividends, as shareholders are the ones making the equity of the company and getting dividends from the profit. Increasing or decreasing the equity and dividends would have a direct impact on the sustainable growth rate.

The sixth area is called creditors. It is about the interest rate. Interest is an indicator, influencing the interest burden and, consequently, the return on equity. Decreasing the interest can be discussed with the creditors, as it would lead to a higher interest burden and return on equity. As a result managers would get a higher financial profit.

The last business decision-making area is government. Government controls the tax rates applied. If a hotel manages to influence it, and reduce the tax rate, all of the indicators in the SGR model would get a higher value.

Therefore, after relating the business decision-making areas to the term of the SGR model, the author was able to show the relations between financial management and hotel managers' decisions, as well as to explain the way each of the indicators influence the decisions. Moreover, after describing the areas of decision-making, the author was able to answer the research sub question and explained which decisions can be taken, based on the SGR model analysis.

#### **5.4.2 Marriott**

The analysis of the Marriott hotel group's business activities of both 2012 and 2013 shows that the company makes the highest profit from its financing activities (Table 8 and Table 9). In order to improve its profitability level, the company should raise the investing and operating profits. The operating profit is represented by the profit margin.

It means that to get a higher profit from the operating activities, Marriott needs to increase the profit margin, which is dependent on EBIT, taxes and revenue. Thus, to increase the operating profit, Marriott has to enlarge EBIT, as the taxes reduction is almost impossible. EBIT consists from the price, the costs and the occupancy level, therefore, the hotel needs to increase the price, decrease the costs or get a higher occupancy level.

The investing profit is represented by the percentage of total asset turnover, which is equal the difference between the return on assets and the profit margin. It means that to increase the investing profit, Marriott has to get the higher return on assets, which consists from the profit margin and the totals asset turnover. Like in the case of the operating profit, Marriott can consider the EBIT components or there is also a way to change the total asset turnover.

The way to increase the total asset turnover is to take fewer assets and increase the revenues. Taking fewer assets would end up with reducing the equity and using debt financing, what is risky.

Moreover, Marriott already has much less equity than liabilities.

To conclude, it is true to say that in general the hotel is doing well, as all the profits are positive. Even though the Profit and Risks Graph (Table 14, Table 15) shows overbalance to the financing side of the house, which means that the Marriott's greatest profit is from the financing activities; the company gets the profit and does not have much roughness.

### **5.4.3 Starwood**

The analysis of the return on equity part of the SGR model of Starwood in 2012 and 2013 (Table 10, Table 11) shows that the company is working as a hotel and gets a greater profit from its operating activities. It did not change during two analyzed years; however the profit margin reduced per 1% as well as the financing profit decreased per 0.8. The investing profit is negative during both years with an increase per 0.2 in 2013. To improve, Starwood has to get a positive investing profit, as it is the weakest point. To do so, the hotel needs to follow the strategy described before, and follow up these indicators: EBIT, revenue and assets.

During both years, the "house" has a concave roof, as a result of an investing loss, which can be easily seen from Table 16 and Table 17. The sides of the roof do not differ that much, as in 2013 the operating profit decreased per 1 and the financial profit decreased per 0.8. The basement is not straight due to the leverages. Operating leverage is 4.7 in 2012, decreasing per 0.2 in 2013, while financial leverage is only 2.8 in 2012, decreasing per 0.2 in 2013.

Thus, the company is compensating its investing loss with the operating and financial profits.

#### 5.4.4 Hilton

The last hotel group analyzed was Hilton. An analysis of the profit from the business activities (Tables 12 and 13) showed that Hilton in 2013 changed the direction, and from working as a bank (getting the profit from the financing activities) changed to a hotel (making the profit from the operating activities).

During both years the investing profit is negative, what can be fixed by changing the price, the sales volume or the share of assets. It is true to say that in 2012 the hotel was compensating the loss in the investing activities by getting a profit from the financing and operating activities, while in 2013, nevertheless the investing profit increased per 0.5, the financing profit reduced heavily, and the profit margin decreased per 1%.

To increase the financing profit, which equals the difference between ROE and ROA, it is important to determine the indicators. As ROE concludes ROA, financial leverage and interest burden, a company needs to enlarge interest burden and financial leverage. Interest burden involves EBIT, taxes and interest, thus, the company needs to increase EBIT or reduce interest rate.

Financial leverage is a ratio between assets and equity. To enlarge it, the company needs to change a share of the equity and become more risky, by using debt financing.

