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Ph.D. Thesis

**Contemporary methods of evaluation of economic performances of  
hotel and spa operators within the framework of international trade.**

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## **Statement of original authorship**

I declare that the dissertation on „Contemporary methods of evaluation of economic performances of hotel and spa operators within the framework of international trade” I developed independently.

Literature and supporting materials are mentioned in the attached bibliography.

Alexey Kondrashov

Prague, 07.01.2014

## Souhrn

V současné době cestovní ruch je považován za důležité odvětví světové ekonomiky díky jeho podílu na světovém HDP, schopnosti vytvářet bohatství a pracovní místa v mnoha zemích. Podle současných statistik UNWTO cestovní ruch vytváří 1 z 11 míst po celém světě a to buď přímo, nebo v souvisejících odvětvích. Během několika posledních desetiletí cestovní ruch se stal mezinárodní ekonomickou aktivitou se značným podílem na mezinárodním obchodu. Celková výše exportu cestovního ruchu dosahuje 30% světového exportu komerčních služeb a 6% z celkového exportu zboží a služeb.

Evropa, která je nejnavštěvovanějším regionem cestovního ruchu na světě, v roce 2011 zaznamenala 504 milionů zahraničních turistů, což představovalo 51 % všech mezinárodních turistických příjezdů na celém světě. Kromě toho, v roce 2011 Evropa měla největší podíl (45%) na příjmech z mezinárodního cestovního ruchu, což odpovídalo 463 miliardám amerických dolarů. Cestovní ruch představuje třetí největší sektor v ekonomice EU po odvětví obchodu a distribuce (maloobchod a velkoobchod) a stavebnictví.

Mezinárodní cestovní ruch zahrnuje příjezdovou a výjezdovou turistiku a je uznáván jako důležitý faktor rozvoje mnoha ekonomik. Ekonomické přínosy z mezinárodního cestovního ruchu však nejsou rovnoměrně rozděleny po celé Evropě, což je způsobeno odlišností zemí EU ve vztahu k bilanci cestovního ruchu. Z tohoto důvodu bilance cestovního ruchu zůstává klíčovým prvkem pro zjišťování, zda země těží z cestovního ruchu, nebo nikoliv.

K dnešnímu dni existuje velmi málo publikací, ve kterých se pojednává o bilanci cestovního ruchu a jejím vztahu k platební bilanci a geografické poloze, stejně jako je málo zkoumaná aplikace statistických metod a finanční analýzy k vyhodnocení determinant ekonomické výkonnosti hotelových podniků. Tento výzkum vyplňuje tuto mezeru v poznání a poprvé poskytuje komplexní analýzu makroekonomických aspektů cestovního ruchu a zároveň nabízí nové poznatky a závěry plynoucí z měření výkonnosti hotelových podniků pomocí univerzálních operačních ukazatelů a finančních indikátorů.

Struktura disertační práce zahrnuje pět kapitol, z nichž kapitola č. 2, kapitola č. 3 a kapitola č. 4 jsou empirické kapitoly.

První kapitola poskytuje úvod do zkoumané problematiky, uvádí cíle a hypotézy práce. Zároveň tato kapitola obsahuje metody práce, přínos výzkumu a strukturu práce.

Druhá kapitola je věnovaná makroekonomickým aspektům cestovního ruchu a zjišťování jeho významu pro ekonomiky EU. Tato část práce hodnotí ekonomické efekty mezinárodního cestovního ruchu na evropské ekonomiky. Zde je poskytnuta komplexní analýza bilance cestovního ruchu v 25 ekonomikách EU v období 2004-2011 s využitím metodiky platební bilance. Zároveň je tady provedena analýza vhodnosti jiných existujících metodických koncepcí jako soustava národních účtů a satelitních účtů cestovního ruchu pro účely vyhodnocení ekonomických účinků mezinárodního cestovního ruchu na makroekonomické úrovni. Bylo zjištěno, že v současných podmínkách metodika platební bilance je jediným vhodným přístupem, zajišťujícím konzistentnost statistických dat pro měření ekonomických efektů mezinárodního cestovního ruchu. Rozdíl mezi příjezdovou a výjezdovou turistikou představuje položku cestovní ruch v běžném účtu platební bilance, a je klíčovým faktorem pro vyhodnocení přínosů mezinárodního turismu do ekonomiky země.

Na základě analýzy bilance cestovního ruchu bylo zjištěno, že země EU se liší rolí, kterou cestovní ruch hraje v jejich ekonomikách. Objasnění tohoto zjištění bylo uskutečněno výpočtem indexů komparativních výhod (Balassa indexu) pro rozvoj cestovního ruchu. Jelikož během posledních dvou století je teorie komparativních výhod považována za jedno z hlavních objasnění mezinárodního obchodu, index komparativní výhody je považován za vhodný nástroj. Klíčová otázka, zda země s kladnou bilancí cestovního ruchu zároveň mají i komparativní výhody pro jeho rozvoj, byla ověřena výpočtem Ballassa indexu. Hodnoty indexu potvrdily existenci komparativních výhod u České republiky a dalších třinácti zemí EU. Zároveň tato práce ukázala, že geografie je hlavním faktorem pro existenci komparativních výhod v turismu.

Třetí kapitola je zaměřená na informace o hotelovém sektoru a statistickou analýzu operačních indikátorů hotelů. Hotelový sektor hraje důležitou roli v cestovním ruchu jak z hlediska příjmů a zaměstnanosti, tak i v celkové image turistické destinace. Ubytovací služby v EU podle statistik Eurostatu poskytuje více než 267 000 podniků, z toho je 150 000 hotelů a podobných ubytovacích zařízení. Sektor hotelů a podobných ubytovacích zařízení vytváří více než 30% hrubé přidané hodnoty v pohostinství (hotely a restaurace).

V této části práce je zkoumaná otázka významu jednotlivých operačních ukazatelů jako míry obsazenosti a průměrné denní sazby za hotelový pokoj v generování tržeb hotelů. Pro tento

účel byla uskutečněná statistická analýza, která zahrnovala vícerozměrné regresní modely s využitím dat z 2194 hotelů umístěných na území České republiky, Rakouska a Slovenska. Výzkum odhalil, že řízením obsazenosti hotelu lze dosáhnout vyšších tržeb než změnou průměrné ceny za hotelový pokoj.

Dále ve třetí kapitole byl popsán problém sezónnosti v hotelovém sektoru a možnosti jeho eliminace poskytováním dodatečných služeb, jako například lázeňských procedur. Srovnávací statistické analýzy návštěvníků v hotelových ubytovacích zařízeních a v lázních České republiky ukazují na menší sezonní kolísání počtu hostů v lázních, což dokazuje, že tato specializace může do jisté míry eliminovat negativní dopady sezónní poptávky a tím i potenciálně zvýšit výkony lázeňských podniků. V závěru kapitola obsahuje klíčové informace o rychle se rozvíjícím sektoru lázeňství a wellness, včetně informací o tomto sektoru v České republice. Spa a wellness již nejsou jen trendy, ale stávají se významnou součástí rychle se rozvíjejícího trhu cestovního ruchu zaměřeného na zdraví.

Čtvrtá kapitola je věnovaná aplikaci nástrojů finanční analýzy na největší lázeňské podniky v České republice. Jednalo se o komplexní ověření předpokladů, že lázeňská hotelová zařízení i přes vysoký podíl dlouhodobého majetku a nízké ziskové marže, které jsou typické pro hotelnictví, jsou schopna generovat zisk. Kromě toho, tato kapitola obsahuje rozsáhlý výzkum metod a ukazatelů (efektivity, zadluženosti, rentability a aktivity) s největší vypovídací schopností a univerzálním použitím pro měření ekonomické výkonnosti podniků. Lázeňské společnosti České republiky ukázaly solidní výkon ve sledovaném období, přičemž zde také byl pozorován vztah vlivu geografické polohy na ekonomický výkon.

Pátá kapitola obsahuje diskuze, výsledky a závěry práce. Tato kapitola shrnuje výsledky předchozích částí práce a obsahuje klíčové závěry. Autor disertační práce na základě existujících publikačních zdrojů diskutuje vlastní výsledky s jinými autory. Tato část dává závěry výzkumu do širších souvislostí a objasňuje nerovnoměrný význam cestovního ruchu v ekonomikách EU. Zároveň zde práce nabízí interpretaci dosažených vlastních výsledků hodnocení operačních indikátorů hotelů a diskutuje je s dostupnými nejmodernějšími publikačními zdroji v rámci tzv. koncepce „revenue managementu“. Jelikož každé rozhodnutí při řízení firmy má finanční důsledky, autor odůvodňuje role, které hrají finanční indikátory v řízení podniků.

Závěry disertační práce shrnují potvrzení stanovených hypotéz a ukazují, že cestovní ruch vzhledem k jeho vlivům na spotřebu, investice a čistý export členských zemí EU se stává

významným faktorem přispívajícím k makroekonomické stabilitě. Význam mezinárodního cestovního ruchu pro země EU se liší v závislosti na jeho podílu ve struktuře celkového exportu. Analýza platební bilance a vyhodnocení role cestovního ruchu poskytla relevantní závěry a poprvé komplexně vyhodnotila cestovní ruch jako důležitou kategorii mezinárodního obchodu zemí EU. Statistická vyhodnocení operačních indikátorů hotelů umožnila přispět do současné teorie „revenue managementu“, která se zabývá maximalizací tržeb pomocí optimalizace hotelových indikátorů. Finanční analýza uskutečněná na vzorku největších lázeňských podniků České republiky splnila cíl práce zaměřený na výběr optimálního množství indexů s maximální vypovídací schopností o finančních výkonech a stavu podniků.

Víme, jak jsou důležité nové vědecké výstupy v oboru cestovního ruchu, proto tento výzkum přináší nejmodernější poznatky a komplexně zkoumá cestovní ruch v perspektivě makroekonomické a finanční. Zajišťuje tím soulad s požadavky moderních postdisciplinárních metodických přístupů, které vyžadují zkoumání komplexních jevů, jako je turismus, pomocí komplexních metod.

## Abstract

Recently tourism has been widely considered as an important sector of global economy given its capacity to distribute wealth and create jobs. According to the recent UNWTO statistics, tourism creates 1 in 11 jobs worldwide either directly in the industry or in related sectors. During past several decades tourism became an international economic activity with considerable contribution to international trade with associated implications for international business as a broader concept. Furthermore, tourism exports account for 30% of the world's exports of commercial services and 6% of overall exports of goods and services.

Europe being the most visited tourism region in the world accounts for 504 million of foreign tourists that represents 51% of all international tourist arrivals worldwide. Furthermore, Europe holds the largest share of international tourism receipts (45% share), reaching US\$ 463 billion in 2011. Tourism represents the third largest sector in the EU economy after the sector of trade and distribution, and construction.

International tourism comprises inbound and outbound tourism and it is recognized as an important driver for many economies. However, the benefits from international tourism are not equally distributed throughout Europe as the countries differ in their travel balances. Tourism balances therefore remain the key elements in understanding whether the country benefiting from the travel industry or not.

To date there are very limited publications available on travel balances in their relations to the balance of payments and geographic locations, and on application of statistical and financial analysis to the hotel sector. This research fills this deficit and for the first time provides a complex analysis of the macroeconomic aspect of tourism and builds new insights in measurement of hotel performances analyzing both the uniform hotels indicators and financial ratios in their relationships to the revenue generation.

The structure of the study reflects the main research goal to provide a complex analysis of tourism in EU economies with its implications for the tourist businesses economic performances. The thesis covers five parts: introduction, macroeconomics of tourism, hotel sector indicators and statistical analysis, the application of financial analysis techniques to spa hotels in the Czech Republic, discussion and conclusions.

The first part provides an introductory overview of thesis by presenting the general background and rationale of the study, followed by research objectives and hypotheses, methodology, and principal definitions used. In its last sections contribution and structure of

the thesis are provided.

The second part provides a complex overview of the international tourism contribution to the 25 EU economies using the balance of payments approach during the period 2004-2011. This part assesses the economic impacts of international tourism on European economies and describes the framework suitable for the evaluation of tourism contribution on the macroeconomic level. The difference between inbound and outbound tourism represents travel account within the balance of payments, and it is a key determinant for the estimating the international travel contribution to the country's economy. Moreover, EU countries differ in the role of tourism playing in their economies, the first chapter of this thesis reveals why this phenomenon occurs and verifies this by computing the comparative advantages indices. This research verifies the existence of comparative advantages for the tourism development expressed in values of the Balassa index with the link to the tourism contribution in 25 EU economies. Present research has revealed that geography is a main factor for existence of the comparative advantages. Czech Republic together with another thirteen EU countries has shown the existence of comparative advantage for exports of tourism services together with the positive travel balances, proving that the existing comparative advantages were used.

The third part focuses on the hotel sector performances due to its important role in terms of money generation, creating the overall image of tourist destination as well as its employment potential. Recently hotels and similar establishments generate more than 30% of the gross value added within the hospitality industry. The EU accommodation services sector accounts for the 267 000 businesses in total, 150 000 from which were hotels and similar establishments. This part of research provides an overview on the hotel industry in EU countries and investigates the significance of hotel uniform indicators such as occupancy, average daily rates in revenue generating for the hotel performance evaluation. The statistical analysis which encompasses the multivariate regression models of 2194 hotels data located in the Czech Republic, Austria and Slovakia has revealed and explained that hotel occupancy is superior to other indicators for generating of higher revenues.

In this part of the thesis a problem of seasonality in hotel sector and the options of its elimination were described providing the comparative statistical analysis of visitors in hotel accommodation facilities with spa hotel visitors in the Czech Republic. Results has confirmed that existence of spa division in hotels could be an option for hotel performance increase since it may to the certain extent eliminate of seasonal demand negative impacts.



The fourth part provides an application of financial ratios to spa hotels performances in the Czech Republic. This was a complex verification of assumption that spa hotel facilities despite the high share of fixed assets and low profit margins typical for the hotel sector are able to generate profits despite changing demand. Furthermore, this chapter contains extensive research on the methods and suitable indicators with the greatest explanatory power for the efficiency and the profitability with the universal application to the different types of hotels. Spa hotels of the Czech Republic have shown solid performance that is supported by the spa hotel statistics.

Conclusion part of the thesis provides the results and implications of the present research. This part of the thesis provides a discussion of research results with the existing literature. This section puts the research findings into a broader context and provides clarification of unequal importance of tourism in the 25 EU economies. In addition this chapter offers an exhaustive interpretation of hotel operating indicators results achieved by statistical analysis and discusses them with the latest publications available within the framework of "Revenue Management". Since each decision in the management of the company has financial implications author provides a justification of the role played by financial indicators in corporate governance.

Conclusions summarize key findings and verifications of research hypotheses. Here author points out that tourism due to its effects on consumption, investment and net export of EU member states is becoming an important factor contributing to macroeconomic stability. At the same time, the importance of international tourism for EU countries varies depending on its share in country's total exports. Analysis of the balance of payments and the evaluation of the role of tourism provide relevant conclusions that tourism is an important category of international trade in EU countries. Statistical evaluation of hotel operating indicators provided in this research enables to contribute to current theories of Revenue Management, which deals with maximizing sales through optimization of hotel indicators. The financial analysis performed on a sample of the largest spa operating companies in the Czech Republic has fulfilled the objective of the work focused on the selection of optimal set of indicators with the high explanatory power of financial performance and condition of the companies examined.

We know how important new scientific research is in the field of tourism. Thus this research provides new insights and comprehensively examines tourism in macroeconomic and financial perspectives. Therefore it ensures compliance with the requirements of modern post-

disciplinary methodological approaches that require exploration of complex phenomena such as tourism using complex approaches.

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## Glossary of Abbreviations

(AMECO)	Annual macro-economic database European Commission
(BoP)	Balance of Payments
(CZSO)	Czech Statistical Office
(EU)	European Union
(GDP)	Gross Domestic Product
(GNI)	Gross National Income
(GVA)	Gross Value Added
(NACE)	classification of economic activities in the European Community
(OECD)	Organization for Economic Cooperation and Development
(ROA)	Return on assets
(ROE)	Return on equity
(SNA)	the System of National Accounts
(TSA)	the Tourism Satellite Account
(UNWTO)	World Tourism Organization
(WTTC)	World Travel and Tourism Council

## ***Chapter 1. Introduction***

### **1.1. Introduction**

The substantial growth of the tourism activity marks tourism as one of the most remarkable economic and social phenomena of the past century.  
(World Tourism Organization [UNWTO], 2008).

International tourism is recognized as an important driver for many countries, as it brings foreign currency, tax revenues and supports the economic growth. Despite occasional shocks tourism industry is dynamically developing throughout past decade. Tourism as an internationally traded service has become one of the world's major trade categories. In 2012 as a worldwide export category, tourism ranks fifth after fuels, chemicals, food and automotive products, while ranking first in many developing countries. This has been proven by recent facts that the tourism industry has outperformed the global economy in 2012 i.e. grew faster than manufacturing, retail, financial services and communications (UNWTO, Press Release, 2013). According to recent UNWTO statistics tourism exports account for 30% of the world's exports of commercial services and 6% of overall exports of goods and services (UNWTO, 2013). The industry has grown its total contribution to global GDP by 3% and increased the number of jobs by 5 million to 260 million. This indicates that, for the first time, one in 11 of all jobs in the world are now supported by travel industry. More than 10% of all new jobs created in 2012 were from the industry. The share of Travel & Tourism industry to the global GDP was 9 % in the year 2012 with value of US\$ 6.6 trillion (World Travel and Tourism Council [WTTC], 2013).

Among various regions Europe is a leading tourism destination where tourism is a significant source of revenue for several countries. Notwithstanding the fact that tourism is often placed among the world's largest economic industries there is a lack of publications focused on the complex economic evaluation of this phenomenon.

This research endeavors to create a complex image on tourism from the macroeconomic and financial perspectives.

According to goals and hypotheses the thesis comprises the introduction chapter, three empirical chapters and the conclusion part which summarizes results and provides implications of research for the tourism industry.

## **1.2. Thesis Background and Rationale**

Tourism has interrelated with many industries and sectors of economy and has an important share in international trade although its economic significance is uneven in global scale. Besides travel for leisure tourism enables of business mobility and connectivity. Thus tourism becomes relevant for the field of international business studies.

At the same time significance of tourism on the level of national income varies in different countries with associated implications for the firms operating in travel markets. It appears that there are a set of factors that determining the extent of the development of tourism industry in different countries as well as a number of companies related to travel. Among these factors are macroeconomic environment and the geography, which create or not the comparative advantages for the development of tourism, and management practices focused on creation of the global competitive advantages as the main goal of the firms.

International business focuses on firms as the main bodies. According to Coles and Hall (2008) the firm has become the dominant unit of analysis in studies of international business. In this situation international business is used as a synonym for firms. In recent times, tourism related firms often have international operating activities which besides the exporting and importing may have significant operations outside their home countries. The choices about foreign operations are often made by firms due to existence of so called foreign location generated unique advantages. The typical example of these is the rapid growth of the international hotel chains. These hotels chains go internationally in order to use location advantages that are generally include access to new markets and customers as well as natural resources. Thus, the need for standardized performance measurement framework and indicators in firm's management became evident.

In terms of business efficiency it is worth to mention the global trends of standardizations in business practices and environment. According to Carpenter and Dunung (2011) the greater the level of standardization - both within and across markets - the greater the possible level of global efficiency. This could be seen in efforts of implementing the uniform account

standards (IFRS), as well as internationally recognized financial ratios and performance indicators. Recently in hotel business it becomes a common practice to use the universal performance indicators allowing to do international comparison of the economic performances of hotel enterprises.

Managing a business is complex of interrelated activities with the aim of valorization of money invested and profit maximization, therefore the fulfillment of the purpose the firm was established. In modern globalized world both volatility and complexity are on the rise. The global economy becomes more susceptible to crisis phenomena in key economic regions of the world. Moreover, in recent decade no sooner is one crisis over than the next one begins. Thus never before have firms been less certain about their future business development. At the same time leading economists acknowledge that forecasting economic results and management become very difficult. Even the question arises if management becomes art of the impossible?

This highly volatile economic environment encourages companies to seek for comprehensive indicators reflecting their economic performances with universal applicability. The current economic science has developed methods to prepare for unpredictable, even in very unstable times. But which way is the right one?

This dissertation is devoted to finding answers to these questions in tourism industry, which has been showing positive developments in both the Czech Republic and in most countries of the world.

There is a growing need in tourism research with the emphasis on tourism as an economic phenomenon. In line with this is the statement of Coles and Hall (2008) that “increased international mobility of people, capital, and firms means that tourism and international business are actually more academically relevant than ever” (p. 12). Recently it became evident that the complex nature of tourism requires new approaches to its study. A growing body of contemporary tourism research clearly shows the use of new approaches while building new insights.

The publication of Graburn and Jafari (1991) proposed that “tourism can be studied only if disciplinary boundaries are crossed and if multidisciplinary perspectives are sought and formed” (pp. 7–8). It has initiated the search of suitable approaches to study tourism as a complex phenomenon and to assess its economic and social effects. Therefore modern



approach should encompass different tools and techniques that cross the boundaries of one discipline and enable to study object as a holistic phenomenon. Recently such approaches got their name as post-disciplinary approach. It opens a new perspective in integration of knowledge without professional barriers.

Author's own research and conferences experiences, discussions of this research results with the recognized experts in this area from the University of Exeter (UK), University of Neuchâtel (Switzerland), Kurt Bosch Institute (Switzerland), and the School of hotel management in Lausanne (Switzerland) led to the understanding the necessity to analyses tourism from the different perspectives as a complex matter, using holistic or post-disciplinary approach.

The rationale of the thesis is straightforward and based on more than one consideration.

The thesis therefore uses insights from the theories of international trade, financial ratio analysis as well as statistical methods.

This research deals with the tourism as a holistic phenomenon and analyses tourism within EU in two dimensions: macroeconomic dimension, reflecting the contribution of tourism to the level of national income; and the firm's dimension, assessing their financial performance indicators.

The macroeconomic research on tourism in European Union is lacking in existing literature, providing an impetus for the author to assess the contribution of the tourism sector in EU economies, its relevance in international trade as well as GDP contribution. Thesis answer the questions why tourism is an important sector for certain countries and is not for the others?; and upon analysis of comparative advantages it examines the position of tourism services in international trade of EU countries.

In this research 25 European Union countries were analyzed. The choice of the countries was made due to the fact that all of them have been EU members since 2004, which for all countries offers a consistent framework of harmonized statistical data for analysis.

The second dimension is related to the firm's performance evaluation. Profit maximization through building the global competitive advantage is the main goal of all firms as it helps to maintain the business efficiency. The control whether the goal was achieved can be realized in performance measurement where financial performance still represents the core concept

(Suchánek, P. et al., 2012; Higgins, R., 2012; Quiry P., 2011). Performance measurement represents the key element of maintaining the competitive advantage and the long-term stability for the firms around the globe. It helps firms to align their daily activities to strategic objectives (Parmenter, 2010). This thesis measures financial performances in hotel sector as it represents the key tourism segment. This is due to the fact that hotels unlike food and restaurant services are created to serve entirely tourists either foreigners or domestic. Hotels are also the key sources of tourist flows statistics since a very definition of tourist is inseparably linked to the accommodation sector. According to the UNWTO tourist (overnight visitor), i.e. temporary visitors if his/her trip includes an overnight stay.

The second reason is that accommodation services are the integral part of travel packages created by tour operators. Moreover hotels as the major component in the tourist infrastructure add to the overall image of tourist destinations.

Since all economic activities pursues the one goal of the money generation then it comes to a need to use statistical methods to determine the relevance of universal performance hotel benchmarks in terms of revenues generating. The statistical analysis which encompasses the multivariate regression models of 2194 hotels data located in the Czech Republic, Austria and Slovakia has revealed and explained that hotel occupancy is superior to other indicators for the revenues generation.

Besides this all hospitality businesses encounters with the problem of seasonality of tourist demand, which is particularly important for the hotel industry. Therefore this research analyzes whether the hotel specialization mitigates seasonal fluctuations in demand and has a positive effect toward profitability. This analysis was performed on the biggest spa hotel operators in the Czech Republic as a rapidly evolving tourism sector.

### **1.3. Research objective and hypotheses**

Recently tourism has emerged among the world's largest industries. Europe is leading among the regions where tourism has an important position in economy.

However, the benefits from international tourism are not equally distributed throughout Europe. The geography, structure of economy, size and exports specialization are the key factors that determine the role of tourism for these economies. Besides macroeconomic aspects seasonality, rapid growth of certain destinations which results in increasing competition within travel industry makes the questions of profitability measurement for hospitality businesses of great importance. The hotel industry represents a key sector of tourism, thus this study will provide analysis of its performance indicators.

Therefore, the possible positive effects of international tourism toward the economy, analysis of seasonal fluctuations in demand and the evaluation of hotel profitability led the author to examine them in this study.

This thesis has set the following objectives:

1. to analyze and describe the tourism macroeconomic position in terms of the economic significance of a tourism for the EU economies and in the relations to the country's GDP and international trade;
2. to reveal the economic importance of tourism as a relevant category of an international trade and to define the ability of countries to capitalize on the benefits of travel industry;
3. to analyze the determinants of profitability for the hotel sector in the Czech republic, Slovakia and Austria;
4. to select the indicators of financial analysis relevant for the evaluation of economic performances of the spa hotel operators in the Czech Republic.

The objectives of the thesis led to the formation of the four research hypotheses:

Hypothesis 1.

Tourism is an important component in economies and international trade in EU 25 countries.

Hypothesis 2.

Hotels are key sector in the infrastructure of the tourist destinations. Hotels are the indicator of the efficiency of the tourism industry.

Hypothesis 3.

Spa specialization as an indirect factor in increasing the efficiency of the hotel facility as spa amenity reduces the pressure of seasonal fluctuations in demand on profits.

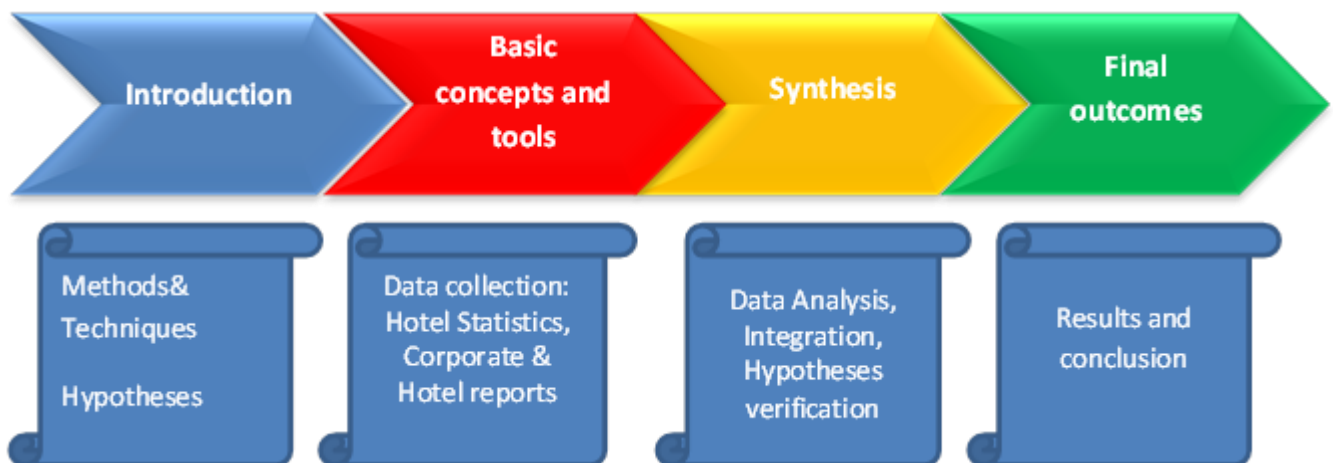
Hypothesis 4.

Financial analysis is an appropriate tool for the evaluation of hotel performance.

## 1.4. Methodology

The research process in the thesis had passed through four consecutive stages as presented in Figure 1.

- I. **Introduction** (formulation of research questions, objectives and hypotheses);
- II. **Basic concepts and tools** (collection and processing information from the theory of international trade, financial analysis, finding the sources of information relevant for present research);
- III. **Analysis and Integration;**
- IV. **Results and Conclusions.**



**Figure 1. Stages of research process in the thesis.** Source: own elaboration based on Veal (2011).

The method of deduction was employed in the dissertation research. This approach is found suitable for the purposes of the thesis because of its top-down logic analysis (i.e. from macroeconomic environment to the study of company's performances) and its ability to provide research hypothesis verifications in a way that logical conclusions are drawn from a set of general premises.

In this research 25 European Union countries were analyzed. The choice of the countries was made due to the fact that all of them have been EU members since 2004, which for all countries offers a consistent framework of harmonized statistical data for analysis.

All the data used in present research was collected from the Annual macro-economic database European Commission (AMECO), Eurostat, and Organization for Economic Cooperation and Development (OECD) statistical databases (AMECO, 2013; OECD, Statistics, 2013; Eurostat, 2013). Travel export is considered as a segment of overall export. The software used for the data processing was MS Excel.

Balance of payments approach was employed for the purposes of present research (International Monetary Fund [IMF], 1993). This is a universal source of information that allows to assess the economic impacts of international tourism on European economies.

The theoretical insights of Ricardian, the Heckscher-Ohlin and Krugman's models were used in connection to determination of countries comparative advantages and structure of their international trade (Krugman & Obstfeld, 2003; Leamer, 1995).

Comparative advantage determination was analyzed using Balassa Index (BI) (Balassa, 1989; Hinloopen & Marrewijk, 2001). This analysis was performed for EU-25 economies in order to determine whether tourism is a country's strong sector in exports. The BI values higher than 1.0 show the existence of comparative advantage, and the BI values below 1.0 does not confirm this in the set of countries analyzed.

Statistical software package Gretl 1.9.7 was used for multiple regression evaluations [Gretl, 2011]. The econometric analysis (multivariate regression model) was performed for 2194 hotels located in the Czech Republic (693 hotels), Slovakia (115 hotels) and Austria (1386 hotels) over the period 2005-2011. The hotel data was provided by the STR Global.

Microsoft Excel spreadsheet statistical analysis was used in order to find seasonal indices of visitors' distribution of in the Czech Republic. Time series contains monthly statistics for the past 12 years, i.e. from 2000 to 2012, obtained from the Czech statistical institute (Statistical office of the Czech Republic, Spa statistics, 2013). Seasonal indices were calculated through the use of moving averages.

Financial analysis ratios of liquidity, solvency, activity and profitability were employed for the evaluation of economic performances and their major determinants on the several spa hotel operators in the Czech Republic (Harris, 2011).

## **1.5. Principal definitions**

International tourism comprises inbound and outbound tourism.

Inbound tourism or the overall export of tourism services is directly connected to the arriving foreign visitors into the host destination and is generally associated with the inflow of foreign currencies, representing benefits for the host country economy.

Outbound tourism is the phenomenon of opposite nature, representing the outflow of money caused by residents travelling to foreign destinations.

The National Accounts (SNA) represents a broad and comprehensive statistical system aimed at describing a national economy. It provides the conceptual framework required for developing macroeconomic equations and measuring all aspects of an economy.

The Tourism Satellite Account (TSA) measures the economic contribution of tourism which is in the TSA framework viewed as an interlinked set of economic (monetary) flows that can be traced from the tourism consumption units (both resident and non-resident visitors) to the productive units, where the various industries produce and import the goods and services purchased by visitors.

The balance of payments (BoP) is defined as statistical statement that summarizes, for a specific time period, usually a year, all the economic transactions of a given economy with the rest of the world.

Financial management as a complex nature comprises the following components: financial decision-making, financial analysis, financial planning and financial control.

Financial analysis is an important part of corporate governance. This analysis provides feedback on past activities and results of the company, and thus becomes a key in preparing for high-quality decisions as well as in financial control.

Economic performance of the firm is usually assessed in terms of the achievement of economic objectives. It is an assessment of a firm in relation to its assets, liabilities and overall market strength.



A multivariate regression model is a statistical process for estimating the relationships among variables. It helps to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

## 1.6. Contributions of the study

In recent years the world economy and the tourism sector have experienced an increasing pace of changes and volatility. Understanding the economic implications of such changes provides an impetus for the continuous development of research in different areas including tourism and management practice. According to Law et al. (2012) academic research supplements the ongoing development of the hospitality industry and plays an important role in extending knowledge. Therefore, academic research can benefit an industry by equipping it with the theoretical principles to guide practitioner's decisions (van Scotter & Culligan, 2003).

The thesis builds new insights and expands the boundaries of knowledge in following two perspectives.

1. **Macroeconomic perspective**, which creates the framework for analysis of tourism as a significant economic sector particularly in EU countries. For the first time thesis provides the complex assessment of the role of tourism in EU 25 economies simultaneously with the description of the major determinants for the tourism development. The relevance of macroeconomic approach became evident in two dimensions analyzed in the thesis. First, it considers international tourism within the BoP, and reveals the role of geographic location for the country's balance of travel. Second, present research verified theoretical assumptions of international trade proposing that country specializes in those kinds of export categories where it has a comparative advantage. Research provides calculations of the Balassa Index, which enables to estimate the comparative advantages in export of tourism services. A strong positive correlation between the existence of comparative advantages in tourism and the high share of tourism services in exports was found in 25 EU economies.

Moreover, macroeconomic environment explains the fluctuations of company's performances in relation to the general business cycle. This makes connections to the second perspective of this research.

2. **Hospitality companies perspective**. This perspective encompasses analysis of performance determinants in hotel facilities. This thesis offers, for the first time, a comprehensive and in-depth econometric analysis of the relevance of occupancy and average daily rates for hotel revenues, verified in 2194 hotels in the Czech Republic, Austria and Slovakia. Analysis of these operating indicators is a cornerstone of revenue management concept widely used by hoteliers. It was found in all countries analyzed that changes in

occupancy rate have greater effects on hotel revenues than changes in hotel room rates. Besides this, thesis analyses the problem of seasonality in hotel sector and the options of its elimination. It was statistically proved that spa industry has less seasonal fluctuations in demand compared to the rest sectors of tourism.

Finally, this thesis provides an analysis of spa operating company's economic performances within the framework of financial analysis. The choice of financial indicators comprises those with the highest explanatory power allowing to create a complex picture of the company's economic performances. An additional contribution of the thesis is that it settles the terminological inconsistency of financial indicators, providing their distinct structure and uniform names performed on the basis of reliable accounting and corporate finance publication sources.

## **1.7. Structure of the thesis**

The thesis comprises five chapters.

Chapter 1 provides an introductory overview of thesis by presenting the general background and rationale of the study, followed by research objectives and hypotheses, methodology, principal definitions used. In the last sections contribution and structure of the thesis are provided.

Chapter 2 provides a complex overview of the international tourism contribution to the 25 EU economies using the balance of payments approach during the period 2004-2011. This chapter assesses the economic impacts of international tourism on European economies and describes the framework suitable for the evaluation of tourism contribution on the macroeconomic level as a share to the country's GDP and in relation to the international trade as considering tourism within balances of services. Moreover, EU countries differ in the role of tourism playing in their economies, the first chapter of this thesis reveals why this phenomenon occurs and verifies this by computing the comparative advantages indices.

Chapter 3 empirically examines the uniform hotel performance indicators in selected EU countries, such as the Czech Republic, Austria and Slovakia. The statistical analysis encompasses the multivariate regression models in order to determine the significance of hotel uniform indicators such as occupancy, average daily rates in revenue generation.

In this part of the thesis a problem of seasonality in hotel sector and the options of its elimination were described providing the comparative statistical analysis of visitors in hotel accommodation facilities to spa hotel visitors in the Czech Republic. Results have justified the rapid growth of spa and wellness sector.

Chapter 4 discussed the internationally recognized methods of financial analysis and suitable indicators with the greatest explanatory power for the efficiency and the profitability measurement with the universal application to the different types of hotels. This chapter provides an application of financial ratios to the spa hotels performances in the Czech Republic. This was a complex verification of assumption that spa hotel facilities despite the high share of fixed assets and low profit margins typical for the hotel sector are able to generate profits despite changing demand.

Finally, Chapter 5 concludes the thesis by summarizing the key results and discusses the possible implications of this dissertation.

## ***Chapter 2. Macroeconomics of tourism***

### **2.1. Introduction**

Europe is leading among the regions in terms of numbers of tourist and receipts generated by tourism. Tourism has interrelated with many industries and sectors of economy and has an important share in international trade although its economic significance is uneven in different countries.

It appears that there is a set of factors that determine the extent of the development of tourism industry and therefore its economic importance in different countries. Therefore, the objective of this chapter is to find and analyze these factors in EU 25 countries along with analysis of the share of international tourism in their export structures. Thus, this part of the thesis provides insight into international tourism's economic importance and the universal statistic approaches allowing to estimate its economic effects. The macroeconomic analysis of tourism effects in EU builds on official statistics provided by Eurostat for EU 25 countries over the period 2004-2011.

This chapter addresses the hypothesis # 1 of the thesis that” **Tourism is an important component in economies and international trade in EU 25 countries**”.

Therefore, chapter provides answers to questions why EU countries differs in their travel balances; why this occurs and what is the role of tourism in international trade of EU 25 economies?

Throughout human history economies evolve to accommodate for changing societies. Recently an increasingly globalized world, technological progress, shifts in people's lifestyle, income and preferences for travel require changes in the set of productive activities that supply current needs. The emergence of relatively new fast growing global economic sector of tourism reflects those changes.

Today tourism represents an important sector of global economy exerting multiple economic effects as well as assuming them from other economic sectors. This happens through the different industries producing goods and services demanded by a special category of travellers, identified as visitors, which are the fundamental element of tourism.

International tourism is recognized as an important driver for many countries, as it brings foreign currency, tax revenues and supports the economic growth. Tourism as an internationally traded service has become one of the world's major trade categories. According to recent UNWTO statistics tourism exports account for 30% of the world's exports of commercial services and 6% of overall exports of goods and services (UNWTO, 2013).

The impacts of tourism run deep into global economy, as it stimulates the development of accommodation, as well as transportation infrastructure. According to the recent UNWTO statistics, tourism creates 1 in 11 jobs worldwide either directly in the industry or in related sectors (UNWTO, 2013). The share of Travel & Tourism industry to the global GDP was 9 % in the year 2011 with value of US\$ 5.991.94 billion. This is more than the automotive industry which accounts for 8.5% of the global GDP (WTTC, 2013).

Moreover, despite the occasional shocks tourism is considered to be among the fastest growing industries in the world. Over the past six decades tourism has experienced tremendous growth from 25 million in 1950 (1% of the world population), to 1.035 billion in 2012 (14.7% of the world population) (Population Reference Bureau, 2012). The recent economic crises of 2008-2009 had a significant impact on the global tourism sector, however it lasted a relatively short period, the upturn started in 2010 and sustained through 2011-2013. In addition, indicators of 2012 of global tourism are encouraging; in fact, it has exceeded maximums, reached in 2007, before crisis.

Recent developments of hospitality industry demonstrate significant improvements in performance indicators in most regions of the world. According to the World Tourism Organization global travel increased by 5.3 % in 2012 compared with 2011 (UNWTO, 2013). As it was anticipated tourism has exceeded one billion of international arrivals at the end of 2012.

## **2.2. An overview on significance and the recent trends in international tourism in the EU and the Czech Republic**

Europe being the most visited tourism region in the world accounts for 504 million of foreign tourists that represents 51% of all international tourist arrivals worldwide in 2011.

Furthermore, Europe holds the largest share of international tourism receipts (43% share), reaching US\$ 463 billion in 2011. The specifics of European tourism are also the fact that about 84% of tourist trips were made within the EU. This makes the EU tourism industry of particular importance and we will focus on it in present research.

In recent years the role played by tourism, for both businesses and citizens, has grown substantially worldwide. This is consistent with the global trend in developing a growing share of the tertiary sector in many economies which is made-up of services. For instant, 25 member countries of the European Union (EU-25) have an average share of services as 57.5% in their economies (AMECO, 2013). The tourism industry is considered to be an important sector within the EU economy. Tourism represents the third largest sector in the EU economy after the sector of trade and distribution, and construction. According to estimates provided by the European Commission, tourism in 2011 accounts for more than 5 % of the EU gross domestic product (GDP) and its share grows up to 10% of EU GDP if related sectors, such as transportation and culture are considered (European commission, Communication, 2010). The inbound tourism itself is also widely considered as a source of foreign capital necessary to maintain economic development and create jobs. This has placed inbound tourism among important export industries and as a source of financial receipts. Due to Eurostat statistics, export of tourism services in EU-25 countries has amounted to 267 514 million of euro in 2011 (Eurostat, Tourism trends - Statistics Explained, 2013).

Tourism creates constantly growing number of businesses and employment opportunities worldwide as well as in many European countries. According to Eurostat statistics tourism comprise of 1.84 million businesses employing about 12-14 million of people (TourismLink, 2012). Furthermore, tourism as an internationally traded service has become one of the world's major trade categories and fastest-growing economic sectors in the world that became particularly evident recently (UNWTO, 2012; United Nations, Manual on statistics of international trade and services, 2010). The average growth of 2.88% in international tourist receipts in EU over the period 2010-2012 outpaced the EU average GDP growth of 0.93 % (Eurostat, EU Member States GDP growth rates, 2013). This makes tourism an important for the both employment opportunities and overall export revenues.

Tourism comprises the various industries or subsectors. According to European Commission classification, the structure of tourism consists of following subsectors:

1. accommodation (hotels and similar establishments),
2. intermediaries (tour operators and travel agents)



### 3. food and beverage (restaurants, bars and catering activities).

Due to Eurostat statistics over 1 840 000 enterprises operated in EU. The share of food and beverage was 80.5% of total businesses, while accommodation and travel intermediaries had 14.5% and 5% respectively (TourismLink, 2012).

Tourism includes a wide range of products and destinations and became an important factor for the regional development. Therefore, recently European governments have strengthened the support of tourism and consider this sector as one that has potential to back economic recovery given its capacity to distribute wealth and create jobs across the region.

On the other side is tourism demand where following specifics occurred, seasonal fluctuations in demand which is particularly high in the tourist accommodation, high income elasticity on traveling, which increases or reduces more easily than for many other products or services. Thus, spending on tourism generally decreases proportionally faster than consumers' income during times of economic slowdown. In addition, political or economic uncertainties could also change the tourism demand. These factors led to the understanding the need for coordination and support of tourism long term development on the European level.

In 2010, the European Commission adopted a Communication titled "Europe, the world's No 1 tourist destination, a new political framework for tourism in Europe" (European commission, Communication, 2010). This Communication intends to maximize the potential of EU financial policies and instruments for developing tourism as well as to define a new framework for actions to increase the competitiveness of tourism. It also proposed a need for consolidation of the European socio-economic knowledge base for tourism. These proposals are in line with the EU strategy for economic and social development 'Europe 2020'.

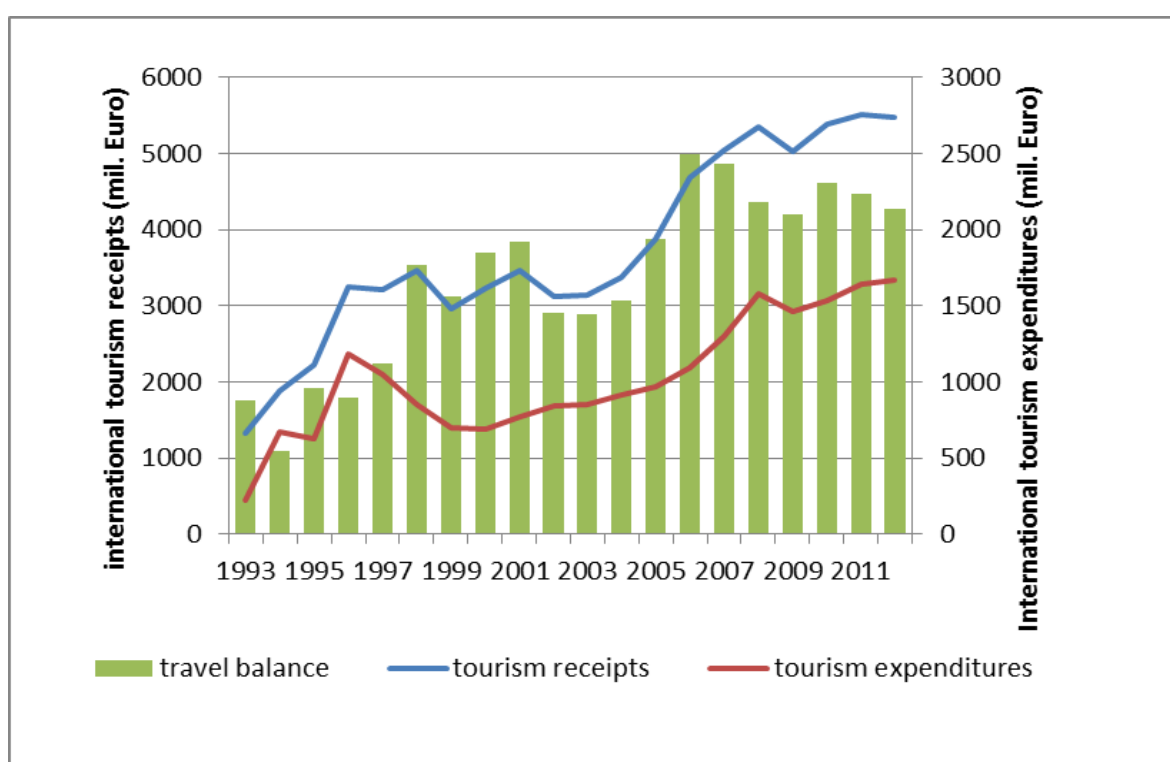
An example of EU new tourism related initiative is "Destination Europe 2020" strategy, a joint project between the European Commission and the European Travel Commission to strengthen the image of Europe in long-haul markets.

The substantial economic significance of tourism has created a need for creating a framework data to measure its effects in an economy.

In the Czech Republic tourism industry has showed a strong performance over 2010-2012. Similarly to the EU, tourism has outperformed the GDP in the Czech Republic in 2012. Tourism statistics has recorded an increase of 1.4% in total receipts and of 3% in arrivals that occurs despite the decrease in country's GDP in -1.0% in 2012 (Eurostat, 2013). Thus,

recently international tourism gained a growing importance for the Czech economy. For the same year tourism exports share on the GDP was 3.5% and is slightly increasing compared to 2011. The total receipts from the international tourism have reached 5.481 billion of euro, whereas expenditures were amounted as 3.346 billion of euro. Travel balance for the year 2012 was positive, and international tourism generated 2.135 billion of euros for the Czech Republic.

This amount of money could be recognized as a gain of Czech economy from the international tourism. Results are visualized in Figure 2, which reflects the long term positive travel balance in the Czech Republic.



**Figure 2. International tourism revenues and expenditures in the Czech Republic.** Source: own elaboration, using data from the Czech National Bank (Czech National Bank, Public Database, 2013).

### 2.3. Framework for the evaluation of tourism economic contribution: system of national accounts, tourism satellite accounts, and the balance of payments

The importance of regular, reliable, and comparable statistics on tourism is recognized by international organizations. Today, the United Nations World Tourism Organization and the International Monetary Fund have put in place a conceptual framework for gathering statistics and indicators in tourism.

European countries are working intensively on developing their statistics and economic analysis of tourism. The European Commission's Directorate-General for Enterprise and Industry make estimation on economic effects of tourism in the EU, as well as Eurostat produces statistics related to European tourism sector.

Tourism spreads its multiple effects on consumption, imports and exports as well as savings and production. In this regard a question of how to measure the tourism effects toward the different sectors of economy as well as its overall economic effects to national economies arises.

Therefore, there is a growing need to estimate tourism economic effects primarily in the scale of the country. The advantage of economics is in fact that its facets like production, consumption, exports, and expenditures are expressed in a uniform unit of measurement, which is money. Furthermore a universal category is transaction, which is the basic unit of economy allowing to precisely estimate the money flows in different sectors of economy. The United Nations and International Monetary Fund official documents on National Accounts and balance of payments identify tourism as a specific area of economic activity and point to the Tourism Satellite Account as a new appropriate tool for deriving key aggregates and internationally comparable indicators on the macro-economic contribution of the tourism sector world-wide (IMF, 1993; Eurostat, Essential SNA, 2013).

Thus tourism as a specific area of economic activity is identified in the system of National Accounts, balance of payments (BoP) and the tourism satellite account (TSA). The System of National Accounts (SNA) is recognized as a universal structure that encompasses the estimation of economic statistics which contain tourism statistics. The SNA represent the core framework for estimations of consumption, imports, exports, savings and production by industries. Moreover, the SNA includes satellite accounts such as TSA, which was created for deriving key aggregates and internationally comparable indicators on the macroeconomic contribution of the tourism sector world-wide.

Because the BoP, including the international investment position, forms an integral part of the National Accounts, there is complete concordance between them in concept and classification.

Considering the inbound and outbound tourism the balance of payments is recognized is the most appropriate approach thus far to get statistics. This is due to the fact that balance of payments is a finished and well established statistical approach for the accounting the all international transactions, used since 1993. Whereas TSA concept is still evolving, still cannot be considered as a finished approach. Its last update in 2008 despite the remarkable progress still does not show interactions of tourism with the rest of the economy, such as general government and households and, or with the rest of the world. This led to the situation, that the revenues such as tax revenue or levies from tourism for general government cannot be observed. In addition it is necessary to admit that the extent of use of TSA still varies a lot in EU countries, and the significant change in 2008 to TSA concept represent a certain obstacle to compare the long term tourism indicators. This was the main reason of use the BoP approach for the tourism macroeconomic analysis in 25 EU economies.

Due to the extensive use of the National Accounts, international tourism, balance of payments and the tourism satellite account terminology in this study, their definitions and general structure have been provided.