The Profit and Risks Graph during both years (Table 18 and Table 19) is far from straight and shows the weakest points straight away. The "house's" roof has a concave shape like in Hilton's case, as both companies are loosing on the investing activities. But if in Table 18, demonstrating 2012, the sides of the roof are more or less equal, in Table 19, showing 2013, there is an overbalance to the left side due to the significant reduction of the financing profit.



## **6 Discussion**

### **6.1 Conclusions**

The research showed that there is a link between the financial management of a hotel and the managerial decisions, which can be taken to improve the company's profitability level. In the results the author explained which decisions the managers could make to increase their profit, using the sustainable growth indicators. The author also explained that the influence of the indicators is not dependent on the chain a hotel belongs to.

Moreover, the author implemented a new tool the Profit and Risks Graph and reached a sub objective of the thesis by testing it in the real world situation proving its efficiency.

Most of the challenges, which the author faced during the thesis process, were successfully negotiated through the attentive designing and thoughtful monitoring of the thesis. However, there are limitations to the research, which should be mentioned. First of all, the author used secondary data, which gave enough information for the analysis, but it is true to say that primary data might have made the research more precise. Besides, the research was not assigned by the hotels, as the author did not cooperate with the hotel groups and used only public information. Therefore, there is always the risk, that the hotels will not use it.

Future research on the topic could include a full analysis of the SGR model. The author could make an experiment by setting a SGR number, needed in the company and checking the change, which should be made in the indicators. Then they could determine which decisions should be made to cause these changes in the indicators. Another possible experiment is to see what a company has to change to get a straight "house", using the Profit and Risks Graph.

This research can be used by the hotels' managers for improving the profitability and performance of their company through following the research undertaken.

As explained above, it is essential for any regular manager to possess basic knowledge about the impact of financial management. Therefore, the research could be also used for the educational purposes as it offers an easy way of analyzing the financial performance of a company. Both the SGR model and the Profit and Risks Graph would definitely help managers in identifying the weaker sides of the company.

## **6.2 Research Reliability and Validity**

Yin (1994, 32) explains, that there are four tests to judge the quality of the empirical research methods: trustworthiness, credibility, confirmability and data dependability, which has been later summarized to construct validity, internal validity, external validity and reliability. As the case study has an empirical focus, the author will face all of the tests to inform the reader of the quality of the research.

To achieve construct validity, a case study research has to have an extensive and a reliable theoretical background (Yin, 1994). As the author used different types of reliable sources and critically reviewed the literature, the research meets the requirements of construct validity.

According to Yin (1994), internal validity is suitable for quantitative research. As this research does not use a quantitative method, the author did not need to analyze it.

External validity means the generalization of the research (Yin, 1994). As there was a specific group analyzed, the author was able to generalize the data for the hotels, as all of them were of the same level.

As shown by the results, the hotel groups do not have an impact of the role of sustainable growth in their financial management. It means that the present research can also be used for other hotel groups.

Reliability of the research is about the ability of other researchers to carry out the same study and achieve the same results. It means that the author has to document all of the steps taken to achieve his objectives (Yin, 1994).

As the author described all the actions taken in order to answer the research questions, using the tables for the calculations, based on the theoretical background, gathered beforehand, the reliability of the study can be guaranteed.

### **6.3 Closing**

The author is fully satisfied with the results of the research, as she was able to answer the research questions and reach the objectives of the thesis. The process of the research implementation was challenging and helped the author to gain more knowledge in the field of financial management in general as well as to get a deeper understanding of the uniqueness of financial management in the hospitality industry.

The aim of the research was to find out whether there is a link between the managerial decisions and financial management of a hotel. In order to reach this objective, a theoretical background on the financial management, financial statements and sustainable growth of hotels was built, using comprehensive sources.

The research method used was a case study, which involved the application of the SGR model and its analysis, and an implementation of the Profit and Risks Graph tool. The author used secondary documentary data for the analysis.

The results of the research involved conclusions from the analysis of every hotel group as well as a description of the areas of business decision-making, to support a more precise view of the subject. Furthermore, the author made several suggestions for further researches, using the SGR model and the Profit and Risks Graph.

The author believes that the outcomes of the research are innovative and can have a valuable impact on the field of hospitality financial management and that they give a lot of opportunities for further researches. It is important, as the subject has been little studied, which makes the research undertaken valuable and practically significant.

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