### **2.3.1. The System of National Accounts**

The economy needs a special framework in which to put measures of economic activities into practice. This framework has been developed gradually by economists and it represents what are called ‘national accounts’.

The SNA consists of a coherent, consistent and integrated set of macro-economic accounts: current and accumulation accounts, balance sheets and tables based on agreed concepts, definitions and accounting rules. From the stage of production of goods and services to the stage of their final disposal, innumerable transactions take place. National Accounts enable to understand how these various transactions are interrelated and provide us an idea of the working of an economy (OECD, National accounts at a glance, 2013).

The National Accounts represent a broad and comprehensive statistical system aimed at describing a national economy. It provides the conceptual framework required for developing macroeconomic equations and measuring all aspects of an economy.

The SNA provides a comprehensive and systematic set of statistics for the national economy, with information on economic transactions, involving a resident economic entity as well as transactions that involve economic relationships with non-resident entities, which are known as ‘rest of the world accounts’. Therefore the SNA describes production, income, consumption, accumulation and wealth.

The SNA represents universal set of accounting standards and is jointly published by the Commission of the European Community, the International Monetary Fund, the Organization for Economic Cooperation and Development, the World Bank and the United Nations (Eurostat, Essential SNA, 2013).

In the EU National Accounts have generally been compiled according to the European System of Accounts (ESA95) (United Kingdom, Office of national statistics, 2013). The European Commission issued its national accounting guidelines in the ‘European System of Accounts 1995’. The ESA95 is based on the SNA but is more detailed and precise. Within the European Community the national accounts play an important role in defining the economic contribution of member states and establishing criteria for membership of the monetary union. Thus concepts and classifications of the national accounts have been standardized on an international level and are laid down in international guidelines used by the most of the countries in the world including all EU member states.

Not only so, the concept of national accounts makes a substantial contribution to the quality and international comparability of the statistical data on economic activities. It describes transactions in national economies and the links between different national economies. National accounts concepts are based on the different systems in an economy, such as: business accounting, production, employment, productivity, monetary policy, inflation, budgetary policy, government finance, personal income, wealth and consumption, balance of payments, etc. (Eurostat, Essential SNA, 2013).

The SNA describes the economy using institutional sectors. The five institutional sectors are:

1. non-financial corporations,
2. financial corporations,
3. general government,
4. households,
5. non-profit institutions serving households.

6. and an additional link to the rest of the world which reflects transactions between residents and non-residents.

Institutional sector represents an approach where institutional units are grouped together. An institutional unit is defined as an economic entity that is capable, in its own right, of owning assets, incurring in liabilities and engaging in economic activities and in transactions with other entities (Eurostat, Essential SNA, 2013).

According to the SNA two types of institutional units exist in an economy: 1. Persons or a household; 2. Legal or social entities: (a) Corporations (financial and non-financial), (b) Non-profit institutions (NPIs); (c) Government units.

In the EU National accounts aggregate macroeconomic statistics by activity breakdown presented in the statistical classification of economic activities in the European Community (NACE). System of National accounts refers to the whole economy. The information contained in the sectoral accounts, is used to produce so-called aggregates, i.e. the most important macroeconomic indicators such as gross domestic product (GDP), production, expenditure and income as well as related indicators such as employment and productivity are the major indicators of the economic performance of a country (Eurostat, Main GDP aggregates and related indicators, 2012).

In addition aggregate indicator as Gross value added (GVA) represent as an essential measure of the economy performance. GVA measures the additional value created by a production process. Gross value added is defined as the value of output less the value of intermediate consumption (production related costs). Gross value added is a measure of the contribution to GDP made by an individual producer, industry or sector. Thus, the combined valued added in the economy results in GDP or gross national income (GNI). The institutional sector accounts record the further distribution of the generated income from production (profits), labor costs (wages and salaries) into consumption, savings, investment and financial transactions in balance sheets. Data for the SNA are collected from different sources such as household and production surveys, tax information and government income and expenditure information, are combined to achieve a consistent set of accounts, balance sheets and tables.

Thus the SNA data is suitable for the analysis and evaluation of the economic performance of industries, but also of sectors such as households and corporations.

### **2.3.2. Tourism Satellite Account**

The SNA incorporates satellite accounts, which serves the specific needs of particular industries. For the purposes of enabling a country to properly evaluate the tourism phenomenon TSA concept is used. Measurement of the economic contribution of tourism is viewed in the TSA framework as an interlinked set of economic (monetary) flows that can be traced from the tourism consumption units (both resident and non-resident visitors) to the productive units, where the various industries produce and import the goods and services purchased by visitors (UNWTO, Tourism as an internationally traded service, 2005). Being an SNA satellite structure, the TSA shares its multi-purpose system design, irrespective of a country's tourism structure or stage of economic development (Eurostat, Essential SNA, 2013).

The TSA enables comparisons of statistics on macroeconomic level. The TSA approaches tourism mainly from the consumption, production and employment side. Furthermore, TSA provides measures of tourism gross domestic product (GDP), tourism gross value added (GVA), tourism trade, and employment in tourism.

The TSA comprises ten tables. The first and second set of tables contains the data in monetary terms. The first set of tables encompasses the amount of goods and services consumed by visitors and produced or imported by industries. It is necessary to mention, that the tables on consumption and production are integrated which resulted in the measurement of tourism in the total production volume. Hence, from these tables is possible to calculate GVA, which is total production minus production related costs.

The second set of tables covers employment in tourism, investment in tourism and the consumption of special government services. The tenth or last table presents a number of non-monetary indicators of the tourism industry such as occupancy rates, statistics of arrivals and the room capacities.

Thus, TSA comprises statistics that can be used to monitor the EU tourism policies and also its regional and sustainable development policies. The TSA includes important economic indicators such as the share of tourism in GDP and a breakdown of the importance of tourism over the different industries and product categories.

The application of the TSA framework to the tourism industry in numerous countries and the experiences from these applications provides continued material for TSA development improvements. Currently, this concept is still evolving and could not be considered as a finished product. This is particularly true for comparing and interpreting the TSA results for EU countries. Eurostat states that “country results may be affected by methodological discrepancies between the national TSA and the TSA: RMF (Recommended Methodological Framework), by different levels of completeness of TSA, by different levels of maturity of the information (some figures are preliminary, others come from pilot projects) and because of different reference years for the transmitted variables” (Eurostat, Tourism Satellite Accounts (TSA) in Europe, 2010, p. 6). By the end of 2010 only 20 EU countries participate in TSA but with different level of coverage and reference year. However it is a very promising approach for years to come.

### **2.3.3. The use of balance of payments approach for the international tourism analysis in the European Union**

With respect to expenditure associated with international flows of nonresident visitors (inbound and outbound tourism), the TSA is linked to the balance of payments. The consumption of these visitors is reflected in the estimation of the travel item and of international passenger transport in BoP (IMF, 1993; UNWTO, Tourism as an internationally traded service, 2005).

International tourism has a complex nature including inbound and outbound tourism. The difference between inbound and outbound tourism represents travel account within the balance of payments, and it is a key determinant for the estimating the international travel contribution to the country's economy.

Thus, all receipts and expenditures from international tourism are recorded in the travel account of BoP. The term “travel account” used in BoP is synonymous with the term “tourism” used in the System of National Accounts and by the United Nations World Tourism organization. In addition, it should be mentioned that the term “travel account” is also synonymous with the term “travel balance”.

Travel account BoP comprises the following main services: accommodation (lodging), food and beverage, and transportation within economy visited, as all of which are consumed in the



host economy. It also encompasses souvenirs and gifts purchased by travelers for personal use. Travel accounts consistently record all tourism-related transactions forming the travel balance as a difference between currency inflows from inbound tourism and currency outflows related to the outbound tourism. Travel does not include the international carriage of travelers, which is covered in passenger services under transportation account BoP.

Therefore, if the country receives more receipts related to international tourism than payments, it results, *ceteris paribus*, in a surplus of balance of travel and vice versa.

As a result, international tourism, in contrast to domestic tourism, is measured in the balance of payments with the direct relation to the national income. The balance of payments has a universal application for different countries and contains statistics of currency receipts and expenditures from international tourism. Thus, the question of measuring the contribution of the international tourism to the national income can be solved by its evaluation within a country's balance of payments. This makes it relevant for the purposes of the present research.

The analysis of travel statistics from Eurostat clearly shows the effects of tourism toward stabilizing the balance of payments in several countries through tourism and allied activities. Tourism became an important trade category within overall export for countries like Malta, Greece, Cyprus, and Spain (Eurostat, 2013).

A country's balance of payments can be defined as statistical statement that summarizes, for a specific time period, usually a year, all the economic transactions of an economy with the rest of the world. It consistently records inflows and outflows of currency related to all export earnings and import expenditures respectively (IMF, 1993). Balance of payments is traditionally done by the Central Banks in the countries. The balance of payments accounts are prepared in a single currency. In the European Union, all BoP account's statistics are provided in Euro.

Due to the International Monetary Fund (IMF) methodology, the overall balance of payments consists of four main accounts:

1. the current account
2. the capital account
3. the financial account
4. net errors and omissions.

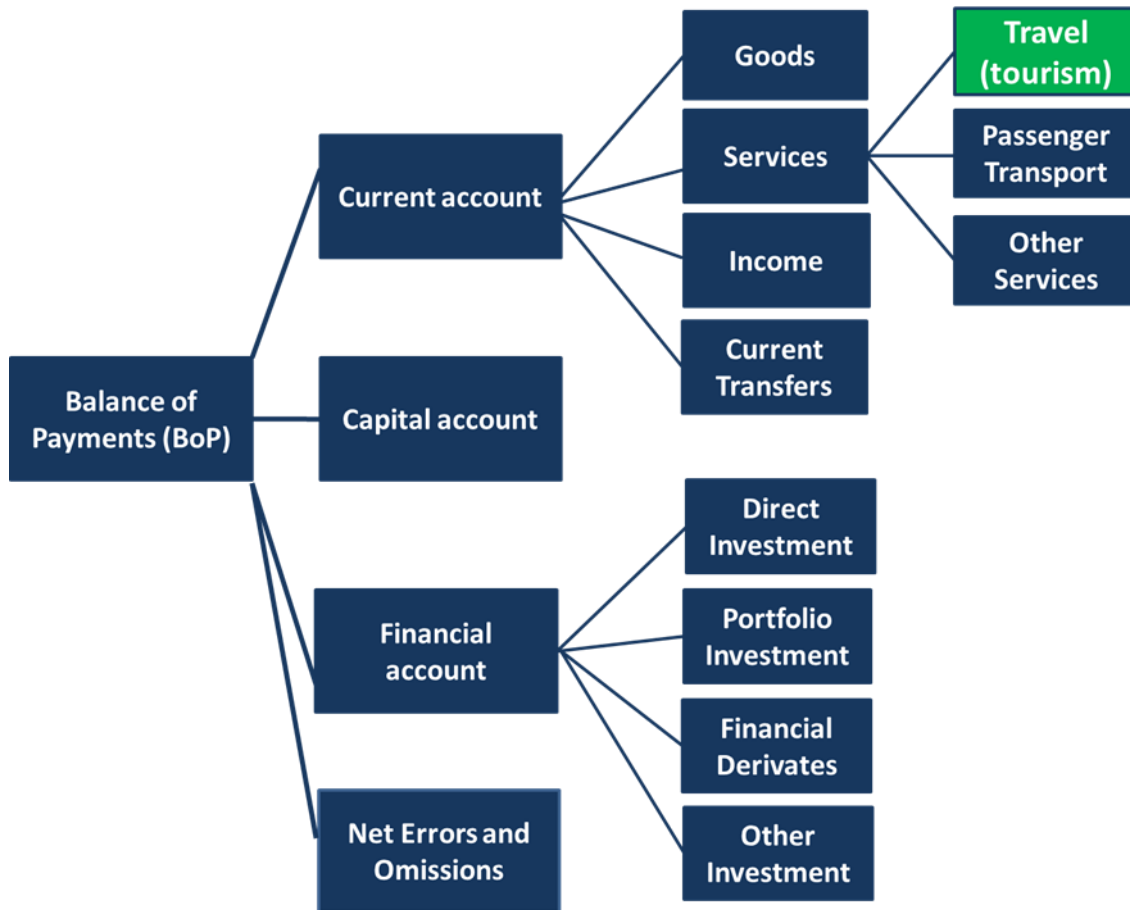
The current account mainly measures the value of goods and services traded, as well as payments and receipts of returns on investment (interest and dividends), and private and intergovernmental transfers (short-term aid). The current account comprises three subaccounts: goods and services, income, and current transfers. The subaccount of goods and services is subdivided into: trade balance (exports and imports of goods), balance of services (travel account, transportation, and other services). Information regarding receipts from tourism is contained in the travel account which shows the overall position of currency inflows and outflows.

The financial account reflects currency flows in and out of the national economy relating to inward or outward of foreign direct investments (FDI) and purchases of financial assets (portfolio investments), financial derivatives or other investments (such as real assets, the receipt of long-term or short-term loans from abroad), or sales of such assets in the domestic economy to foreigners.

Capital account of EU countries encompasses primarily capital transfers related to the utilization of EU structural funds and the acquisition of non-produced, non-financial assets.

Additionally, there is a net errors and omissions component which arises due to imprecise data collection. This component is created to compensate for mistakes (errors) and items that have not been counted (omissions).

The structure of the BoP is visualized in Figure 3.



**Figure 3. The balance of payments structure.** Source: own elaboration.

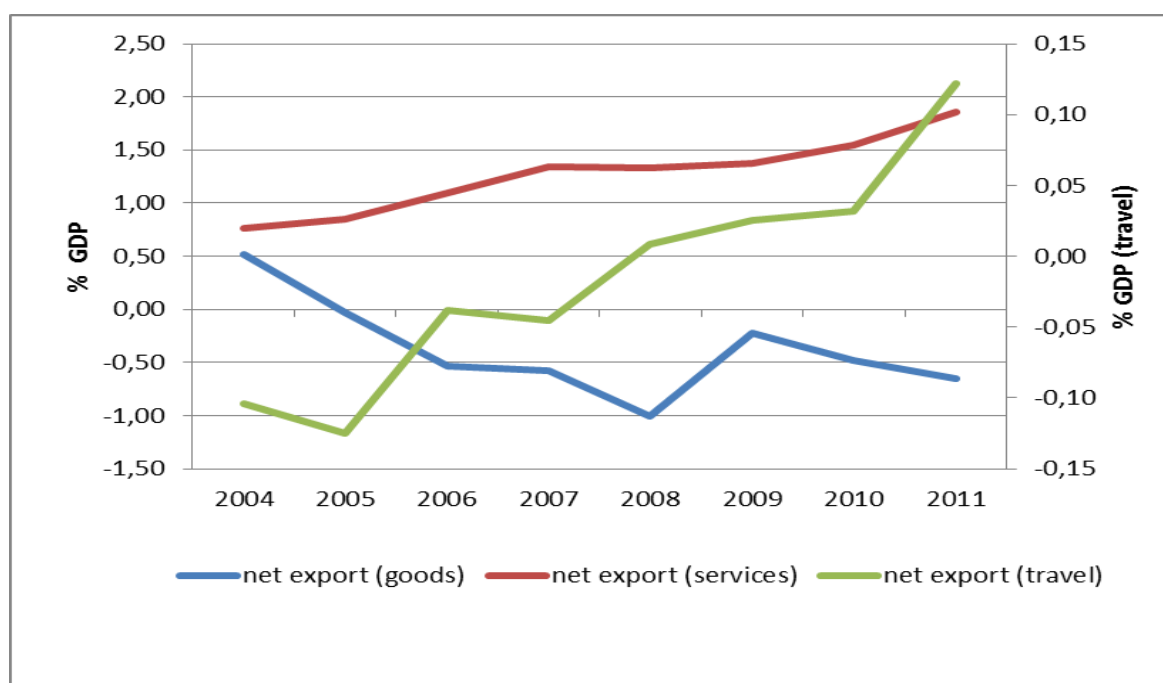
The BoP is based on principles of double entry accounting. Every recorded transaction is represented by two entries with equal values. One of these entries is designated as a credit transaction that results in a receipt of a payment from foreigners. The other is designated as a debit transaction that leads to a payment to foreigners. Due to the double-entry accounting, a country's BoP will always balance.

#### **2.4. The analysis of the international tourism contribution to EU 25 economies during 2004-2011**

As far as this thesis is focused on European tourism it is worth to say that international tourism has become an important industry for certain European economies as it promotes export revenues, and therefore, may help to alleviate the pressure on their balance of payments (Ivanov & Webster, 2007). The large, persistent current account deficits in several European countries have led economists to examine the main components of balance of payments and the possible measures to improve this situation. In many economies, tourism has been found to be an important contributor to the currency inflow or outflow. Therefore,

tourism as an export category could favorably change trade balances which will be further discussed.

Tourism as an internationally traded service has become one of the world's major trade categories and fastest-growing economic sectors in the world that became particularly evident recently (UNWTO, 2012; United Nations, Manual on statistics of international trade and services, 2010). The growth rate of export of services in EU-25 outpaced the export of goods during the period 2004-2011, as shown in Figure 4. This however occurred due to the rapid growth in financial services export.



**Figure 4. Trade balance, balance of services and travel balance developments in EU-25 countries.**  
Source: own elaboration, using data from AMECO database.

Each country in the EU has different structures of their economy, income and purchasing power of its inhabitants, price levels, as well as macroeconomic environment and tourist attractions. This set of factors plays a decisive role for the structure and development of the balance of payments in EU countries. Recent economic crisis and the substantial changes in trade and service balances in many European countries have provided an impetus to assess them within balance of payments (BoP). The balance of payments is a universal source of

information that allows to assess the economic impacts of international tourism on European economies. Moreover, the BoP is also recognized as one of the key macroeconomic variables which can be useful for government policy monitoring (Tribe, 2011).

Recently European governments have strengthened the support of tourism and consider this sector as one that has potential to back economic recovery given its capacity to distribute wealth and create jobs across the region.

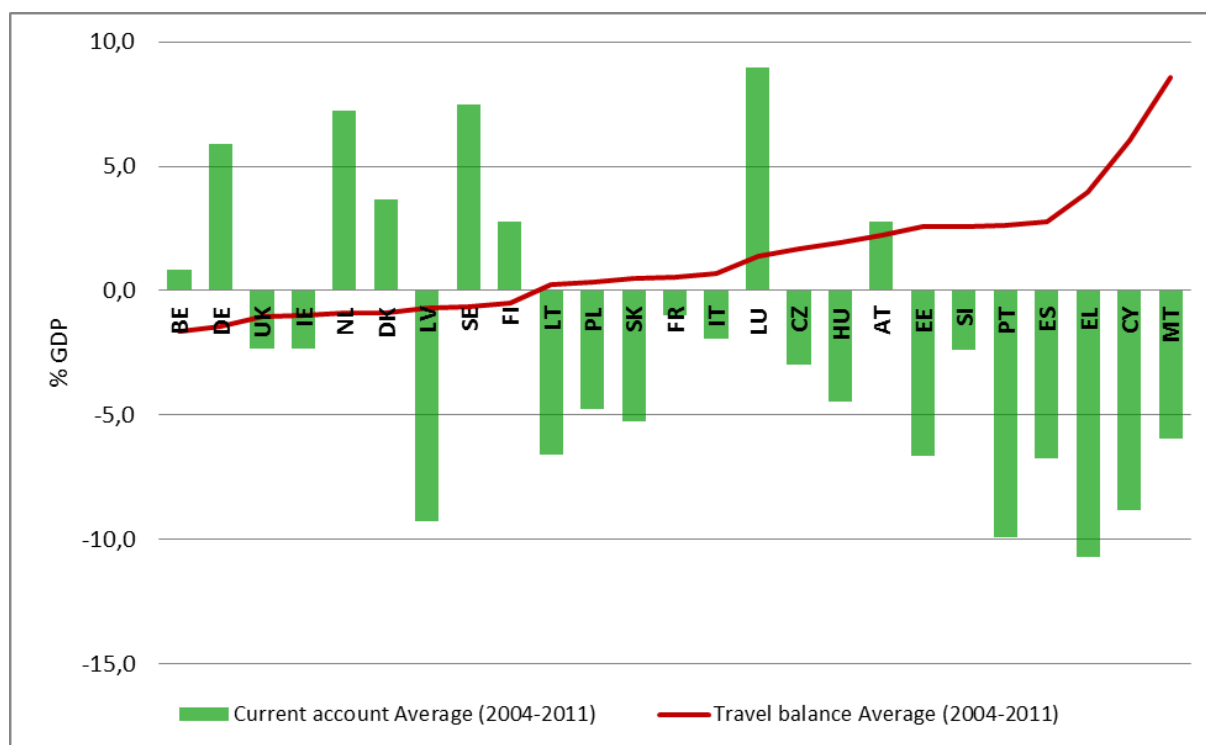
#### **2.4.1. The role of geographic location for the country's balance of travel**

International tourism is an important sector in the European economies where a redistribution of wealth from north to south coincides with a major tourist flows for many decades. For example, in Greece, Malta and Spain, international tourism is a significant source of export earnings. In addition, it is necessary to point out that international tourism is recognized as an important segment in most of South European economies. At the same time for the major source markets for international tourism as Germany, Scandinavian countries and England tourism represents only a small percentage of the expenditure on imports of services, despite the big volume of outbound travel. This occurs due to the high diversification of their international trade (Boniface & Cooper, 2009).

At all times geographic location plays an essential role for the economy and trade relations and a tourism industry is no exception. Until recent days there has been a lack of research focused on the examination of relationships between travel balances of countries and their geographic locations.

This study analyzes the share of travel balances to GDP in relation to geographic location of EU-25 member countries under the period 2004-2011. This research has revealed that countries of the Northern Europe, Germany and the Netherlands have long-term negative travel balances, making them tourist-generating areas. On the other side, countries in Southern Europe as well as in Central Europe have for the examined period 2004-2011 demonstrated positive travel balances that show them as tourist-receiving areas. This confirms the existence in reality tourist-generating areas and tourist-receiving areas. This is consistent with the concept of geographical components of the tourism system (Boniface & Cooper, 2009).

The results are visualized in Figure 5 in which travel balance values are plotted together with the country's current account averages. Both values were expressed as a share to GDP.



**Figure 5. Travel balances and current account average values expressed as a share to the country's gross domestic product (GDP) over the period 2004-2011.** Source: own elaboration, using data from the Eurostat.

In addition, countries abbreviations used in Figure 5 are provided in Table 1.

**Table 1. EU countries abbreviations as internationally adopted.**

Belgium	BE	Ireland	IE	Cyprus	CY	Malta	MT	Slovenia	SI
Czech Republic	CZ	Greece	EL	Latvia	LV	Netherlands	NL	Slovakia	SK
Denmark	DK	Spain	ES	Lithuania	LT	Austria	AT	Finland	FI
Germany	DE	France	FR	Luxembourg	LU	Poland	PL	Sweden	SE
Estonia	EE	Italy	IT	Hungary	HU	Portugal	PT	United Kingdom	UK

Source: own elaboration.

Additional findings can be drawn from the Figure 5. The most favorable average travel balance to GDP is achieved by Spain (2.8%), Greece (4.0%), Cyprus (6.1%) and Malta (8.6%). Moreover, tourism is important item of export in those economies. In terms of average share of travel on total exports abovementioned countries with the high average travel balance Spain has 15%, Greece (23.7%), Cyprus (25.9%) and Malta has 14% respectively. At the same time these four countries have negative current account, due to the large import of goods. However, positive travel balances enable partly mitigate the negative impacts of foreign trade balances in mentioned countries.

On the other side are countries such as Germany and the Netherlands where a negative travel balances and positive current account are found. The average share travel balance and current account to GDP for Germany are -1.4% and 5.9% and for the Netherlands -0.88% and 7.25 % respectively. These countries are typical examples of highly diversified export oriented economies, where high volume of export of goods outweighs negative travel balances. Moreover, in Germany and the Netherlands tourism constitute only a small proportion of total exports of 2.4% in average.

The least favorable situation for both the travel balances to GDP and current account is found in United Kingdom and Ireland. These economies have both trade and travel balances in negative values that indicate the excess of imports in goods and tourism over exports.

Finally, only two EU economies Austria and Luxembourg have both positive travel balance and current account. In case of Austria the positive travel balance of 2.2% to GDP and current account 2.8% indicates a diversified export, where tourism has about 10% share on the total exports. At the same time Austria has a more than 70% share of goods in exports in contrast to Cyprus which has only 17% share of goods in exports. Luxembourg gains a lot from its geographical location which enables it to remain in positive values of both trade and travel.

#### **2.4.2. Comparative advantages in travel export**

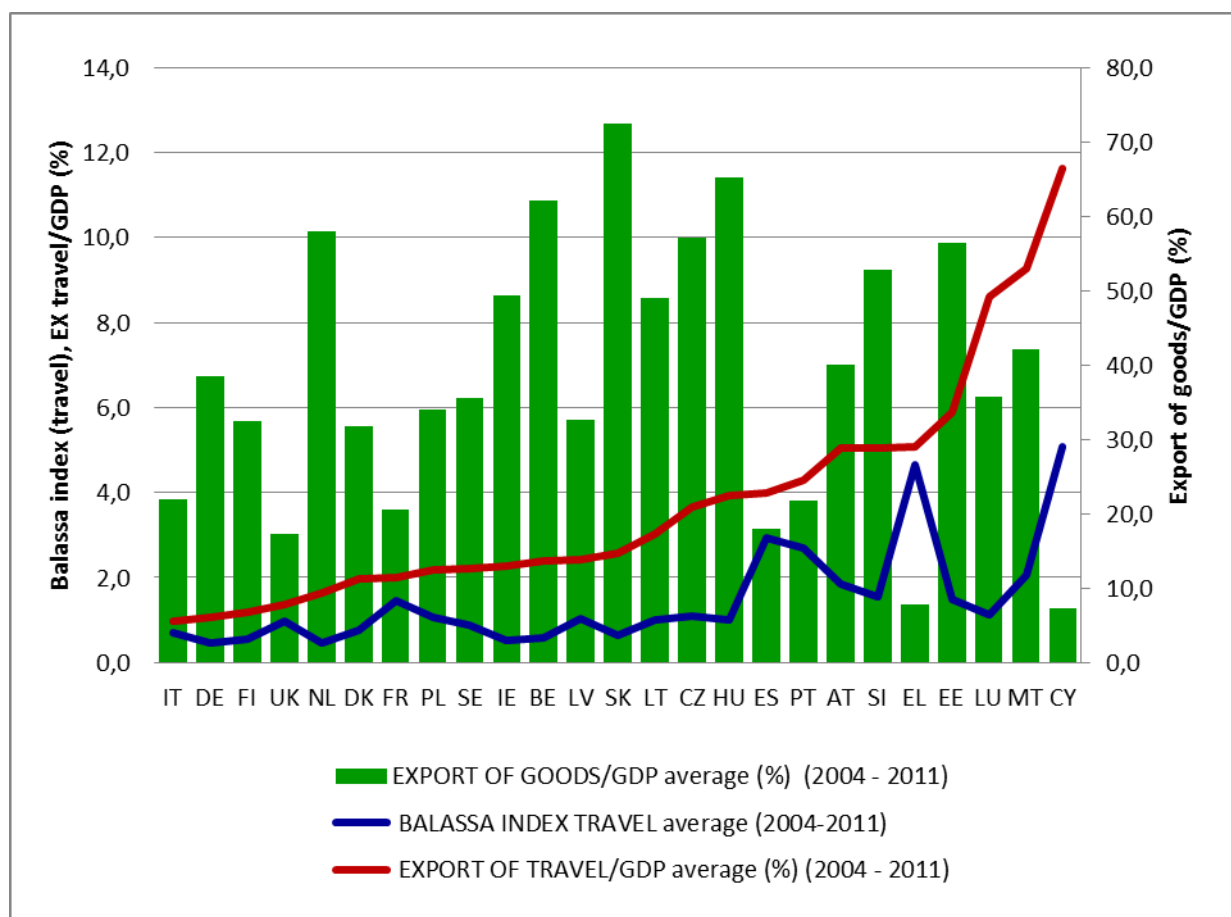
In connection to the first finding that geographic location determines travel balances in EU-25 countries, the next important question arises. Do the countries recognized as tourist destinations have comparative advantages in export of travel and whether they use them?

The analysis of the relationship between comparative advantage and the share of tourism in overall exports will reveal the countries in which tourism is an important trade category. For

the purposes of assessing the comparative advantages in travel export, Balassa index was employed (Balassa, 1989; Hinloopen and Marrewijk, 2001).

Balassa index (BI) allows to find the comparative advantage in certain segments of exports calculated for the certain country in relation to the reference group of countries subjected to the analysis. The nature of BI helps to distinguish countries in relation to share of export of travel to overall export. As a result the existence of two groups of countries were found, those that have index value higher than 1, and with the values below 1. The BI value above 1 means the existence of comparative advantage in export of travel. Conversely, the countries with BI values below 1 do not have comparative advantages in travel exports.

Figure 6 demonstrates the BI values along with the shares of overall exports to GDP and exports of travel to GDP for 25 EU countries.



**Figure 6. Exports of travel and goods as percentage of GDP and Balassa index.** Source: own elaboration, using data from the Eurostat.



The highest values of BI were found for countries as Cyprus, Greece, Spain, Portugal and Malta. At the same time North European countries have the lowest BI values, and therefore, do not possess comparative advantages in export of travel.

It is also apparent in the relationship between BI values and travel exports. This was confirmed by the positive correlation between travel exports and BI values, where the correlation coefficient is 0.67 proves the significant positive correlation.

More detailed information about distributions of comparative advantages for travel exports are provided in Table 2, where countries with the top 5 highest and top 5 lowest BI values are shown.

**Table 2. Balassa index results**

BI average values 2004-2011			
country	The highest 5 values	country	The lowest 5 values
CY	5.09	NL	0.46
EL	4.66	DE	0.47
ES	2.95	IE	0.52
PT	2.69	FI	0.56
MT	2.04	BE	0.59

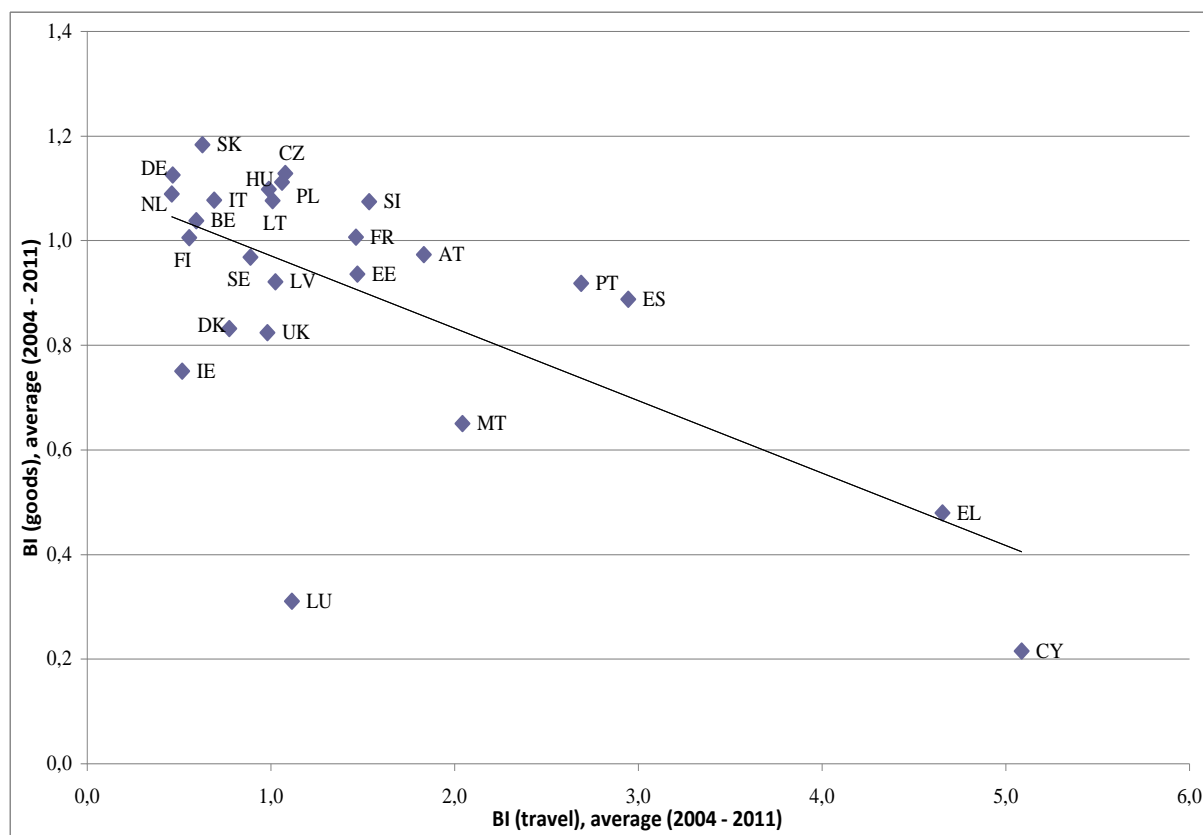
Source: own calculations

In addition, from Figure 6 is evident, that countries with the higher values of BI for travel simultaneously have lower share of goods in their exports. These results are consistent with the Ricardian and Heckscher-Ohlin theory of international trade proposing that a country specializes in those kinds of export categories where it has a comparative advantage.

Complex picture of comparative advantages which exist for travel exports and for export of goods is presented in Figure 7.

Figure 7 provides a visualization of a strong negative correlation between BI for export of goods and BI for export of travel. The correlation coefficient is – 0.66. This figure confirms

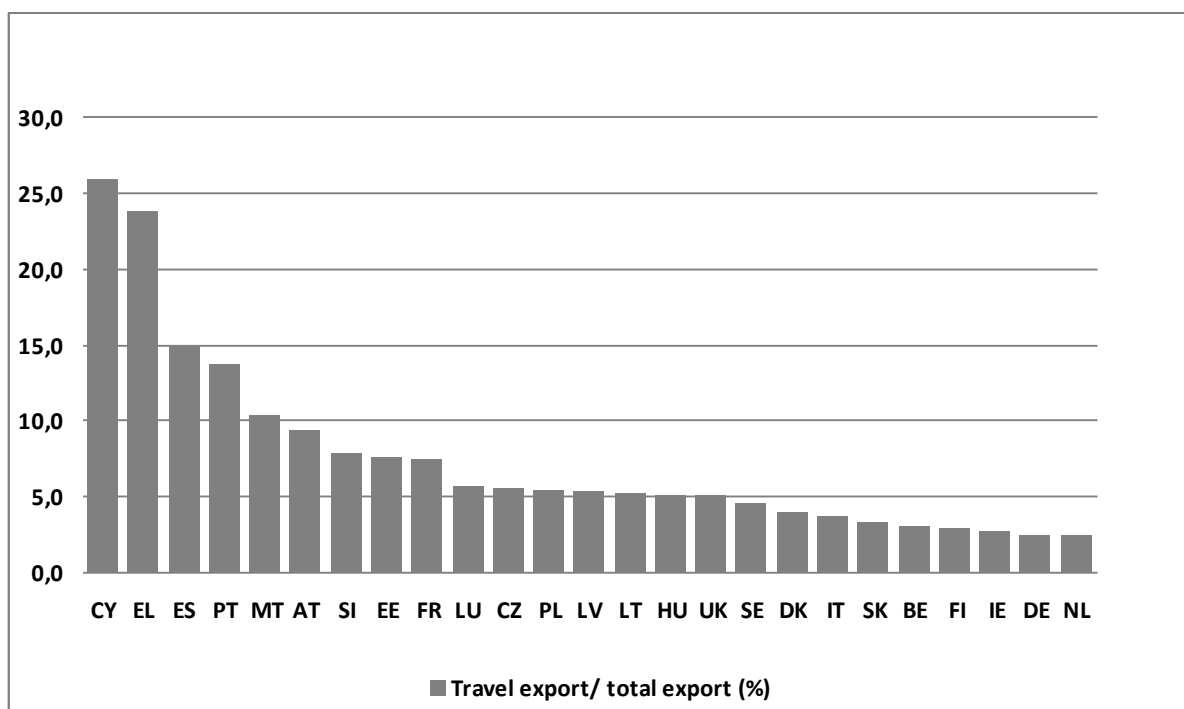
that countries that have the comparative advantages in travel exports may not have this in exports of goods.



**Figure 7. Balassa index average values for export of travel and export of goods.**  $y = -0,1383x + 1,1092$ ,  $R^2 = 0,4405$ . Source: own elaboration, using data from the Eurostat.

At the same time comparative advantages expressed in BI values represent just a prerequisite for exports of certain items. Therefore, the present study verified whether the countries recognized as tourist destinations actually use their comparative advantages in export of travel. This was calculated as a relation of travel export to the total export.

The share of travel export to the total export in EU-25 countries is provided in Figure 8.



**Figure 8. The share of travel export in total exports.** Source: own elaboration, using data from the Eurostat.

Cyprus and Greece possesses the highest share of tourism in their overall exports, followed by Spain, Portugal and Malta. This is to the certain point confirms the use of comparative advantages for tourism exports, but at the same time, it highlights on the risk of too limited number trade categories in their exports.

These results for EU-25 countries show that comparative advantages as well as export of tourism services are in particular dependent on geographic location.

## 2.5. Conclusions

Recently tourism as an internationally traded service has become one of the world's major trade categories and fastest-growing economic sectors in the world. Notwithstanding renewed interest on the impacts of tourism into European economies, the empirical evidence in this field remains limited.

Thesis results show that the economic effects from tourism specialization can be significant. This is consistent with the study by (Arezki, Cherif, & Piotrowski, 2009).

This research contributes to the literature in at least two major dimensions. First, it considers international tourism within the BoP, and reveals the role of geographic location for the country's balance of travel. Second, present research verified theoretical assumptions of international trade proposing that country specializes in those kinds of export categories where it has a comparative advantage. Since this chapter focused on the international tourism and its role in BoP in 25 EU economies, the inclusion of BI was employed in order to confirm theoretical assumptions and to identify comparative advantages. These results are supportive for the relationships between geographic locations, comparative advantages for the development of tourism and a share of tourism in total exports in countries analyzed as provided in Figure 8.

As a result this chapter has provided solid evidence that tourism is an important component in economies and international trade in EU 25 countries confirming the hypothesis #1 of the thesis.

## ***Chapter 3. Hotels as an important sector of the tourism industry***

### **3.1. Introduction**

The hotel industry to a large extent represents the tourism industry anywhere in the world. Hotels today have big economic and social impact to the regional development and economic growth. Hotel industry directly contributes to employment and indirectly facilitates tourism and commercial activities. During the past two decades hotel chains have experienced the tremendous growth. The number of these hotels has surged at very fast rates around the globe. Increase in both hotel facilities numbers and room capacity of the world's biggest chain hotels are shown in Table 3.

***Table 3. Worldwide Hotel Ranking in 2012.***

RANK	GROUP	HOTELS		HOTELS GROWTH	ROOMS		ROOMS GROWTH
		2012	2011		2012	2011	
1	INTERCONTINENTAL HOTEL GROUP	4 480	4 437	43	658 348	647 161	1.70%
2	HILTON WORLDWIDE	3 843	3 689	154	633 238	605 938	4.50%
3	MARRIOTT INTERNATIONAL	3 537	3 446	91	617 837	602 056	2.60%
4	WYNDHAM HOTEL GROUP	7 205	7 207	-2	613 126	612 735	0.10%
5	ACCOR	4 426	4 229	197	531 714	506 606	5.00%
6	CHOICE HOTELS INTERNATIONAL	6 203	6 142	61	502 460	495 145	1.50%
7	STARWOOD HOTELS AND RESORTS	1 077	1 041	36	315 346	308 700	2.20%
8	BEST WESTERN	4 078	4 015	63	311 598	307 155	1.40%
9	HOME INNS (+MOTEL 168)	1 426	818	608	176 562	93 898	88%
10	CARLSON REZIDOR HOTEL GROUP	1 077	1 078	-1	165 802	165 061	0.40%

Source: own elaboration, using data from the MKG Hospitality database (2012).

Data regarding top ten world hotel chains shown in Table 3 confirms the global tourism statistics, which indicates recent growth trend for the hospitality industry.

This chapter addresses the hypothesis # 2 of the thesis that” **Hotels are key sector in the infrastructure of the tourist destinations. Hotels are the indicator of the efficiency of the tourism industry**”.

Also this chapter also addresses the hypothesis # 3 that” **Spa specialization as an indirect factor in increasing the efficiency of the hotel facility as spa amenity reduces the pressure of seasonal fluctuations in demand on profits**”.

Further analysis of the global hotel sector reveals expand in hotel offerings which change the shape of the hotel services. This is supported by the continuous growth in number of hotels that in addition to accommodation services offer spa and wellness services for their guests. To illustrate this we can use an example from Hilton Worldwide hotels. Being the world second biggest hotel group Hilton opens the first spa division in their hotel in October 2010. By October 2013 this hotel chain runs 190 spa hotels in the world (Hilton hotels, 2013). The question why the spa and wellness became a popular across hotel sector will be discussed in the further parts of this chapter.

In the European Union statistics accounts approximately 150 thousand enterprises classified as hotels and similar establishments by the end of 2010. These facilities together employed almost two million people and generated about EUR 53.2 billion of added value. Moreover, accommodation services generated more than 32.4 % of the added value for accommodation and food services in EU (Eurostat, Accommodation and food service statistics – NACE, 2013).

Due to economic importance of the accommodation sector European statistical office (Eurostat) has started to use the indicator named the gross operating rate (which measures the relation between the gross operating surplus and turnover) as one measure of operating profitability allowing to compare performances of the economic subsectors. The gross operating rate measures the relation between the gross operating surplus and turnover. In 2010 the gross operating rate for the EU-27’s hotels and similar accommodation services sector was 14.4 % showing around 1.5 times higher performance compared to the non-financial business economy average of 10.1 % (Eurostat, Accommodation and food service statistics – NACE, 2013).

According to Eurostat data on value added generated in the sector of accommodation services there are three countries in EU with the highest specialization in this sector such as Cyprus, Austria and Spain. These data reflect the important position of tourism for those economies which was described in previous chapter.

The Czech Republic shows the positive development of the accommodation sector after 2010. The number of hotel facilities has increased by 300 new hotels and similar establishment in 2011 compared to 2010. Similarly to the overall EU statistics in 2012 tourism has outperformed the GDP in the Czech Republic. Figure 9 visualizes the development of hotel accommodation sector in the Czech Republic together with the GDP and tourism receipts trends over the 2004-2012.



**Figure 9. Czech hotel sector, GDP and tourism revenues developments over 2004-2012.**

Source: own elaboration, using data from Statistical office of the Czech Republic.

### **3.2. Main indicators in the measurement of hotel economic performances**

Each country or geographical region has different currencies, incomes, and purchasing power of its inhabitants, as well as macroeconomic environment and tourist attractions. This set of factors play a decisive role for the hotel profitability and, to a large extent, predetermines the

development of the hotel key economic indices. The need of indicators with the universal application for different hotel facilities in different environments led to the creation the set of indicators that now become widely used by hotel operators around the world.

This chapter provides an analysis of the uniform hotel performances indicators on the example of 2194 hotel facilities located in the Czech Republic, Austria and Slovakia.

The precise analysis of hotel economic performances is critical for its future development and price decision making.

It is necessary to mention the shift in hotel financial management during the last two decades. The new patterns of investment in hotels predetermined the involvement of foreign investors in the financial management and decision making. At the same time growing competition between hotels makes for hotel management mandatory to justify the tactics and strategies in order to provide positive financial outcomes for investors as well as for owners.

The contemporary development of analytical tools and financial methods has led to the creation of several universal tools that are used for the measurement of economic performance of hotel establishments.

Today, hotel operators as well as industry analyst, widely use the following main indicators: average daily rate (ADR), rooms occupancy rates, and revenue per available room (RevPAR).

These industry-wide averages are recognized as key points of comparison and analysis for room rates, occupancy, and revenues.

Due to the extensive use of above mentioned indicators in this study, their definitions have been provided. As a product of multiplication of ADR and occupancy RevPAR is a complex nature. ADR is a measure of the average rate paid for rooms sold, calculated by dividing room revenue by rooms sold. ADR shows only the average rate of rooms actually sold. Occupancy is the percentage of available rooms that were sold during a specified period of time (DeFranco & Lattin, 2007; Vallen & Vallen, 2012; STR Glossary).

In practice, hotel owners and managers tracking ADR, occupancy and RevPAR of their facilities as well as competition. These indicators provide essential information to identify trends as well as allow proactive decision making at the right time. Obtaining overall hotel



data for the certain location or a country is the main obstacle to create a hotel performance evaluation. Nevertheless, recently analytical companies specialized in the processing and publishing of data on hotel performances and statistical reports worldwide have emerged. For the purposes of this study, the hotel data was provided by a leading world analytical company, Smith Travel Research Global (STR Global).

This is the landmark first research dealing with the analysis and the possible economic interpretation of ADR, occupancy and RevPAR prepared using the hotel statistics from three Central European countries. The countries were chosen to confirm our theoretical hypothesis on the influence of the ADR on country hotel performance statistics. This will be verified on the hotel data the Czech Republic, Slovakia and Austria. The strength of this study is the use of hotel data for all three countries analyzed from the one source STR Global, which means the same methodology for the hotel data obtaining and processing (Kondrashov, 2012).

According to STR Global, the European hotels finished the year 2011 with 5.8% growth to 66.16 euro in revenue per available room. In 2011, the hotels sold 3.1% more rooms than in 2010 and the total occupancy reached 66.3%. In addition, average daily rate estimated in euros has increased by 2.6%, reaching an absolute value of 99.86 euro (Kondrashov, 2012).

This part of research provides a deep analysis into the nature, significance and possible interpretations of the three main indicators mentioned above.

The advantages of these indicators are its universal applicability for different hotel categories worldwide, because of their direct generation by the hotel information systems, and simple results interpretation. These indices are helpful for the creation of the general trend in hotel profitability for the particular regions and particular time.

A comprehensive analysis of these indices reveals that the average daily rate and revenue per available room values are skewed in a positive direction by hotels with extremely high rates. Furthermore, countries with a high average ADR could show stronger statistics compared to ones with a low ADR.

Since we consider hotel occupancy to be an important indicator of RevPAR, we could assume occupancy could be skewed in a negative direction by the group of hotels with low occupancy levels.

To show a practical interpretation of indicators described above, their advantages and weaknesses, the hotel industry results for the Czech Republic, Slovakia and Austria for the seven year period from 2005 to 2011 are provided by the STR Global.

The countries subjected to this study are located in similar regions of Central Europe, and have strong potential for tourism development and numerous tourist attractions.

The hotel industry's main indicators as ADR, RevPAR, occupancy plus total hotel revenues for the seven year period from 2005 till 2011 for the Czech Republic are presented in Table 4. This data enables pre crisis analysis, analysis of the period of economic downturn and the recent hotel indices and trend developments analysis.

**Table 4. Key hotel performance indicators for the Czech Republic.**

Year	Occupancy		ADR		RevPar		Revenue	
	This Year	% Change	This Year	% Change	This Year	% Change	This Year	% Change
2005	72.7		97.78		71.06		1 118 947 282	
2006	70.1	-3.6	100.71	3.0	70.55	-0.7	1 143 020 050	2.2
2007	69.8	-0.4	99.77	-0.9	69.63	-1.3	1 159 480 075	1.4
2008	62.0	-11.1	93.40	-6.4	57.95	-16.8	989 425 930	-14.7
2009	55.3	-10.8	73.36	-21.4	40.58	-30.0	710 247 640	-28.2
2010	60.4	9.3	69.66	-5.1	42.10	3.7	747 985 691	5.3
2011	64.6	6.9	71.39	2.5	46.11	9.5	819 235 723	9.5

Source: own elaboration, using data from STR Global. (STR Global Country Report: the Czech Republic, 2012).

The hotel occupancy as well as RevPAR has a decreasing trend from 2005 to 2009 in the Czech Republic, at the same time these indicators started to grow from the year 2010 following the global recovery trends of tourism industry.

Table 4 shows evidence of the tight relationship between occupancy and ADR as well as the influence of global tourism trends on the RevPAR and revenues. ADR maximum values of 100.7 euro were achieved in 2006, after this year a decreasing trend occurs until the year 2010. The year 2009 for the Czech hotels meant the lowest occupancy rates which were only slightly above the 55 percent and the lowest RevPAR of 40.6 euros, which has been decreased about 30 percent compared to the year 2008. The lowest ADR was registered in 2010 which was 69.7 euros, however in 2010 due to increased occupancy average RevPAR values risen

about 3.7 percent. It appears that in that case the drop in ADR was outweighed by the increase in occupancy.

The second country analyzed was Slovakia. Key hotel performance indicators for Slovakia are visualized in Table 5. The occupancy line between 2005 and 2009 has a decreasing slope. The highest hotel occupancy rates of 71.8% were observed in 2005, with a minimum of 39.6 % in 2009. Maximum ADR values of 99.39 euro in 2008 were very close to Austrian ones, however lower occupancy resulted in lower RevPAR for the entire analyzed period.

**Table 5. Key hotel performance indicators for Slovakia.**

Year	Occupancy		ADR		RevPar		Revenue	
	This Year	% Change	This Year	% Change	This Year	% Change	This Year	% Change
2005	71.8		90.87		65.26		171 681 897	
2006	64.7	-9.9	94.47	4.0	61.10	-6.4	162 075 137	-5.6
2007	59.9	-7.4	99.39	5.2	59.50	-2.6	161 416 220	-0.4
2008	57.0	-4.8	98.32	-1.1	56.02	-5.9	152 369 699	-5.6
2009	39.6	-30.6	82.88	-15.7	32.78	-41.5	96 639 454	-36.6
2010	41.4	4.7	72.44	-12.6	30.00	-8.5	96 591 602	-0.0
2011	45.7	10.3	71.11	-1.8	32.48	8.2	109 190 620	13.0

Source: own elaboration, using data from STR Global. (STR Global Country Report: Slovakia, 2012).

Finally, hotel statistics for Austria are presented in Table 6. It has become evident that in Austria, occupancy rates started to decline in 2007 and have continued to fall until the year 2010, despite this, RevPAR continues to grow in 2007 and 2008 due to the rising ADR. During the analyzed period the highest rates of occupancy of 73.5% occurred in 2006, while the lowest of 63.7% were observed in 2009. The ADR development paints a different picture, with the highest rates of 103.6 euro observed in two consecutive years, and the bottom rates of 88.3 euro observed in 2010.

**Table 6. Key hotel performance indicators for Austria.**

Year	Occupancy		ADR		RevPar		Revenue	
	This Year	% Change	This Year	% Change	This Year	% Change	This Year	% Change
2005	71.2		86.60		61.68		1 785 447 218	
2006	73.5	3.2	90.83	4.9	66.74	8.2	1 947 463 549	9.1
2007	72.6	-1.2	103.58	14.0	75.20	12.7	2 220 022 278	14.0
2008	69.0	-5.0	103.59	0.0	71.48	-4.9	2 142 266 980	-3.5
2009	63.7	-7.7	91.99	-11.2	58.58	-18.0	1 785 693 326	-16.6
2010	69.7	9.5	88.30	-4.0	61.57	5.1	1 896 102 792	6.2
2011	70.0	0.5	92.01	4.2	64.44	4.7	2 020 059 813	6.5

Source: own elaboration, using data from STR Global. (STR Global Country Report: Austria, 2012).

A more complex picture can be obtained from the analysis of the average occupancy, ADR and RevPAR values for the Czech Republic, Slovakia and Austria for the period 2005-2011. Hotel performance indicators averages are provided in the Table 7.

**Table 7. Averages of hotel performance indicators for the Czech Republic, Austria and Slovakia**

	Czech Republic	Slovakia	Austria
Occupancy (%)	65.0	53.4	69.9
ADR (eur)	86.6	87.9	93.9
RevPAR (eur)	56.9	46.9	65.6

Source: own calculations

For purposes of the comparative analysis of Czech, Slovakian and Austrian hotel performances an analysis of occupancy, ADR and RevPAR averages was performed.

This analysis shows that Revenues per available room in Austria are higher due to the higher ADR and OCC. Moreover, this study confirms the statement about the positive relationship between ADR and RevPAR. This has been through averages of hotel performance indicators shown in Table 7. Another interesting deduction is that lower ADR does not directly affect the hotel occupancy. This illustrates Austrian hotels that had higher ADR together with high occupancy compared to the Czech or Slovak hotels. Austrian hotels analysis confirms our hypothesis that countries hotel statistics are skewed in a positive direction by hotels with extremely high rates and that countries with a high average ADR and RevPAR could show stronger statistics compared to ones with a low ADR.

### **3.3. Econometric analysis of hotel performance indicators in their relationship to the revenue generation**

Hotel operating indicators form a suitable framework for the analysis of hotel performances in terms of revenue generation, pricing policy and the use of the room capacity. At this point the important question arises. Which of the uniform hotel indicators i.e. occupancy rate or ADR are superior for revenue generation? Revenue can be described as a function of occupancy and ADR. The question was answered by use of the multivariate regression model for hotel revenue determinants. For calculations the open-source statistical software package Gretl 1.9.7 was used (Gretl, 2011). This econometric analysis was performed for 2194 hotels located in the Czech Republic, Slovakia and Austria over the period 2005-2011.

#### **Hotel data specifications:**

Hotel operating indicators for the Czech Republic, Slovakia, and Austria were provided by the analytical company STR global in its country's STAR reports (Smith Travel Accommodations Report). All five hotel categories listed below were included into STAR reports and therefore were subjected to the econometric analysis.

This research uses hotel categorization created by STR global. The classes are based on the global chains ADRs. The STR groups the hotel chains based on their annual average room rates. Moreover, chain scales are analyzed annually and use the average achieved ADR of the prior year to classify the global performance of a brand. The STR also considers the geographical spread of a brand to ensure its annual average room rate is not impacted by exchange rate fluctuation and/or dominance in a particular market.

The STR therefore classifies hotel properties into following categories:

- Luxury - top 15% average room rates
- Upscale - next 15% average room rates
- Mid-Price - middle 30% average room rates
- Economy - next 20% average room rates
- Budget - lowest 20% average room rates

Source: STR country report: methodology, 2012.

### Econometric analysis specifications:

Length of time series has 84 observations for each country from January 2005 till December 2011. The dependent variable in multiply regression models is revenues; the two independent variables are occupancy rate (OCC) and average daily price (ADR).

The qualities of models were verified by following tests:

1.  $R^2$  is a coefficient of determination, meaning the proportion of variability was explained by the model
2. *Durbin-Watson test of autocorrelation*, meaning the correlation of time series with its own past and future values
3. *White's test of heteroscedasticity* or inequality of variance. This test controls whether the model is correct.
4. *Dickey-Fuller test of stationarity of time series*, which controls the trend existence in variables.
5. *Multicollinearity (VIF) test* which refers to the linear dependence among variables in regression model

These parameters are subsequently visualized in figures of actual revenues vs revenues calculated using multivariate regression models.

In addition it is necessary to emphasize that the research focuses on the revealing the role of ADR and occupancy rates on the hotel revenues. For this goal and aggregated data were evaluated. The research of the other factors that may influence revenues are beyond the scope of this thesis.

### Multivariate regression model results for the Czech Republic.

The results are visualized in Figure 10.

Model: OLS, using observations 2005:01-2011:12 (T = 84)  
Dependent variable: Revenue

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	6.99334e+07	2.42376e+06	-28.8532	<0.00001	***
OCC	1.12803e+06	38631.3	29.2000	<0.00001	***
ADR	892719	27232.2	32.7817	<0.00001	***
R-squared	0.979998	Adjusted R-squared	0.979504		
F(2, 81)	1984.314	P-value(F)	1.56e-69		
Log-likelihood	-1393.629	Akaike criterion	2793.257		
Schwarz criterion	2800.550	Hannan-Quinn	2796.189		
rho	0.451826	Durbin-Watson	1.072618		

**Figure 10. The dependence of revenues on occupancy rates and average daily price in the Czech Republic.** Source: own calculations

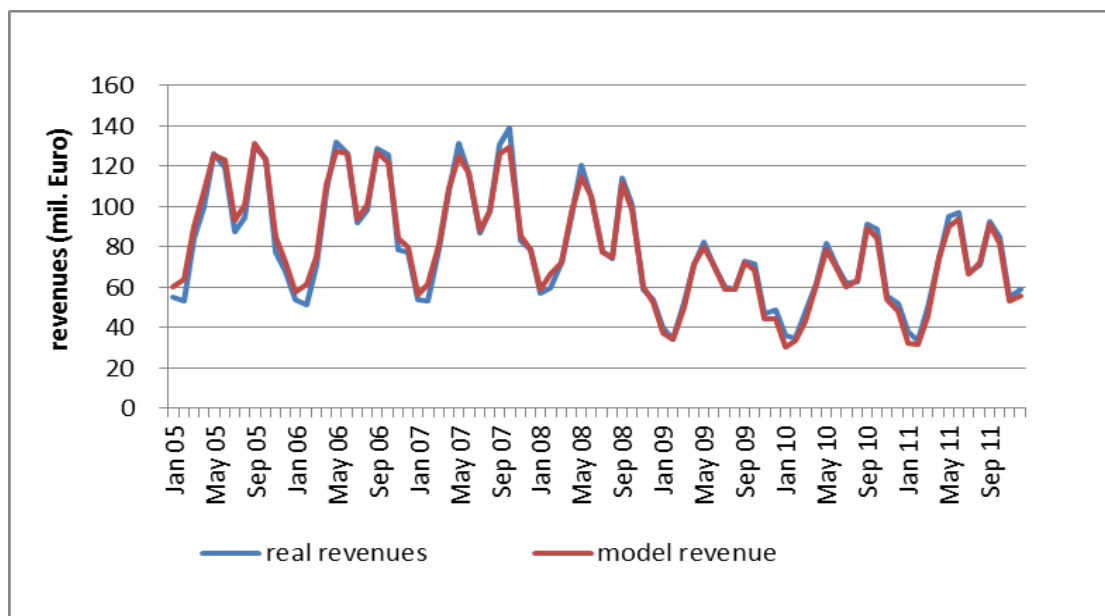
Based on the model results the equation for revenues can be presented as following:

$$y = 6.99334e+07 + 1.12803e+06 * OCC + 892719 * ADR$$

This means that if occupancy changes in 1% (percentage point) the revenues will change on 1 128 030 euro; in case of change of ADR in 1 euro, the total revenues will change on 892 719 euros.

The test result allows to conclude that occupancy rates are superior to ADR in terms of generating total revenues.

Figure 11 confirms the correctness of all parameters of revenue model used for the Czech Republic.



**Figure 11. Model revenue vs real hotel revenues in the Czech Republic.**

Source: own calculations

### Multivariate regression model results for Slovakia.

The results are visualized in Figure 12.

Model 2: OLS, using observations 2005:01-2011:12 (T = 84)

Dependent variable: Revenue

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	5.26802e+06	536824	-9.8133	<0.00001	***
OCC	186836	6901.14	27.0732	<0.00001	***
ADR	74054	7579.9	9.7698	<0.00001	***
Mean dependent var	11309103	S.D. dependent var		3280745	
Sum squared resid	3.94e+13	S.E. of regression		697073.2	
R-squared	0.955943	Adjusted R-squared		0.954855	
F(2, 81)	878.7556	P-value(F)		1.21e-55	
Log-likelihood	-1247.854	Akaike criterion		2501.707	
Schwarz criterion	2509.000	Hannan-Quinn		2504.639	
rho	0.337920	Durbin-Watson		1.306611	

**Figure 12. The dependence of revenues on occupancy rates and average daily price in Slovakia.**

Source: own calculations

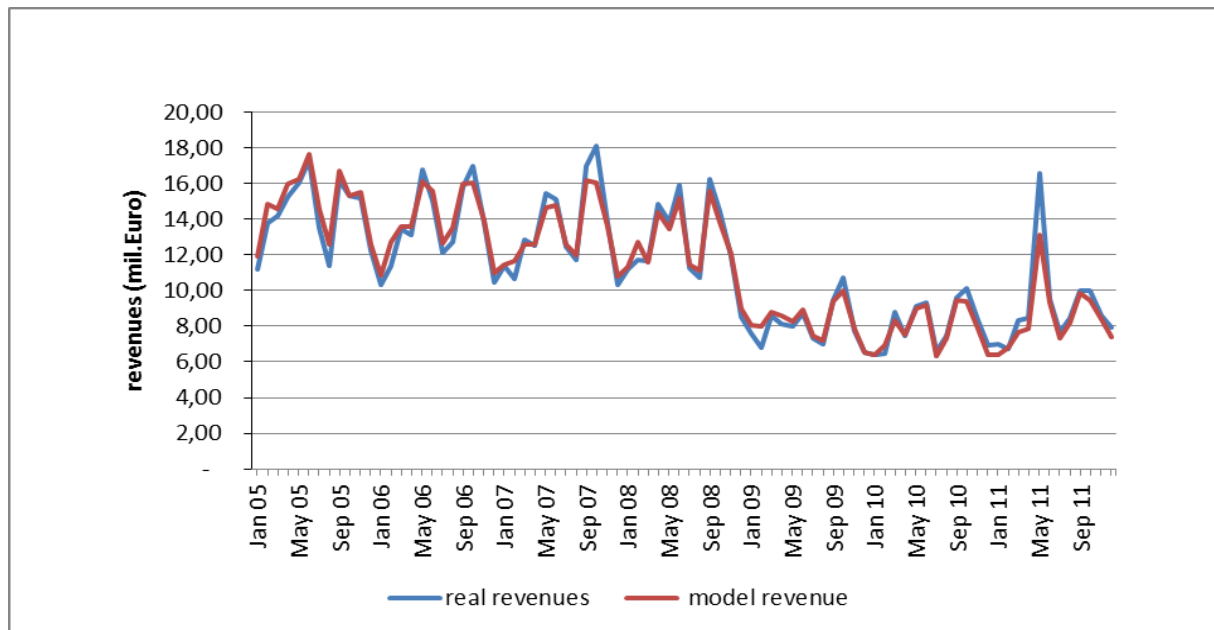
Revenues equation which is derived from the model is following

$$Y = 5.26802e+06 + 186836 * OCC + 74054 * ADR$$

From this equation is evident that changes in 1% of occupancy rate yields in higher changes in revenues compared to changes in 1 euro of ADR. These results are consistent with those for the Czech Republic.

Additional verification of the model is provided in Figure 13.





**Figure 13. Model revenue vs real hotel revenues in Slovakia.** Source: own calculations

### Multivariate regression model results for Austria.

Results for dependence of revenues on occupancy rates and average daily price are visualized in Figure 14.

Model 3: OLS, using observations 2005:01-2011:12 (T = 84)

Dependent variable: Revenue

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	1.69956e+08	6.49956e+06	-26.1488	<0.00001	***
OCC	2.38359e+06	70455.5	33.8312	<0.00001	***
ADR	1.79749e+06	66034.7	27.2204	<0.00001	***

Mean dependent var	1.64e+08	S.D. dependent var	35270939
Sum squared resid	2.88e+15	S.E. of regression	5963193
R-squared	0.972105	Adjusted R-squared	0.971416
F(2, 81)	1411.359	P-value(F)	1.11e-63
Log-likelihood	-1428.157	Akaike criterion	2862.314
Schwarz criterion	2869.607	Hannan-Quinn	2865.246
rho	0.460280	Durbin-Watson	1.075087

**Figure 14. The dependence of revenues on occupancy rates and average daily price in Austria.**

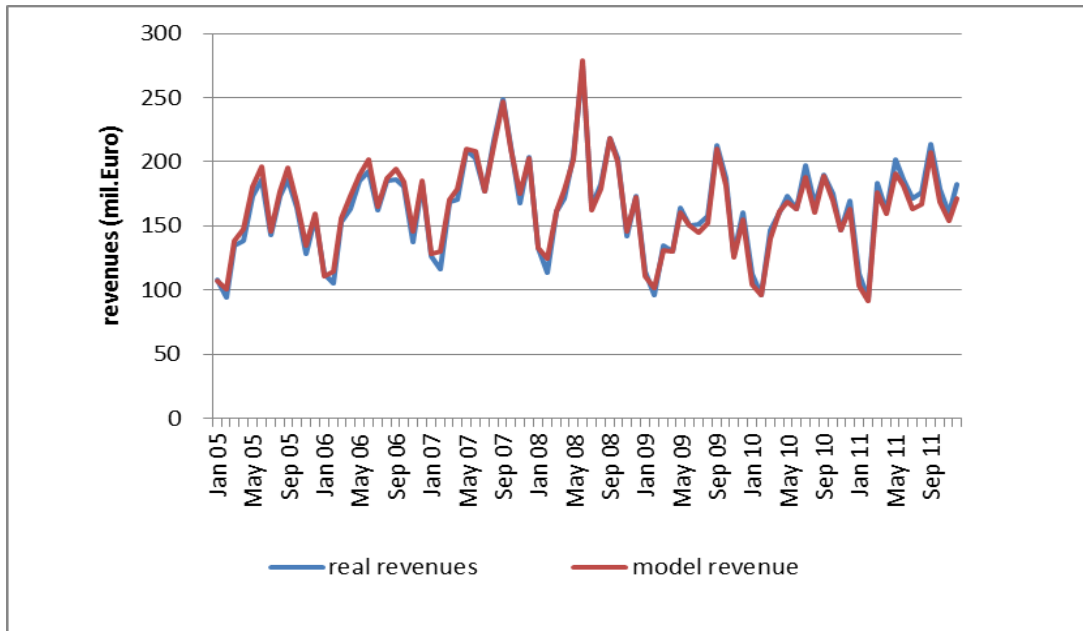
Source: own calculations

These results can be expressed in equation

$$Y = 1.69956e+08 + 2.38359e+06 \cdot OCC + 1.79749e+06 \cdot ADR$$

Similarly to the previous results for the Czech Republic and Slovakia, occupancy rates are superior to ADR in revenues generating.

The verification of the model revenues to real revenues for Austria is presented in Figure 15.



**Figure 15. Model revenue vs real hotel revenues in Austria.** Source: own calculations.

Control tests of model parameters for the countries examined prove that they are correct and appropriate for this study.

Control test results:

1.  $R^2$  varies from 0.96 to 0.98, proving that models are very strong for all countries examined
2. Durbin-Watson test results do not confirm of autocorrelation
3. White's test do not reject homoscedasticity for all counties analyzed
4. Dickey-Fuller test showed stationarity in time series examined
5. Multicollinearity test values did not indicate a collinearity problem

### 3.4. Practical implications of the econometric analysis of uniform hotel performance indicators results. Revenue management concept

During past decade the uniform hotel performance indices became widely accepted within hospitality industry being a quantitative expression of the Revenue management concept. Revenue management represents the integrated control of capacity and price used in services which has the following characteristics: perishable inventory, low variable to fixed cost ratio, limited capacity and unstable demand. Hotel industry has all this characteristics making the concept appropriate to use (Vallen & Vallen, 2012; Pizam, 2010).

Revenue management allows hotels to increase profit by forecasting the occupancy of hotel room capacity, optimization of prices based on current supply and demand and offering different prices for different customers. This concept may explain the large difference between the prices at the same hotel for identical rooms. Figure 16 visualizes the concept of revenue management.



**Figure 16. Revenue management concept.** Source: adopted from Crafting management solution (2001).

Revenue management or inventory control is used to increase the revenue per available unit of capacity. The results of implementing of the revenue management are expressed in key performance indicators such as occupancy, ADR, RevPAR and the total revenues.

The major specific of the revenue management is that it tries to maximize revenues by managing the tradeoff between a lower occupancy and higher room rate scenario versus a higher occupancy and lower room rate. The analysis of existing publications sources in the hotel sector shows that the concept is still developing as the information and computer technologies allows to create a set of demand forecasting techniques, make optimizations and evaluate the achieved results.

Despite the profitability goal of hotels is obvious, there still exists controversy in the hotel industry regarding the actual relationship between hotel revenue indicators, including average daily rate, occupancy percentage, and profitability.

According to the revenue management concept the common goal of the hotels is to achieve the maximum occupancy with the highest possible rates. Therefore, it is essential to look closer on the two variables as occupancy and ADR in their relations to the hotel revenues.

The multivariate regression models were computed for 2194 hotels located in three countries the Czech Republic (693 hotels), Austria (1386 hotels) and Slovakia (115 hotels) have shown that changes in occupancy rate have greater effects on hotel revenues than changes in hotel room rates.

The findings of this research clarify the relationships between specific operating indicators and the hotel revenues. For the first time the large scale econometric study of the hotel performance indicators was performed for the above-mentioned three countries. The study results put additional evidence on the importance to closely monitor hotel occupancy rate in order to achieve higher revenues.

On the other hand those indicators cannot provide a complete picture of the hotel profitability since they do not visualize the hotel expenses. This question is a matter of analysis in the chapter 4.

### **3.5. The problem of seasonality in hotel sector and the options of the elimination of its negative impacts**

The seasonality of demand is a specifics and the persistent problem of the tourism sector anywhere.

It negatively affects accommodation business performances. Among options to mitigate negative impacts of seasonal demand are widening the hotel services offer, innovations and specialization.

Current researches in hotel management are mainly focused on the search for new effective tools that can help to achieve higher profits (Vallen & Vallen, 2012; Kimes, 2003; Kimes, 2009).

Several international studies were focused on finding the relationship between higher profits with the hotel profile and location (Vallen & Vallen, 2012; Kondrashov, 2012; Tabacchi , 2010).

One of the options to increase revenues emerged is spa and wellness offer in hotel facilities. In modern society we have found a shift to a healthy lifestyle in a growing number of people for which spa and wellness becomes an integral element of their life. Spa and wellness are no longer considered as just a trend, but they are becoming an established division of the growing market for health related vacations (Kondrashov, 2011).

In response to increasing demand worldwide, we found a growing number of hotels offering spa and wellness treatments. During the past decades it became evident that spa and wellness centers affect the hotels ability to draw customers, improve their sales and more equally distribute demand for their room capacities. Therefore, lodgment industry has experienced a fast development of spa and wellness centers at the hotel facilities.

This research provides empirical evidence on the effects of hotel spa specialization on seasonal fluctuation of demand on an example of the Czech Republic. In order to verify the possible seasonal fluctuations on visitor's distribution throughout the year a comparative statistical analysis of visitors in the both tourist hotels and spa hotels was prepared using the monthly data over the period 2000-2012 from the Czech statistical office. The overall numbers of visitors in tourist hotels and spa hotels were seasonally adjusted using moving averages and standardized seasonal indices were calculated.

The average results for the period analyzed are shown in Table 8.

**Table 8. Mean seasonal distribution of visitors in tourist hotels and spa hotels in the Czech Republic over the period 2000-2012.**

Period of time	Quarter	Tourist hotels standardized seasonal indices	Spa hotels standardized seasonal indices
<b>I/2000 - IV/2012</b>	<b>I</b>	<b>0.7493</b>	<b>0.8607</b>
	<b>II</b>	<b>1.0557</b>	<b>1.0934</b>
	<b>III</b>	<b>1.3960</b>	<b>1.1443</b>
	<b>IV</b>	<b>0.7990</b>	<b>0.9016</b>

Source: own calculations.

Table 8 confirms small seasonal fluctuations of visitors in spa hotels compared to the other types of hotels. These results confirm the assumption that specialization on providing spa treatments makes spa hotel facilities attractive for the patients as well as visitors during almost the whole year.

### **3.6. Global spa industry trends. The Czech Republic as a spa destination**

From the ancient times to the present day people have used thermal and mineral waters. The contemporary spa industry is founded on the interest of people from the earliest times in mineral springs that differed from ordinary springs in their appearance, taste, temperature and the healing properties. Europe has a long tradition of balneology or water therapy treatments which have their root in the time of ancient Greece and the Roman Empire. Visiting the bathing establishments as well as hot springs were of great popularity during the Roman Empire, where more than 900 public bathing facilities were established, many of them are still in use in several European countries (Křížek, 2002). The extensive use and the great popularity of natural spring waters in Roman Empire have determined the European bathing practices for centuries. Today frequently used term ‘spa’ is an acronym for the Latin phrase ‘sanitas per aqua’, meaning ‘health through water’. Throughout the centuries the concept of spa has modified and moved beyond hydrotherapy and bathing into the holistic medical concepts including recently popular wellness practices. At the same time the principles of the spa as a place of restoration and health have remained unchanged.

The contemporary global spa industry represents a variety of traditions and therapeutic practices. It comprises the European balneology practices based on use the mineral spring waters for hydrotherapy, bathing and drinking, creating spa towns or spa destinations near mineral baths; North American spa approach developed around wellness practices with its emphasis on beauty, fitness and weight loss without any need to have a mineral springs nearby or use of hydrotherapy; and Asian holistic approach to the human health and spiritual practices. Europe has a great variety of mineral and thermal waters and from the ancient times health tourism has inclined to be based around mineral springs locations or spas (Smith & Puszko, 2009). Even in recent days spa destinations in Europe are recognized as those that have natural mineral springs and offer water-based treatments. This still forms the major difference between European attitude to spa and the current global concept of spa regardless of their location.

In recent foreign publications it often happens that the term wellness substitutes the term spa and conversely. Due to the extensive use of the term spa and wellness their definitions have been provided. From the European perspective spas have been defined as “a business offering spa treatments based on authentic water-based therapies which are practiced by qualified personnel in a professional and relaxing environment” (Garrow, 2008, p. 55). This definition includes a water element based on the original meaning of spa interpreted as “healing through water”, and it also includes a relaxation element to address contemporary spa clients definition of spa as “a place to relax”. At the same time the International Spa Association (ISPA) based in the United States created a following definition for the term of spa: “Spas are places devoted to enhancing overall well-being through a variety of professional services that encourage the renewal of mind, body and spirit” (International Spa Association, Types of Spas, 2013). Unlike the European definition it does not mention the use of water-based therapies.

In recent times wellness practices are becoming increasingly popular worldwide. The greater awareness about healthy lifestyle become the major driving force for the emerging and growing of wellness industry worldwide. There is a huge potential for development of this sector, confirmed by numerous sociological studies. According to a survey conducted by the Institute for Motivational Research (Austria), 96 percent of respondents said that feeling good is a matter of physical and mental balance and that a healthy lifestyle is becoming increasingly important in their lives (Austria, Tourism and wellness, 2010). Moreover, the leading global travel and destination management company Kuoni has been also reported the

changing preferences of travelers toward spa and wellness (GDI, 2006). This receives further support among big international companies which encourage their employees to maintain a healthy lifestyle. Although wellness is relatively new segment of global travel industry it has a deep historical background described earlier.

Wellness is defined as “an optimal state of health. It concerns a person’s individual health physically, mentally, emotionally and spiritually and also their role in society and fulfilling expectations in their family, community, place of worship, workplace and environment” (The Truth About Wellness, Executive Summary, 2013, p. 2). The concept of wellness emerged in the late 1950s in the USA due to the activities of Dr. Dunn. Wellness practices were summarized in his publication “High level Wellness” in 1961. Recently wellness is emerged as a complex and global phenomenon through a merging of different services, products and therapeutic practices.

Wellness is comprised of number segments as visualized in Figure 17.



**Figure 17. Wellness structures.** Source: own elaboration based on The Global Wellness Tourism Economy report (Stanford Research Institute [SRI], 2013).

Figure 17 provides a structure of wellness industry according to the latest study conducted by the Stanford Research Institute. The core business within wellness is spa segment as it



generates more than 40% of total wellness industry receipts. Wellness tourism is also important and fast growing segment. Wellness services are consumed by travelers who make a trip primarily for wellness purposes and the others those want to stay regenerated and relief stresses during their travel.

Wellness industry has several dimensions related to the physical, mental and social wellbeing. Those dimensions are visualized in Figure 18.



**Figure 18. The wellness dimensions.** Source: adopted from University of California, Riverside (2014).

It is also worth mentioning that wellness tourism is tightly related to the other tourism segments. In recent times an integration of wellness and leisure services occurs in hospitality industry. Thus spa and wellness became a part of global hotel business.

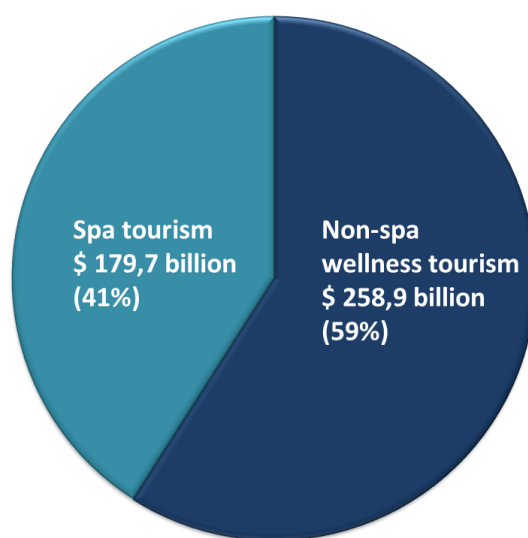
The current concept of wellness allows to be recognized as spa or wellness facility regardless of location. Today, a growing number of spas provide treatments for visitors based on therapist skills and products instead of use healing mineral water sources in spa locations.

Today travel often leaves a traveler less well after a trip than he was before. Thus there is a growing understanding in tourism industry of the necessity to offer services that will relief travel stresses, and among them wellness industry looks very promising. Hoteliers globally starting to create special hotel brands focused on spa and wellness. Thus it can be assumed that global spa and wellness is catching up the popularity in global scale similar to that existed

in several European countries over the past two centuries.

Growth in wellness industry means its increasing economic significance and therefore business opportunities. Recently, spa and wellness have been considered to be among the fastest growing sectors in travel industry. Spa industry becomes an important tourist product reflecting the growing popularity of healthy life style in many populations. According to the latest Stanford Research Institute study (SRI, 2013) in 2007 spa tourism had generated US\$ 106 billion with 142 million spa trips. However, five years later in 2012 global spa revenues had reached US\$ 179.7 billion, with 224.9 spa trips made both internationally and domestically, therefore significantly outpacing global tourism growth.

In 2012 wellness as a whole industry accounts for 524.4 million of all domestic and international trips and it has globally generated US\$ 438.6 billion, which represent 14% of all domestic and international tourism expenditures (SRI, 2013). The global wellness tourism receipts structure is visualized in Figure 19.



**Figure 19. The receipts generated by global wellness tourism.** Source: own elaboration, using the data from SRI (2013).

Moreover, wellness tourists are recognized as high-yield tourist spending 130% more than the average tourist. This occurs because they tend to stay longer and more likely to book more expensive hotel accommodation (SRI, 2013).

Therefore, wellness industry statics provide evidence that spa and wellness are no longer considered as just a trend, but they are becoming an established division of the growing market for health related vacations.

### **Spas in the Czech Republic**

Historically Czech Republic belongs to popular health tourism destinations because of its diversity of mineral water sources and spa medical treatments found in several world renowned spa destinations. The thermal spa destinations of Carlsbad and Teplice are among the oldest and most famous Central European spas. Furthermore the beginning of spa medicine in Czech Republic is related to the use of thermal waters of Teplice and Carlsbad.

Traditionally Czech spa facilities offer balneotherapy, which involves complex drinking and bathing therapies based on the use of mineral spring waters, peloids and natural gases. The country possesses a great number of healing assets: spa mineral and thermal waters, mud, gas, and climatic resources. These curative agents have been used for therapeutic treatment for centuries and gave rise to the foundation and development of towns around these springs. Interestingly the time of establishing the oldest spa towns such as Teplice and Carlsbad is strongly related to the discovery of the healing properties of mineral waters.

Mineral waters have been used for therapeutic purposes since the beginning the 12<sup>th</sup> century, as the oldest spa city of Teplice was established in the north-western part of the Czech Republic. Carlsbad (Carlsbad) the second oldest and the world famous spa town was established in the mid 14<sup>th</sup> century by the Bohemian king Charles IV, when the healing properties of thermal water springs located in this area were made known to him (Kondrashov, 2014).

During the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century Czech spas have experienced a rapid development of new spa destinations and facilities as well as growing popularity. During that time, most today well-known spa destinations were built. The spa town of Mariánské lázně was established in 1808 and the spa resort of Poděbrady was established in 1905 (Burachovič & Wieser, 2001). The Czech spa towns have their own specific architecture such as colonnades, splendid spa buildings and hotels which are surrounded by gardens and parks, all of these elements add to the tourist attractiveness of such destinations.

Today, 37 spa towns or health destinations exist in the Czech Republic. Due to the Spa act adopted in 2001, spa town status is granted to settlements, where proven natural healing assets

exist. The quality of mineral waters, their healing properties and hygienic conditions of spa facilities are regulated by the Ministry of Health, using a set of standards that are regularly examined (Ministry of Health of the Czech Republic, Spa Act, 2001).

The spa industry plays an important role in the tourist industry of the Czech Republic, being a significant source of revenues in foreign currency. For example, according to the Czech National Bank statistics, overall export of tourism was estimated 5.5 billion Euros in 2012 (Czech National Bank Statistics, 2012). Moreover, according to the Czech Statistical Office, more than 7.1 million foreign tourists visited the Czech Republic in 2012 and more than 351,000 of them visited spas (Statistical Office of the Czech Republic, Spa Statistics, 2012). The numbers of spa visitors has steadily increased in the past decade (Kondrashov, 2014).

The Czech Republic offers a numerous spa and wellness treatments in 37 spa destinations. The advantages of such offer are in selling the travel packages that beside the room typically includes meals, treatments and resort activities. It is generally acknowledged that destination spas gain a lot from economies of scale by attracting visitors for which spa and wellness itself becomes a primary purpose of travel. At the same time hotels in other locations attracts visitors that may or may not use the spa.

Therefore, spa and wellness operators located in spa destinations have higher prerequisites to get higher utilization of their capacities and profits. Additionally it is necessary to emphasize that geographic location of spa destinations is also an important determinant of a number of visitors that results in occupancy, prices and eventually in firm's profits.

### **3.7. Conclusions**

The econometric analysis performed in this research has outlined strategies to boost hotel revenues. It was found that focus on occupancy rates may result in higher hotels revenues. At the same time it is necessary to note that applying overall industry statistics to the particular hotel establishment situation has certain limitations and it is necessary to take into account the other indices and factors.

At the same time it is necessary to admit that the amount of revenues does not mean profits generation therefore this will be further discussed in the next chapter.

The financial analysis is recognized as a promising technique, which would allow the creation of a complex set of performance measurement indicators. These indicators are corporate

profitability, liquidity, debt ratios, as well as, net working capital values and the Altman Z-score. This will be further discussed in the Chapter 4.

It is worth mentioning that hotel profitability is dependent upon the quality of managerial decisions and investment policies of particular enterprises and is also tightly dependent on general business cycle.

The indices analyzed in the present research show their significance and possible applications. This is particularly important for the comparison of hotel profits in different counties within the same hotel chain. These indices could provide a quick overview on recent market trends, which would help to predict future ADR development, as well as, total revenues.

On the other hand, it is necessary to note that comparative analysis of the above-mentioned three indices should take into consideration the current ADR and occupancy rates in particular markets in order to avoid different price level distortion. This has been shown in the current study, apparent in the comprehensive hotel data analysis from the Czech Republic, Slovakia and Austria.

In conclusion, it is worth mentioning that the recent trend of growing demand for medical wellness represents an additional option for Czech spa industry to retain competitive advantages and maintain financial stability for upcoming years. The spa and wellness enterprises profitability represent a key question in modern times. Therefore, the next chapter will build insights on application the financial analysis methods on the biggest spa operators in the Czech Republic.

Hotels are the key suppliers of reliable tourist statistics and are enterprises that created to provide services to tourists. This hospitality sector is important in destinations' infrastructure. Therefore this chapter has provided solid evidence to confirm hypotheses #2 and hypothesis #3 that spa specialization as an indirect factor in increasing the efficiency of the hotel facility as spa amenity reduces the pressure of seasonal fluctuations in demand on profits.

## ***Chapter 4. Application of financial analysis techniques to spa hotels in the Czech Republic***

### **4.1. Introduction**

Thousands of hotels worldwide daily offer their services to the customers which implies to benefit from these activities. Hotels differ in their room capacities, range of services and specialization, but the one thing remain unchanged for the all of them as they were built to create a value i.e. generate profits for their owners and investors. Thus, analysis of their financial performances is the core concept that will be provided within this chapter.

This chapter addresses the hypothesis # 4 of the thesis that” **Financial analysis is an appropriate tool for the evaluation of hotel performance**”.

Before we start with financial analysis and description of the suitable framework for this it is necessary to name the specifics of the hotel industry that to the certain extent affect their financial results. These specifics are the following:

- a) product perishability (cannot be produce for inventory);
- b) sales volatility (e.g. seasonal, weekly, economic cycle-induced);
- c) labor intensity;
- d) the high proportion of fixed costs (high proportion of fixed assets, investments into periodic refurbishments), this produces high rent and depreciation cost which along with significant salary costs results in hotels having a high fixed costs. This determines the level of sales necessary to achieve breakeven point.
- e) interdependence of hotel divisions performances (the increase in occupancy may lead to higher sales in hotel restaurant, spa center etc.)

Every decision made in a business has financial implications therefore any firm is a system of financial relationships and cash flows, which are activated by management decisions.

A number of different approaches might be used in analyzing a firm performance as they reflect needs and purposes of analysis. Among them financial analysis is the core framework for the analyses of business performance and is based on the accounting results, i.e. financials statements, (the balance sheet, the income statement, and statement of cash-flow). The most common form in which basic financial information is presented is the set of financial statements compiled in accordance to the national or international accounting standards.

Accounting is often called the language of business, as it translates a firm's diverse activities into objective numerical financial reports that provide information about the company's performance, problems and prospects (Higgins, 2012). Finance therefore involves the interpretation of these accounting numbers for assessing performance.

Finance is generally viewed as a set of principles and theories concerned with the generation and allocation of money. Therefore, the most relevant aspect of finance at the company level is the effective use of resources in order to maximize profitability. In general, the accounting system represents for companies the most extensive and all-encompassing information system as it based on money as the most fundamental common denominator in business.

Accounting has certain limitations as they are historical i.e. based on historical data, thus the value of many assets on the balance sheet is what the firm paid for them and not their current market value; and accounting statements do not measure current value. On the other side accounting has following advantages as current value of some assets can be hard to estimate; valuation models are complicated to apply and the resulting numbers are theoretically open to abuse (Moles, P., Parrino, R., & Kidwell. D., 2011).

Despite the criticism it is necessary to admit that accounting is the only information system that measures the economic performance of all departments within an organization. The concepts like 'Balanced Scorecard' which encompasses financial and non-financial performance indicators have their foundations in financial dimension derived from accounting statements (Niven, 2005).

Thus financial analysis remains the relevant framework for performance analysis. Moreover, given the importance attached to published financial statements by the investing community, continued management emphasis on financial indicators is to be expected.

## **4.2. Financial statements as a source of data for financial analysis**

### **The balance sheet (statement of financial condition)**

The purpose of the balance sheet is to provide at a specific point in time a picture of the financial condition of a business entity relative to its assets, liabilities, and ownership equity.

The balance sheet summarizes the assets, liabilities, and owners' equity of a business at a moment in time, usually the end of a year. In other words it is a financial snapshot of all the assets company owns and all the claims against those assets taken at a point in time. Assets are listed at book value and used to generate profits. Shareholders' equity and liabilities tell us how the firm has financed its assets, and represent claims against its assets. The basic equation is following:  $\text{Total assets} = \text{total liabilities} + \text{total shareholders' equity}$  (Higgins, 2012).

### **The income statement** (profit and loss statement)

The purpose of the income statement is to show economic results of profit-motivated operations of a business over a specific operating period. The income statement summarizes the revenues and expenses of the firm over a particular period of time, usually a year. The income statement presents revenues, operating expenses, capital expenses, and the resulting profit or loss for the period. The last line on an income statement, often referred to as the bottom line, is net income, or profit and loss.

Though the balance sheet represents a snapshot of the firm's financial position at a moment in time, the income statement depicts a summary of the firm's profitability over time (Higgins, 2012; Moles et al., 2011).

### **The statement of cash flow** (sources and uses of funds statement).

This statement shows the firm's cash inflows (receipts) and outflows (payments) for a period of time. The concept of cash flows is important one in financial management. It is necessary to admit that revenues, expenses and the net income reported in the firm's income statement do not necessarily reflect cash flows.

### **Interrelations between the financial statements**

Balance sheet summarizes what assets the company has at the particular point of time and how the company has financed those assets with debt and equity. From one year to the next, the company's balance sheet changes because firm buy or sell assets as well as the value of debt and equity financing changes. Those changes are exactly the ones presented in the statement of cash flows. Thus, the statement of cash flows summarizes the changes in the firm's balance sheet from the beginning of a period to the end of that period.



Income statement calculates the firm's net income as well as an input that is used in the balance sheet and the statement of cash flows (Moles et al., 2011).

### **4.3. Financial analysis application to spa operator's financial performances in the Czech Republic**

Hotel businesses often have several objectives, such as being profitable, expand its market share, and growing its size as in adding more lodging operations and divisions. For all that, three basic objectives of every hospitality enterprises are solvency, profitability and positive cash flow. Solvency is the ability to pay debts on time, which is reflected by the company's balance sheet. Profitability is the ability to generate net income, which is shown on the company's income statement. Cash is used to pay company's obligations as they come due and is shown on the statement of cash flow.

The evaluation of abovementioned objectives in terms of money will be provided in this part of a thesis by using analytic tools i.e. financial analysis. According to tourist statistics, Czech spa tourism industry has managed to retain certain competitive advantages and has developed positively over the past decade. This study analyzed the financial performances over the period 2006-2011 of the five biggest spa operators in the Czech Republic located in Carlsbad, Luhačovice, Mariánské Lázně Poděbrady and Teplice. These spa operating companies have a complex structure combining medical and wellness divisions with the hospitality services provided in their spa hotels.

Financial analysis serves as a set of universal tools that allow an evaluation and comparison of achieved economic results of the company examined. The financial ratios that measure profitability, risk, leverage and financial stability were chosen in order to provide a complex overview of economic performances of spa operators. In addition to ratio analysis, a relevant indicator of RONA (return on net assets) is employed to verify profitability indicators ROA and ROE independently to their capital structure i.e. effects of leverage. Finally, this chapter includes complex models such as Altman Z-score model related to the assessment of the bankruptcy risk for firms analyzed.

Financial analysis generally involves the evaluation of three characteristics of a company: its liquidity, its profitability, and its solvency, which reflects different interests of different entities involved. These three characteristics represent ratios, making the ratio analysis the main tool for financial analysis performed in this chapter of the thesis.

Financial statement analysis is a matter of relating the various parts of the statements to each other and to the whole, and then interpreting the results. Different users of financial statements are interested in different segments and specific items.

Generally, three broad groups of people are interested in the evaluation of ratios: internal operating management, current and potential creditors, and the company's owners.

All readers of financial statements, owners, managers, investors, and creditors are interested in analyzing and interpreting the financial statements. But, what is of great interest to one may be of less interest to another. Moreover, they most likely will have different interpretations of the information being viewed.

Here we mention the specifics of their interests in relation to the ratios.

A short-term creditor, such as a bank, is primarily interested in the liquidity or ability of the borrower to pay obligations when they come due. Thus, the liquidity of the borrower is particularly important in evaluating the safety of a loan. A long-term creditor, such as a bondholder, however, looks to profitability and solvency indices that indicate the company's ability to survive over a long period of time. Long-term creditors consider such measures as the amount of debt in the company's capital structure and its ability to meet interest payments. Likewise, stockholders are concerned in the profitability and the solvency of the firm. Therefore, they want to evaluate the possibility of dividends and the growth potential of the stock they hold.

Despite the industry specifics the major accounting rules and therefore financial statements have a universal character for the all industries. This builds rationale for application the financial analysis techniques to hotel economic performance evaluation performed in this thesis.

Ratio analysis gains a great popularity because it has certain advantages. From its definition, financial ratio is one number from a financial statement that has been divided by another financial number. According to Moles et al. ratios eliminate problem arising from differences in size because size is effectively "divided out" because the denominator of the ratio adjusts numerator to a common base. Ratios are generally classified by the type of information they provide (Moles et al., 2011). Despite the extensive use of ratios there is still a problem with the use of standardized names for all of them. Thus, it happens frequently, that ratios vary in their names in different publications. Thus ratios being the same in its formula bear different names. This will be shown in this part of research. Despite the number of financial ratios in literature and practice is steadily growing, actually, the ratios needed to complex assessment

of the financial condition and performances of a company are relatively few. They are classified to five common groups presented in Table 9.

**Table 9. Classification of financial ratios.**

<b>Ratio group</b>	<b>Main ratios</b>	<b>Significance</b>	<b>Interest group</b>
<b>Liquidity</b>	<b>Current ratio, Quick ratio, Cash ratio, Net working capital</b>	Measures an operation's ability to meet its short-term obligations (one year or less)	Banks, investors, managers, suppliers and other trade creditors, owners
<b>Solvency</b>	<b>Solvency ratio, Debt ratio, Equity ratio, Interest coverage ratio</b>	Measures an operation's ability to meet its long-term obligations (over one year). This ratios measure the extent to which the enterprise has been financed by debt and is able to meet its long-term debt obligations	Long-term creditors, stakeholders
<b>Activity</b>	<b>Asset turnover, Receivables turnover, Liabilities turnover, Inventories turnover</b>	Used to assess the effectiveness of how assets have been managed	Managers
<b>Profitability</b>	<b>ROCE, ROA, ROE, Gross profit margin</b>	Measures management's effectiveness in achieving profit margins and return-on investment goals	Investors, managers, suppliers, owners
<b>Operating</b>	<b>ADR, OCC, Revenue</b>	Uniform indicators which measures the efficiency of hotel operations.	Managers, hotel chains, investors, analytical and statistic agencies

Source: own elaboration.

The ratios presented in the Table 9 are widely accepted and included in any financial analysis. The choice of the ratios was made according to their explanatory power. However, it is frequently happens that in different financial analysis publications many of these standard financial ratios slightly differs, in their formulas and especially in their names. To eliminate this problem all the indicators used in this study were provided with their synonyms in order to offer the maximum convenience with reading.

### **4.3.1. Liquidity ratios**

The term liquidity is judged by how easily an asset can be turned into cash without large discounts in its value. Liquidity is the major concept for the accounting and the financial analysis. Assets on a balance sheet are listed in order of liquidity from long-term or fixed assets to current assets (Harna, 2007).

The liquidity indices indicate the short-term solvency of the business, or the ability to meet its obligations. In other words liquidity refers to ability of a company to convert its assets into cash quickly and with lower costs as possible. Also such liquid assets are necessary to cover any unforeseen situations and play as a buffer in company's operations.

Cash and money on bank accounts as well as current assets of the firm (such as accounts receivable, and inventories) are used to pay current liabilities.

Assuming all other things being equal, a company with more liquid assets will be more able to meet its maturing obligations such as its accounts payable and other short-term debts, than a company with fewer liquid assets. Therefore, creditors are principally concerned with a company's ability to pay its bills (Mayes & Shank, 2012). To assess this ability, the current ratio, the quick ratio, the cash ratio and the net working capital are generally used.

However, higher liquidity does not always mean good for all parts of the business i.e. creditors and shareholders; this will be further illustrated on the liquidity ratios. Moreover, existing literature, indicates that the higher liquidity and net working capital, the lower the profitability of the company (Pavelková & Knápková, 2005).

The liquidity of firm's assets is also a determinant of firm's debt capacity (Higgins, 2012). It is become evident from the analysis of company's assets. Long term assets are usually recognized as an illiquid, thus they are not considered as appropriate source of liquidity for the company. This represents a confirmation of the rule that long term assets should be financed by long-term debts. In case these illiquid assets were financed by short-term liabilities, they must be paid before the assets generate enough cash to pay them.

Thus liquidity is an important measure for choosing the sources of financing of assets for the companies.

Very practical implications can be drawn from the following liquidity measures:

1. The current ratio;
2. The quick ratio;
3. The cash ratio;
4. The net working capital.

#### **4.3.1.1. Current ratio**

The need to finance current operations related to the short-term liquidity risks that may arise. The most frequently used ratio to measure short-term liquidity risk is the current ratio.

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

It relates to a company's ability to pay short-term obligations. The current ratio informs about the efficiency of a company's operating cycle or its ability to turn its product into cash. A current ratio less than 1.0 indicates that the firm has more obligations coming due in the next year than assets it can expect to turn into cash. Thus, it is an indication of liquidity risk. If the ratio is too high, the company may not efficiently use its current assets such as having problems reducing its inventory (Damodaran, 2001). This may also indicate problems in working capital management, the indicator which will be further discussed.

Therefore, for the creditor the higher current ratio is better because it means the high probability that will be able to pay its obligations. However, the shareholder's has a different view on it, because current assets usually have a lower expected return than do fixed assets (Mayes & Shank, 2012).

Thus, companies prefer to invest as small as possible amount of their capital in current assets. Finally, the current ratio higher than 1.0 does not always mean that firm's is able to pay its bill, because its current assets can be made up illiquid assets. Therefore, the current ratio should supplemented by the analysis of company's assets, or by the other liquidity ratios presented in this study (Mayes & Shank, 2012).

#### 4.3.1.2. Quick ratio (acid test)

The quick ratio unlike current ratio excludes the least liquid of the firm's current assets i.e. inventories. Therefore, this indicator is often seen as a more precise measure of the firm's liquidity.

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$$

This indicator excludes the influence of inventories on firm's liquidity. This is important from two perspectives; first because inventories cannot be easily converted into cash without large price concessions; second a certain level of inventories is needed for the company's ongoing operations, thus these inventories cannot be converted into cash (Harna, 2007). The optimum quick ratio is ranged from 1.0 to 1.5., which means that the company is able to pay its obligations. The high value of the quick ratio is a positive indicator for creditors. However, for shareholders its high value indicates that many assets are tied up in cash which represents zero return for the firm.

It is worth mentioning that the quick ratio is always less than the current ratio. This is according to the formula. At the same time, if a quick ratio is too low relative to the current ratio, this may indicate inventories are higher than they should be (Mayes & Shank, 2012).

#### 4.3.1.3. Cash ratio

The cash ratio is the most precise of the three short-term liquidity ratios (current, quick and cash). It only expresses the most liquid short-term assets of the company i.e. cash, that can be immediately used to pay off current obligations. It does not include inventory and receivables, as there are no assurances that these two accounts can be converted to cash in a timely matter to meet current liabilities.

$$\text{Cash ratio} = \frac{\text{Cash}}{\text{Current liabilities}}$$

However, in reality a very few companies will have enough cash to fully cover current liabilities, which isn't necessarily a poor performance. Thus, an optimum value of this indicator, unlike the other liquidity ratios is being around 0.02-0.05. According to Moles et al. (2011) 5% cash ratio provides adequate liquidity to fund ongoing operations and for unexpected emergencies.

The cash ratio is rarely used in financial reporting because it is not realistic for a company to maintain high levels of cash assets to cover current liabilities. The high values of cash ratios are seen as poor asset utilization for a company to hold large amounts of cash on its balance sheet, as this money could be returned to shareholders or used elsewhere to generate higher returns. While providing a precise liquidity perspective, the usefulness of this ratio is limited. Here a cash ratio was provided to create a comprehensive look on firm's liquidity.

#### **4.3.1.4. Net working capital**

This indicator connected only with liquidity. It shows the amount of current assets that is in excess over current liabilities. This ratio indicates whether a company has enough short term assets to cover its short term debt.

$$\textbf{Net working capital} = \textbf{Current assets} - \textbf{Current liabilities}$$

There is no uniform standard for optimal working capital level. It depends on the volume of operating activities as well as the size of the company analyzed, i.e. its current assets as well as the volume of current liabilities. The optimal level of net working capital is the level where company is capable to pay day to day expenses. Thus, it is necessary to maintain working capital positive.

The either low level or excess of working capital can influence the business performance. In case company has not enough cash to repay its liabilities, it will undermine its solvency and liquidity and eventually creates a risk of a company bankruptcy. Conversely, excess of net working capital will decrease the return on investment (ROI). High amount of working capital indicates mismanagement of money because that money is not gaining any earning and its

opportunity cost will suffer by shareholders. Eventually it will decrease the value of share in share market for the publicly traded companies.

Therefore, it is very important to get optimum level of working capital where both profitability and liquidity will be balanced.

The most significant liquidity ratios were calculated for the biggest Czech spa operators. The results are visualized in Table 10.

**Table 10 . Spa operator's liquidity performance indicators.**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>Current ratio</b>						
Poděbrady	1.61	1.22	1.28	1.3	0.63	0.46
Carlsbad	4.26	1.93	2.76	7.48	1.81	1.87
Mariánské Lázně	1.24	1.09	1.72	2.43	0.38	0.37
Luhačovice	1.36	1.65	1.39	1.54	0.49	1.37
Teplice	0.66	1.05	1.29	1.84	1.52	1.4
<b>Quick ratio</b>						
Poděbrady	1.44	1.06	1.17	1.20	0.59	0.43
Carlsbad	3.97	1.80	2.56	7.02	1.69	1.76
Mariánské Lázně	1.18	1.02	1.62	2.31	0.35	0.34
Luhačovice	1.30	1.59	1.35	1.51	0.49	1.31
Teplice	0.59	0.97	1.21	1.75	1.43	1.31
<b>Cash ratio</b>						
Poděbrady	0.71	0.50	0.40	0.61	0.33	0.09
Carlsbad	1.38	1.07	1.01	4.94	1.17	1.24
Mariánské Lázně	0.95	0.65	0.57	1.37	0.31	0.27
Luhačovice	0.71	1.13	0.23	0.10	0.02	0.34
Teplice	0.22	0.63	0.90	0.96	0.60	0.66
<b>Net working capital</b>						
Poděbrady	12386	4814	8548	11924	36587	20971
Carlsbad	38181	25860	37541	53941	48962	49689
Mariánské Lázně	28744	10034	65113	104460	40072	42365
Luhačovice	22767	46279	33641	71716	195841	26641
Teplice	-26577	2931	13853	35950	17981	14313

\* Net working capital is expressed in thousands of Czech crown. \*\* Source: own calculations



Liquidity indicators visualized in Table 10 show significant fluctuations over 2006-2011. This for certain extent resembles changes in macroeconomic situation as the 2010-2011 appears to be less favorable for spa operators compared to 2006. In 2011 the current ratio values show a big variation among companies analyzed; the highest values 1.87 and 1.40 related to Carlsbad and Teplice respectively and the lowest values of 0.37 and 0.46 are linked to Mariánské Lázně and Poděbrady correspondingly.

While the current ratio under 1.0 shows negative signs of financial position, it does not necessarily mean insolvency as there are many ways to access financing. To the extent that the company has to make payments to its suppliers before it gets paid for the goods and services it provides, there is a cash deficit that has to be resolved usually through short-term borrowing.

Moreover, it is necessary to mention that current ratio broadly varies in hotels. For instance, current ratio of the world biggest hotel chain Intercontinental Hotels (IHG) has varied from 0.4 to 1.2 over the period 2009-2013. However, despite big fluctuations of current ratio IHG showed positive operating profits (Ycharts, 2013).

Examination of quick ratio shows almost identical patters were observed for the quick ratio compared to current ratio. This is a good sign; otherwise it may indicate inventories are higher than they should be. Carlsbad despite a big variation shows the highest quick ratios, especially in 2009 when it was over 7.0 which indicates a conservative policy, and from the shareholder's point of view should deserve some changes. Quick ratio significantly reduced in 2010-2011 to 1.7 in average in Carlsbad, showing a sign of improvement in asset utilization. The quick ratios for the Poděbrady and Mariánské Lázně in 2010-2011 were below optimum values in which might reflect their little investments in current assets. This is however could be quite risky for both creditors and shareholders. Other companies located in Luhačovice and Teplice had optimal quick ratio values.

Cash ratio has optimal values in Mariánské Lázně, Luhačovice and Teplice over 2011. At the same time in 2011 Carlsbad and Poděbrady show relatively high and extremely low values respectively. Detailed information can be obtained from the Table 10.

Net working capital values for the all spa operators analyzed were positive throughout 2007-2011, indicating the both a good companies efficiency and their short-term financial health. The results are shown in Table 10. Since the growing liquidity and net working capital cause the decrease of profitability, firms have to work to find a balance between reducing their current ratios simultaneously with having optimal amount of cash in net working capital.

#### **4.3.2. Solvency ratios** (leverage ratios, debt management ratios)

The solvency ratios also often called capital structure ratios are vital for the firm's performance and existence. In this research the calculations of the following indicators are provided:

1. Solvency ratio;
2. Debt ratio;
3. Equity ratio;
4. Interest coverage ratio.

##### **4.3.2.1. Solvency ratio**

It provides information about the coverage of debt. It is important measure for the long-term creditors, because it shows whether they will receive their money back in case the firm (hotel) is forced to close down (Harris, 2011).

$$\text{Solvency ratio} = \frac{\text{Total assets}}{\text{Total debt}}$$

where

Total debt = Total liabilities

The ratio should be higher than 1:1 for companies with strong performance.

##### **4.3.2.2. Debt ratio**

Debt ratio indicates what proportion of debt a company has relative to its assets and therefore it has a direct link to the capital structure. The objective is to minimize the cost of capital, which maximizes the value of the firm. In general if the long-term debt equals 50% to total assets this produces the minimum cost of capital and therefore the minimum cost of capital employed.

The use of debt capital may lead to the increase of company performances. In general, debt capital is cheaper than equity due to the effects of financial leverage and debt-related tax shields. Financial leverage is the ability to increase return on equity by adding of borrowed money to equity. If the interest burden of debt is lower than ROA, return on equity is growing and it is desirable to gain cheap debt capital (Harna, 2007). In addition, the effect of the tax shield is related to the interest costs that are associated with debt capital. Interests on debt capital are costs that reduce the tax base and the actual tax liability, therefore, for a firm it means the actual tax savings (Damodaran, 2001; Synek et al., 2007).

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

The debt ratio enables comparisons of leverage to be made across different companies. There is the universal rule that the higher the ratio means the higher the degree of leverage, and consequently, financial risk. A ratio 1:2 is considered safe.

Another perspective is to define capital structure in terms of total debt ratio used in present research.

Total debt contains both long-term and short-term liabilities. Total assets include all fixed assets and current assets. The debt ratio is employed to explain the amount of leverage being used by a company. A high debt ratio means that the company is too dependent on the leverage to finance its activity while low percentage represents otherwise. In general, the higher the ratio, the riskier the company position to be in default payment and subject to face financial distress and eventually bankruptcy.

#### 4.3.2.3. Equity ratio

The equity ratio is the opposite of the debt ratio. This indicator expresses the proportion in which the assets financed by shareholders' money. It is one among the most important debt ratios for evaluating the company's overall financial situation.

$$\text{Equity ratio} = \frac{\text{Equity}}{\text{Total assets}}$$

The optimal value of this ratio is 0.5. However it is highly related to manger's attitude to risk.

In addition it is usually easier to acquire assets through debt than to acquire them through equity. This can be illustrated on example provided by Carlberg (2010) “you might need many investors to make up the amount of capital you need, but you might be able to borrow it all from just one creditor” (p. 185).

Carlberg also adds that “because investors usually require a higher return on their investment than do creditors, it might seem that debt is the preferred method of raising funds to acquire assets. However, potential creditors look at ratios such as the ROA and the debt ratio. A high debt ratio (or, conversely, a low equity ratio) means that existing creditors have supplied a large portion of the company’s assets and that there is relatively little stockholder’s equity to help spread the risk” (Carlberg, 2010, p. 185).

#### **4.3.2.4. Interest coverage ratio** (Times interest earned)

This indicator measures the firm’s ability to service its debts. Ratio measures the extent to which operating profit (EBIT or earnings before interest and taxes) cover the firm’s interest expenses. This is important indicator for creditors as they prefer to lend money to firms which have EBIT significantly higher of their interest payments.

$$\text{Interest coverage ratio} = \frac{\text{EBIT}}{\text{Interest expense}}$$

Generally, the higher value of this index is, the more likely the firm is to meet its interest payments (Moles et al., 2011). Debt coverage ratio is a reliable reflection of the company’s debt burden. As the lower the interest coverage ratio is, the higher the company's debt burden and the greater the possibility of bankruptcy or default. A low ratio means less earnings are available to meet interest payments and that the business is more susceptible to increases in interest rates. When a company's interest coverage ratio is only 1.5 or lower, its ability to meet interest expenses may be problematic. An interest coverage ratio below 1.0 indicates the business is having difficulties generating the cash necessary to pay its interest obligations. That means interest payments exceed its earnings (EBIT).

Conversely a higher ratio indicates a better financial health as it means that the firm is more capable to meeting its interest obligations from operating earnings. However, a high interest

coverage ratio may suggest a company is not using opportunities to increase earnings through leverage.

The overall solvency indicators are presented in Table 11.

**Table 11. Spa operator's solvency performance indicators**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>Solvency ratio</b>						
Poděbrady	3.6	4.5	5.9	3.4	4.5	4.5
Carlsbad	2.3	3.2	3.6	5.4	5.6	6.5
Mariánské Lázně	2.7	3.5	3.9	3.9	4.6	4.7
Luhačovice	1.4	1.5	1.6	1.6	1.6	1.7
Teplice	3.7	3.5	3.4	4.5	6.3	7.0
<b>Debt ratio (%)</b>						
Poděbrady	27.5	22.1	17.0	29.0	22.1	22.1
Carlsbad	44.4	31.6	27.6	18.6	17.8	15.3
Mariánské Lázně	36.6	28.9	25.9	25.9	21.7	21.5
Luhačovice	69.8	67.8	63.4	63.0	64.3	59.1
Teplice	27.0	28.4	29.1	22.2	15.8	14.2
<b>Equity ratio</b>						
Poděbrady	0.7	0.8	0.8	0.7	0.8	0.8
Carlsbad	0.6	0.7	0.7	0.8	0.8	0.8
Mariánské Lázně	0.6	0.7	0.7	0.7	0.8	0.8
Luhačovice	0.3	0.3	0.4	0.4	0.4	0.4
Teplice	0.7	0.7	0.7	0.8	0.8	0.9
<b>Interest coverage ratio</b>						
Poděbrady	8.4	16.6	35.1	27.1	14.8	17.2
Carlsbad	54.1	62.3	11.3	49.8	35.9	76.9
Mariánské Lázně	6.8	10.0	4.6	3.3	39.9	12.0
Luhačovice	15.6	30.3	39.8	53.1	23.8	5.4
Teplice	1.7	0.6	-0.5	7.3	6.0	10.9

Source: own calculations.

The solvency ratio in all companies analyzed was higher than 1:1, meaning a satisfactory coverage of debt. Moreover Carlsbad had shown the highest values of solvency indicator that in addition to its high liquidity provides a positive sign for creditors and investors.

Analysis of spa operators leverage ratios shows that all companies have a relatively small share of debt in their capital structures. Detailed analysis indicates that among companies Luhačovice has the least equity and hence the highest values of debt ratio, whereas companies

in Poděbrady and Carlsbad mainly rely in their equity and show the lowest indebtedness. The optimal debt ratio depends on the size of the firm, industry and competition. The debt ratio values of the spa operators analyzed have in general downward trend over the period 2006-2011. The highest indebtedness was occurred in Luhačovice with about 60% and the lowest of 14.2% and 15.3% in Teplice and Carlsbad respectively. In addition, no correlation between ROA and debt ratio values was found in spa operators analyzed.

Equity ratio calculations show that most of the companies have a propensity to use of equity to finance their assets. With the exception of relatively high leveraged Luhačovice, the rest companies showed above 70% of equity in their capital structures. This consistent with the publications by Kislíngrová et al. (2007), which reveals that Czech companies prefer to finance assets with equity. This is a good example of verification the basic theories of capital structure in practice, such as the tradeoff theory and the pecking order theory.

The pecking order theory declares that firms prefer internal finance, for instance retained earnings, and will choose debt over issuing new stock. Tradeoff theory asserts that firms search for debt levels that balance the tax savings benefit of additional debt against the costs of possible financial distress. Despite firms pay taxes on their income, interest is a tax-deductible expense; therefore, a higher leverage level would create a larger tax benefit for corporate income. Potentially a firm can increase its debt level to the point where the marginal value of tax shields on additional debt is offset by the present value of possible costs of financial distress (Moles et al., 2011).

In 2010-2011 all companies analyzed show high interest coverage ratio, indicating that businesses have a safe capital structure i.e. low level of indebtedness and are able to meet interest expenses.

#### **4.3.3. Activity ratios** (Efficiency ratios, asset management ratios)

This set of ratios gauge how efficiently a company can change assets into sales. Therefore it measures management's effectiveness in using firm's resources (Moles et al., 2011). Managers use different enterprise's resources such as fixed assets and inventories to generate earnings for owners while providing services and products to visitors. Since the fixed assets of

most hotel facilities constitute a large share of the total assets, it is important to use these resources effectively and regularly control this. This research provides calculations of the following activity ratios:

1. Asset utilization ratio;
2. Days in receivables;
3. Days in payables;
4. Inventory turnover.

#### **4.3.3.1. Asset utilization ratio** (Asset turnover)

This is the major indicator of company's efficiency that is listed in hotel databases. The asset utilization ratio measures management's ability to make the best use of its assets to generate revenue. The ratio calculates the total revenue earned for every Czech crown of assets a company owns (Moles et al., 2011). Increasing asset utilization means the company is being more efficient with each Czech crown of assets it has. This is the key indicator of a firm's efficiency.

$$\text{Asset utilization ratio} = \frac{\text{Total sales}}{\text{Total assets}}$$

where,

Total sales = Total revenues

The asset utilization ratio reflects firm's policy and highly dependent on the specialization of the firm.

#### **4.3.3.2. Days in receivables**

(Receivables turnover, Days' sales outstanding, Average collection period)

$$\text{Days in receivables} = \frac{\text{Receivables}}{\text{Sales} * 365}$$

From a company's perspective the days in receivables ratio provides an estimate of the number of days, are needed to collect revenues. It is a subject of payment conditions agreed.

#### **4.3.3.3. Days in payables**

(Liabilities turnover, Days' payables outstanding)

$$\text{Days in payables} = \frac{\text{Current liabilities}}{\text{Sales} * 365}$$

This ratio indicates how long, on average, a company takes to pay its suppliers. It is a subject of payment conditions agreed.

#### **4.3.3.4. Inventory turnover**

(Days in inventory, Days' sales in inventory)

This index shows how quickly the inventory is being used. In general, the quicker inventory turnover the better. This indicator is particularly important for the food and beverage division rather than for room division in a hotel.

$$\text{Inventory turnover} = \frac{\text{Inventory}}{\text{Sales} * 365}$$

There are no universal optimal values, because inventory turnover highly varies in different industries. The results of activity ratios evaluation for spa facilities are presented in Table 12.



**Table 12. Spa operator's solvency performance indicators**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>Asset turnover</b>						
Poděbrady	61.9	65.1	64.4	57.9	58.7	49.7
Carlsbad	86.9	90.7	90.5	79.6	72.8	79.9
Mariánské Lázně	44.9	45.6	44.6	45.0	42.5	43.2
Luhačovice	71.0	70.4	65.9	51.8	39.0	39.5
Teplice	69.2	64.3	62.4	62.4	65.3	64.0
<b>Receivables turnover</b>						
Poděbrady	26.4	19.8	37.5	34.4	27.0	55.4
Carlsbad	74.9	46.7	75.6	45.3	43.6	44.9
Mariánské Lázně	15.2	15.9	21.6	24.8	8.8	11.7
Luhačovice	38.3	25.9	95.1	105.3	284.2	69.1
Teplice	30.7	24.4	18.1	43.1	37.3	31.4
<b>Liabilities turnover</b>						
Poděbrady	36.5	35.7	49.2	57.8	35.0	42.9
Carlsbad	29.0	63.6	48.7	20.2	28.6	19.5
Mariánské Lázně	66.1	62.7	49.4	39.9	49.3	44.3
Luhačovice	66.2	70.8	85.2	126.2	105.8	71.1
Teplice	84.5	72.9	57.8	54.6	45.1	48.7
<b>Inventories turnover</b>						
Poděbrady	6.2	6.0	5.8	5.6	5.7	5.3
Carlsbad	8.5	8.3	9.6	9.8	9.5	8.0
Mariánské Lázně	4.2	4.4	4.7	4.8	5.2	4.8
Luhačovice	4.3	4.2	4.1	3.3	3.8	3.9
Teplice	5.7	5.2	4.5	5.2	4.1	4.5

Source: own calculations.

Results show a significant variation of asset management ratios during the period 2006-2011 in all spa operators analyzed. Carlsbad shows the highest asset utilization ratio values of 90% in 2007 and 2008, then decreased significantly to 72% in 2010. Then it was raised back up to 79% in 2011, improving indicator values. Teplice shows average asset utilization ratio values of 65% with a slight decrease over the period 2006-2009. However Teplice and Mariánské Lázně did not show any significant fluctuations compared to Carlsbad. Luhačovice has the lowest efficiency of asset utilization with the constant decrease over the period analyzed.

Receivables turnover and liabilities turnover ratios varies a lot over the period 2006-2011 in company's analyzed. In 2011 it takes an average 43 days for companies to collect revenues and 45 days to pay their suppliers. Additional information can be found in Table 12.

Finally, average inventory turnover in 2011 was 5.3 days. This means that inventories are converted to cash each 5.3 days in average. Therefore, inventory turnover means that spa operators have very small amount of inventories. In addition it is necessary to mention that ratio underpins the specifics of hotels sector, where inventories are usually small compared to the other industries.

#### **4.3.4. Profitability ratios**

Profitability ratios measure the income or profit of an enterprise for a given period of time. These ratios reflect the results of all areas of company operations. All information obtained from liquidity, solvency and activity ratios affect the profitability of hotel facility. Both dividends and stock price are highly dependent upon the profits generated by the company. The profitability ratios measure the management overall effectiveness (Damodaran, 2001; Harris, 2011).

There are of two types of profitability ratios those showing profitability in relation to sales and those showing profitability in relation to investment. Profitability indicators in relation to sales comprise the profit margin, whereas profitability in relation to investment contains following indicators: Return on capital employed (ROCE), Return on assets (ROA) and the Return on equity (ROE).

##### **4.3.4.1. The gross profit margin**

The gross profit margin is the amount of revenue left over after accounting for expenses. It summarizes a company's income statement performance by indicating profit per money unit of sales. It fluctuates from year to year, and it is an important indicator of a company's pricing policies and its ability to control costs.

$$\text{Gross Profit Margin} = \frac{EBT}{Sales}$$

where

EBT – Earnings before tax or Gross profit

In addition, the gross profit margin is an extremely important in determining the long-term viability of a business. A small gross margin means that a firm have to sell a lot of services/products to cover its overheads and earn profit, however a high gross margin means the opposite and thus is highly desirable (Higgins, 2012).

#### **4.3.4.2. Return on capital employed (ROCE)**

ROCE is a financial ratio that measures a company's profitability and the efficiency with which its capital is employed. ROCE is a useful metric for comparing profitability across companies based on the amount of capital they use.

$$ROCE = \frac{EBIT}{Total\ assets - Current\ liabilities}$$

A higher ROCE indicates more efficient use of capital. It is required that ROCE should be higher than the company's than the cost of debt (the interest rate on loans and borrowings of the business); otherwise it indicates that the company is not employing its capital effectively and is not generating shareholder value (Quiry, 2011).

#### **4.3.4.3. Return on assets (ROA)**

ROA gives an idea as to how efficient management is at using its assets to generate earnings. Index is calculated by multiplying profit margin to asset utilization ratio. ROA is considered as a key measure of profitability. It indicates how profitable a company is relative to its total assets. Moreover ROA measures how efficiently a company can squeeze profit from its assets, regardless of size.

This indicator compare bottom-line profits to the total investment (total assets) listed on the balance sheet. A very low ROA may result from inadequate profits or excessive assets. Conversely, a very high ROA is also not very positive sign, as it could be interpreted as older assets will require replacement in the near future, or it could be a sign that additional assets are needed to support growth in revenues.

ROA is also known as return on invested capital (ROI).

There are several options to compute ROA, if the use the equation shown here the profitability would be independent on the capital structure and taxes.

$$ROA = \frac{EBIT}{Assets}$$

ROA can be also computed by the multiplication of profit margin on the asset utilization ratio (Higgins, 2012). If ROA is increasing, then either EBIT is increasing or average total assets are decreasing.

Optimum ROA should be higher than the cost of capital, which comprises the cost of debt and the cost of equity (Damodaran, 2001). In addition ROA varies widely across different industries. Capital-intensive industries yield a low return on assets. This is why, when using ROA as a comparative measure, it is best to compare it against a company's previous ROA values or the ROA of a similar company.

Therefore expressed as a percentage, ROA identifies the rate of return needed to determine whether investing in a company makes sense. Measured against common hurdle rates such as the interest rate on debt, ROA informs investors whether the company's is able to valorize their money.

#### **4.3.4.4. Return on equity (ROE)**

ROE measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested (Higgins, 2012; Quiry et al., 2011). It is a measure of earnings per unit of equity capital invested. ROE is of great importance as it comprises three components: profit margin, asset utilization ratio and financial leverage. Those indicators were described above, here it is necessary to point out that these components are three following levers to control ROE:

- a) The profit margin or the earnings received out of each money unit of sales.
- b) The sales generated from each money unit of assets employed, or the asset turnover.  
It summarizes the company's management of its asset side
- c) The amount of equity used to finance assets or the financial leverage.

Therefore, these levers encompass the major elements of the firm's financial performance. The thesis shows the interrelationships between financial analysis indicators and the significance of them for financial performance evaluation.

$$ROE = \frac{\text{Net profit}}{\text{Equity}}$$

ROE norms and limits: optimum ROE should be higher than the cost of equity capital ( $ROE > \text{Cost of Equity}$ ). The cost of equity is the return that stockholders require for their investment in a company. In other words, the cost of equity is what it costs the company to maintain a share price that is satisfactory to investors. A company that earns a return on equity in excess of its cost of equity capital has added value.

ROE strongly depends on many factors such as industry and economic environment. According to Damodaran (2014) the average ROE for the hotel sector has been around 4.5% in 2013. Generally, it is supposed that the higher the ROE, the better. But a higher ROE does not necessarily mean better financial performance of the company. According to the DuPont formula, the higher ROE can be the result of high financial leverage, but too high financial leverage is dangerous for a company's solvency.

Results of profitability indicators are visualized in Table 13.

Results shown in Table 13 indicate mixed development of ROCE, ROA and ROE values over 2006-2011.

By comparing ROCE to the interest rates companies pay on their debts it can be assumed that Teplice is squeezing out less from its investments than what it's paying to finance that investment that is not a positive sign. By contrast, average ROCE values for the other spa operators are potentially better than the cost of debt which means that the companies valorize money invested.

ROA average values show that Carlsbad had the highest ones at the beginning over 2006-2007, however the economic downturn of 2008-2009 has influenced ROA resulted in it considerable drop. Despite the big variance of results it is possible to conclude that Carlsbad, Poděbrady and Luhačovice were able to valorize the money invested over the period 2006-2011, whereas spa operator in Teplice for several years had an extremely low or negative ROA and ROE.

**Table 13. Spa operators profitability indicators.**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>ROCE (%)</b>						
Poděbrady	6.70	9.86	11.79	12.14	10.13	8.93
Carlsbad	16.70	27.60	7.93	14.17	7.23	12.24
Mariánské Lázně	6.71	11.97	4.17	1.62	11.23	3.47
Luhačovice	4.90	6.12	10.35	15.18	10.24	8.21
Teplice	1.40	0.49	-0.53	3.77	1.44	0.82
<b>ROA (%)</b>						
Poděbrady	6.28	9.23	10.77	11.03	9.56	8.4
Carlsbad	15.55	23.24	6.98	13.55	6.81	11.72
Mariánské Lázně	6.17	11.03	3.92	1.54	10.58	3.29
Luhačovice	4.27	5.29	8.76	12.46	9.08	7.58
Teplice	1.18	0.43	-0.48	3.42	1.32	0.75
<b>ROE (%)</b>						
Poděbrady	6.26	9.55	10.17	12.27	9.29	8.26
Carlsbad	20.51	21.62	6.87	13.65	6.38	10.66
Mariánské Lázně	6.4	10.69	3.27	1.21	10.76	3.27
Luhačovice	9.46	11.64	18.27	26.43	19.62	12.09
Teplice	0.17	0.1	-2.61	3.83	0.72	0.37
<b>Gross profit margin (%)</b>						
Poděbrady	8.94	13.32	16.23	18.35	15.18	15.92
Carlsbad	17.56	25.2	7.03	16.68	9.1	14.47
Mariánské Lázně	11.72	21.78	6.87	2.4	24.29	6.97
Luhačovice	5.63	7.27	12.96	23.61	22.31	15.67
Teplice	0.68	-0.54	-2.21	4.72	1.69	1.07

Source: own calculations.

Profitability results show that gross profit margins (GPM) fluctuates significantly over the period 2006-2011 in all companies analyzed. Moreover, from the Table 13 it is evident that Poděbrady and Luhačovice show more stable results comparing to the rest of companies. Moreover, Teplice had negative GPM values of -0.54% and -2.21% in 2007 and 2008 respectively. As soon as the GPM reflects the company's ability to control costs, from this analysis it becomes evident that Teplice has dramatically reduced its costs in 2009 from 307,706 million CZK to 271,723 that allowed it to achieve the highest GMP of 4.72% during the period analyzed. In contrast Carlsbad showed the highest GPM of 25.2% in 2007 with the deep fall of GPM values to 7.03% in 2008 and the subsequent growth of GPM to 14.5% in

2011. The deep fall of GPM for the certain extent reflects the rapid increase in total costs in 2008, the reduction of total costs in 2009 positively affect GPM. However total costs raised again in 2011, without any effect on GPM, which was eventually higher compared the previous year this occurred due to the implementing the successful strategy in pricing and the overall increase in total sales.

At the same time, it is necessary to note that profit margins are rarely very large. In a free-market system, competition leads to reduced profit margins over the long term. If a company is very successful and posts a high profit, this very success should lead to increased competition and a lower margin as time goes on.

Moreover, in general hospitality industry tends to have the low profit margins with fluctuating sales volumes. In addition, DeFranco & Lattin (2007) state that hospitality business requires a relatively high level of capital for its real estate component and is strongly depended on market developments as it relies heavily on the discretionary income of their customers. During the economic downturn, when household discretionary income is low, the hospitality industry usually experiences diminishing revenues. This was confirmed in current analysis as the GPM was the lowest in 2008 in both Carlsbad and Teplice, coincided therefore with the economic downturn. However, the cost reduction policies had a positive influence on the values of GPM in Poděbrady and Luhačovice, which show us that companies to a certain extent are able to control its financial condition despite the negative macroeconomic conjuncture.

#### **4.3.5. Operating ratios**

Operating ratios are used for analysis of operations of hospitality businesses. Detailed information necessary for calculating these ratios are usually not available to creditors or the other external bodies. These ratios reflect the actual mix of sales and make possible comparisons to sales mix goals. Operating ratios related expenses to revenues are useful to control disbursements. This set of ratios is important for explaining differences between actual results and planned objectives. Among a big variety of different operating ratios for the hotel facilities key ratios are the following: ADR, occupancy rates and the RevPAR. Those indicators were discussed in detail in chapter 3. They were provided here to complete the ratio analysis classification.

#### 4.3.6. Return on net assets (RONA) (also known as return on invested capital (ROIC))

This indicator is essential for the analysis of the profitability since it allows to circumvent the effects of the firm's indebtedness affecting the ROE and ROA. Several modern publications suggest that the use of this indicator allows to assess the company's fundamental earning power independently on their different capital structures i.e. their financial strategies (Kislingerová et al., 2007). Results of RONA for spa operators in the Czech Republic are visualized in Table 14.

$$\text{RONA} = \frac{\text{NOPAT}}{\text{Total assets} - \text{Current liabilities}}$$

where

$$\text{NOPAT} = \text{EBIT} \times (1 - \text{Tax rate})$$

**Table 14. The results of RONA for spa operators in the Czech Republic.**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>RONA (%)</b>						
Poděbrady	5.1	7.5	9.3	9.7	8.2	7.6
Carlsbad	12.7	21.0	6.3	11.3	5.9	9.9
Mariánské Lázně	5.1	9.1	3.3	1.3	9.1	2.8
Luhačovice	3.7	4.7	8.2	12.1	8.3	6.7
Teplice	1.1	0.4	-0.4	3.0	1.2	0.7

Source: own calculations.

The results of RONA resemble the profitability indexes developments previously discussed. However, the advantage of this approach is that profitability is measured independently on the extent of debt firms employs for their operations allowing to produce more precise results on profitability. Similarly to results of ROA and ROE, Carlsbad shows the highest RONA values over 2006-2011. At the same time it is clear that Carlsbad showing decrease trend in return on assets since 2007. Results do not allow to find one major trend in return on assets for companies analyzed but they provided unbiased picture on their profitability over the period 2006-2011.



#### 4.3.7. Altman analysis (Altman Z-score) a bankruptcy prediction model

For the firm's long term existence it is essential to be informed about its risk of bankruptcy. In this research a widely recognized model of Altman Z-score is used in order to make predictions on financial distress of spa companies in the Czech Republic.

The Z-score model is a quantitative model developed by Altman to predict bankruptcy of a business using a blend of the traditional financial ratios and a statistical method known as multiple discriminant analysis. The Z-score is known to be about 90% accurate in forecasting business failure one year into the future and about 80% accurate in forecasting it two years into the future.

Altman Z-score involves a combination of five distinctive financial ratios used for determining the odds of bankruptcy amongst companies. According to Altman model, companies in which the value of the Z-score greater than 2.9, are safe from an economic point of view (Mayes & Shank, 2012). Companies with a value of Z-score below 1.2 in two years will probably have problems meeting their financial obligations. This model exists in two versions: for publicly traded firms and for firms not publicly traded. Due to the fact that all companies subjected to the study are not publicly traded (privately held) research uses an appropriate version of the model. Results of Altman Z-score for spa operating companies are visualized in Table 15.

The Z-score model for privately held firms is:

$$Z = 0.717X1 + 0.847X2 + 3.107X3 + 0.420X4 + 0.998X5$$

where the variables are the following financial ratios:

$X1$  = net working capital/total assets

$X2$  = retained earnings/total assets

$X3$  = EBIT/total assets

$X4$  = book value of all equity/book value of total liabilities

$X5$  = sales/total assets

There are three ranges of Z-scores:

$Z < 1.2$	Bankruptcy predicted within one year
$1.2 < Z < 2.90$	Financial distress, possible bankruptcy
$Z > 2.90$	No financial distress predicted

**Table 15. The results of Altman Z-score for spa operating companies.**

Index/Town	Year					
	2006	2007	2008	2009	2010	2011
<b>Altman's Z score values</b>						
Poděbrady	2.12	2.39	3.29	2.19	2.71	2.59
Carlsbad	2.1	2.67	2.64	3.56	3.41	4.02
Mariánské Lázně	1.6	1.84	2.1	2.07	2.58	2.00
Luhačovice	1.08	0.97	1.28	1.31	1.18	1.13
Teplice	1.85	1.72	1.71	2.31	3.04	4.67

Source: own calculations.

Results show that Carlsbad, Teplice and Poděbrady in 2011 have Z-score nearly equal or higher 2.9, which indicates that they have strong financial situation. Mariánské lázně with 2.0 Z-score have uncertain position. Finally, Luhačovice has the lowest Z-score of 1.13, which indicates the high risk of financial difficulties. Nevertheless, Z-score values for Luhačovice were at a large extent skewed by a relatively high debt capital. Moreover, the decrease of debt ratio, positive development of liquidity ratios in 2011 and the highest ROE of 12.09 among the companies analyzed indicate that Luhačovice has a positives signs in its economic performances. It is also needed to mention that Altman Z-factor values for Luhačovice were about 1.2 for the whole period of analysis 2006-2011. Despite this spa facility operates seamlessly and generated net income during the period analyzed. More details could be found in Table 15.

#### **4.4. Conclusions**

Since one the objective of this thesis is focused on search and application of the analytical tools and models to the firm's financial performances assessment, this chapter has provided relevant insights in this relation. Based on the literature studied and the empirical evidence author has provided a practical application of numerous relevant financial ratios and models on five biggest spa operators in the Czech Republic located in Carlsbad, Luhačovice, Mariánské Lázně, Poděbrady and Teplice over the period 2006-2011. The spa operating companies have a complex structure combining medical and wellness divisions with the

hospitality services provided in their spa hotels. Thus these companies are relevant for the purposes of the thesis as it is focused on hospitality businesses performance analysis.

Despite some controversy about using of financial statements for the firms performances evaluation it appears that they are still the most reliable source of information in this regard. This is supported by numerous recent publications, and among them it is worth to cite a Higgins as he said that “financial statements provide the best information available” (Higgins, 2012).

This research confirmed an assumption that positive developments in tourism industry adds to the economic stability of spa facilities in the Czech Republic. It was established that financial ratios to the certain extent reflect the market conjuncture. At the same time, this study has revealed certain specifics of the spa sector in relation to the profitability and the overall performances. These specifics are the following: the decisive role of location for the company’s profitability, lesser degree of seasonal fluctuations of demand, and the significant impacts of changes in health insurance policies, which will be further described.

First, the decisive role of location for the spa profitability can be illustrated on the example of spa operators placed in Carlsbad. The Carlsbad as the most famous and frequently visited thermal spa destination shows the best profitability indices as well as the overall economic performance over the whole period of analysis 2006-2011.

Second, the tourism industry characterizes with a high seasonality in demand and production that significantly influences the profitability of almost all businesses. Unlike the other sectors of tourism, spa facilities characterize with a smaller degree of seasonal fluctuation in number of spa visitor’s arrivals. Additionally, recent statistics show that Czech spa tourism was less susceptible to the economic downturn during 2008-2009. While the total number of tourists visited the Czech Republic dropped by 6.7 % in 2009, the number of spa visitors declined less than 5%. In addition, financial analysis of the biggest spa operators in the Czech Republic shows that recent financial crisis of 2008-2009 did not heavily affect their economic performances. Moreover, several ratios of profitability and liquidity among five spa operators analyzed were even higher in 2009 comparing to the 2008. This was achieved mostly due to implementation of cost reduction policies and a relative stability of demand.

Finally, in recent years, growth in overall tourist arrivals as well as spa visitors coincided with the changing policies of health insurance system, which led to a constant reduction of domestic patients in spa facilities meaning the decrease in profits from this segment of clients.

Today, spa operators in an effort to overcome the negative impacts of reduction in domestic health insurance patients extensively promote themselves in foreign markets. As a result, the latest statistics show that in 2012 private pay foreign patients were the biggest segment of spa clients in the Czech Republic. In conclusion, it is worth mentioning that the recent trend of growing demand for medical wellness represents an additional option for Czech spa industry to retain competitive advantages and maintain financial stability for upcoming years.

Therefore this chapter has provided solid evidence that financial analysis is an appropriate tool for the evaluation of hotel performances confirming the hypothesis #4 of the thesis.

## ***Chapter 5. Discussion and Conclusions***

### **5.1. Discussion**

Tourism as a dynamically evolving segment of international trade has attracted considerable attention due to its growing significance to the national income, employment opportunities and overall regional development. This thesis has revealed that underlying basis of the tourism growth is due to changes in its role in economy and contemporary social life. Today tourism starts to be perceived in society as an industry inseparable from the other industries and from everyday life.

Currently traditional confines of tourist destinations and attractions becomes in many respects blurred because tourism related activities are constantly expanding and interfering with everyday life of people in many regions. Tourism becomes a universal social and economic phenomenon that changing the pace and the way of life in many populations since local people sharing the same spaces with tourists. Moreover, many investments in infrastructure, events and conventions made primarily for tourists also imply that local residents will use them. Thus, tourism provides a strong impetus for economic growth and development.

The questions why tourism is unequally important and developed in different countries were answered and supported by extensive evidence from EU member states. At the same time tourism have wider impacts on economies when it was generally assumed until now.

Europe has the leading position in terms of international tourism receipts, expenditures and international tourist arrivals. The BoP implications of tourism are particularly important for certain European countries.

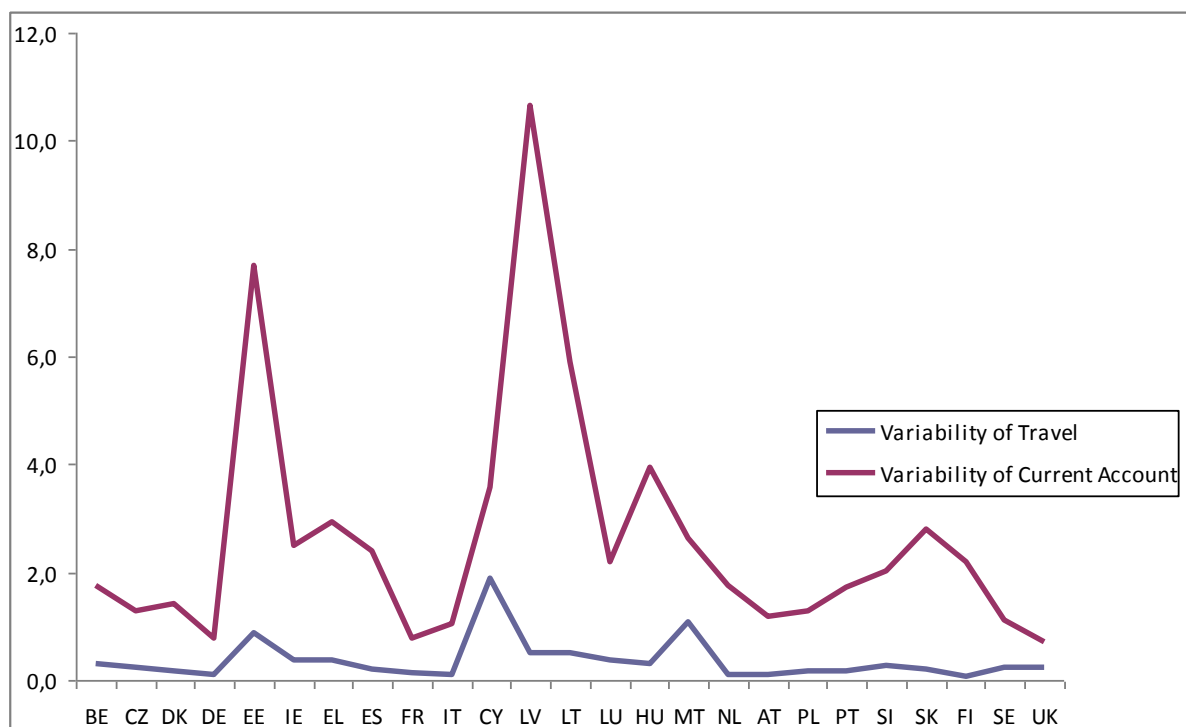
In addition, emerging evidence reveal the positive correlation between both exports of goods and tourism services and the long-term economic growth (Cortés-Jiménez, Pulina, Prunera, & Artis, 2009; Santana-Gallego, Ledesma-Rodríguez, & Pérez-Rodríguez, 2011). In the existing literature inbound tourism is considered as a source of foreign capital necessary to promote economic growth. Since Nowak et al. (2007) proposed the model that describes the mechanism of transmission of economic growth from the tourist-generating areas to the tourist-receiving countries through trade the crucial role of international trade for the country's economic development become evident. These evidences appear to be universal as

far as recent study by Santana-Gallego et al. (2011) has confirmed a complementarity between tourism and trade in OECD countries.

However, until now, very limited research exists in the area of assessing the link between geographic location, comparative advantages of countries for tourism development and their tourism balances.

The present study is focused on estimating the role of international tourism in EU-25 economies within BoP. Research findings suggest that country geographic location is connected with the existence of comparative advantages and may predetermine the share of tourism in their total exports. Analysis performed in this study has revealed that tourism has the potential of helping certain South European economies to partly stabilize their current account. This effect toward current account occurs at least in the short run as far as it was examined in travel balances during the period 2004-2011. This research also provides confirmation of an important theoretical assumption between the long term structural changes in economies and economic growth (Nowak et al., 2007). The contribution of tourism to the structural changes could be observed using the example of tourism development in Cyprus and Greece. Over the past six decades these countries has experienced a substantial shift in their economies structure from the primary sector to the tertiary sector, where tourism plays an essential role. Tourism represents for these economies a relatively new industry that changed a structure of exports and led to the growth of their economies as well as GDP per capita. Likewise, several recent studies confirmed the positive effects of tourism industry toward the economic growth in several Mediterranean countries (Dritsakis, 2012; Celik, Ozcan, Topcuoglu, & Yildirim, 2013).

Stabilizing effects of tourism was also proven by the recent economic crisis, when the variability of current account has risen substantially; however, at the same time travel balance remains almost constant. In this connection variability for both the travel account and the current account was evaluated using the standard deviation average values of balance of travel to GDP and the current account to GDP for EU-25 economies under the period 2004-2011. According to our calculations, the average standard deviation for current account of EU-25 was 2.7 whereas for travel account it was 0.4 throughout 2004-2011. Variability of travel balance was the highest for Cyprus and Malta, and the lowest occurred in Italy and Finland. Figure 20 provides visualization of calculations discussed.



**Figure 20. Variability of travel balance and the current account in EU-25.** Source: own calculations.

In this research the insights from the neoclassical Ricardian, the Heckscher-Ohlin and Krugman's models are used in order to build a better understanding of what determines the number of export items. Abovementioned models explain the idea that countries specialize according to comparative advantage, and exports match such specializations. Therefore, due to these three models countries will export goods and services that use their abundant and cheap factors of production and import products and services that use the countries scarce factors.

Calculations of the Balassa Index enable to estimate the comparative advantages in export of tourism services. A strong positive correlation between the existence of comparative advantages in tourism and the high share of tourism services in exports was found in 25 EU economies. Countries with the favorable travel balances show the higher share of tourism in their exports, whereas countries with negative values of travel have smaller exports of tourism.

For instant, the comparative advantages for development of tourism sector are the highest for Greece and Cyprus. This assumption was proven by present research. It was found that

tourism has the major share in the structure of services in their economies and in their exports. In addition to the comparative advantages the size of economy can for the certain extent influence the export of travel services. For instant, in case of Spain, despite the high competitive advantage for export of travel services, tourism appeared to be less important in the structure of the Spanish economy and overall exports. In this case, the size of the Spanish economy plays the decisive role as a bigger economy has more diversified export compared to smaller economies like Greece and Cyprus. This occurs despite the location and high competitive advantages as shown in Figure 6. Tourism statistics for the year 2011 has estimated 56.7 million of tourists in Spain, whereas only 2.4 million of tourists in Cyprus and 16.4 millions in Greece (UNWTO, 2012). However, in this case the size of economy and the tourist market play decisive role. The smaller numbers of tourist in Greece and Cyprus represent higher share comparing to Spain.

This is consistent with the economic literature that support the existence of a link between the size of the economy and its possible effects toward the number of goods and services categories produced in a country as well as the overall structure of export (Nowak et al., 2007). It is logical that the growing number of categories of products in a country's exports or diversification of exports may lead to the decrease in significance of travel exports in the overall export. This is consistent with the thesis findings when the structure of export of services within the BoP of EU-25 countries was examined.

Developed countries like Germany, Netherlands unlike small south European economies have a highly diversified export. The diversification of export has positive relationships to the stability of the country's total income as for instant, decrease in earnings from certain exporting items due to the world trade conjuncture are being compensated by the other items.

According to the statistical data the share of tourism in the most of the countries of the Western and Northern Europe is smaller comparing to the South Europe. These countries are recognized as a tourist generating areas and have negative travel balances. However, due to the higher extent of export diversification tourism does not play as essential role for those countries as was found for certain Mediterranean countries.

Finally, tourism is also recognized as an investment opportunity. According to the principles of BoP, in case of current account is negative it should be balanced by the capital inflow, such as foreign direct investments (FDI), found in financial account of BoP. In general FDI are allocated into different sectors of economy, including tourism. Moreover, FDI are also



recognized as an important driver of growing services share in many economies (Aslan, 2013).

According to the OECD database an inward FDI in hotel accommodation and restaurants are the biggest investment flows related to the tourism industry. Due to available statistics for the period 2004-2011 more than 16.8 bln USD were invested into tourism industry in 15 EU countries (OECD, FDI flows by industry, 2013). Among the countries with the highest inflow of total FDI into hotel accommodation and restaurants were Italy and Spain, with more than 3.6 and 3.5 bln USD respectively for the period analyzed.

Thus, in contrast to the investments in capital markets tourism could be a competitive and safer option for investors due to the positive development of travel balances in recent years in many European tourist destinations. For instant, this could be supported by the constant positive inflow of FDI into hotel and restaurant sector occurred in Greece during the period 2004-2011, when it received more than 0.25 bln USD. Despite the problems in economy tourism here remains the major item in export of services, helping to maintain positive balance of services. This for the certain extent mitigates the negative impacts of negative trade balance.

Recent statistical data shows that investments in tourism and in hotels sector in particular remains robust despite sluggish EU economy over 2012 and 2013. During the past decade the south European countries has been receiving more investments in tourism sector than EU in average. Moreover, countries such as Malta and Portugal did not show any decline in investments in travel industry during the crisis 2008-2009, whereas the other sectors of their economies have experienced considerable decline in investments (OECD, FDI flows by industry, 2013). This information provides an additional support for possible effects of comparative advantages for travel industry and the hospitality businesses performances in certain countries.

The question why investments in hotels happen has a straightforward answer because of their profit generating ability. This is supported by modern hotels asset management research published by Parkinson, in which he said that “As trading businesses with a substantial property element, hotels have the potential to generate significant annual profits which, in turn, have the potential to provide large upside returns and rarely provide returns significantly lower than those available through other forms of pure property investment (offices, residential, retail)” (Parkinson, 2006, p. 328). On the other hand the ability of hotels and the

other businesses to generate profits is dependent on global economic conjuncture, i.e. their susceptibility to the impact of economic cycles and to the effects of unexpected events. It was found that the hotel sector in Europe is generally recognized as tracking an approximate eight-year cycle (Parkinson, 2006). Thus, hotel performance changes according to macroeconomic environment.

In response to the fluctuations in demand caused by business cycles and seasonality, hotel facilities have long endeavored to create tools to better manage their profits and costs. In recent times these efforts yielded in systems of revenue maximization, known as Revenue management. The concept of Revenue management led to the new way of use of hotel operating indicators. Recently hotel profits are directly influenced by manager's ability to control costs and maximize profits. Evaluation of hotel and spa economic performances provided in the second and third empirical chapters have built new evidence on their explanatory power.

Universal hotel performance indicators also known as operating ratios such as occupancy, ADR, and the RevPAR are widely used in the hotel industry. Today thousands of hotels around the world use the systems of revenue maximization which optimize occupancy and ADR in order to produce the maximum possible revenues. Among the most famous and sophisticated systems are known the One Yield used by in Marriott hotels, Amadeus Hotel Platform - Revenue Management and IDEaS Revenue Solutions used by Hilton worldwide hotels. The common question as "which operating ratio has the highest effects on revenues?" is frequently debated in industry and research publications (Vallen & Vallen, 2012; Kimes, 2003, Kimes 2009). The overall performance of the industry is reflected in both occupancy and price.

Hotel industry closely follows the economic cycle, with the specifics that it lags the general recovery and precedes the start of the decline. Occupancy reflects both supply and demand and is recognized as a measure of the economic condition of an individual hotel and the industry as a whole.

Present research provides evidence that occupancy rates have higher influence on total revenues than ADR. These results about the importance of maintaining occupancy rate are also consistent with Vallen and Vallen, (2012) as they formulated that "The more rooms sold - that is, the greater the demand the higher the room rate. That's because lower-priced rooms

sell first. Conversely, as occupancy falls, so does the ADR (p. 5). Thus increase in occupancy draw increase in price (ADR) and conversely.

This study results put additional evidence on the importance to closely monitor hotel occupancy rate in order to achieve higher revenues. This is also consistent with and assumptions made by Jagels (2007). Jagels indicates that high occupancy is desirable since this indicates greater use of room capacity and a potentially greater use of the other hotel facilities by hotel guests.

Usually occupancy is higher for resort hotels than for transient hotels offering accommodation for business clients (Jagels, 2007). Present research has provided statistical evidence that this trend also occurs in the Czech Republic.

Of late hotel operating indicators are evolving and becoming more sophisticated. Among the latest indicators is a RevPAR positioning matrix report, created by STR Analytics. This is a new technique that allows an individual property to view various occupancy and average daily rate positions and benchmark potential results within its comp set. The RevPAR Positioning Matrix allows a more in-depth understanding of the performance strategies achieved in your market.

Moreover, occupancy rates are also linked to employment opportunities, supporting the social impacts of the hospitality industry (Young, 1996). Besides effects mentioned above occupancy is a valuable indicator due to its link to the breakeven point – a key measure of business performance. Break-even point means that revenue generated by hotel is enough to pay fixed and variable costs of business while profit at this point equals to zero. In hotel industry break-even points are expressed in percentage of occupancy. Any revenue beyond the break-even point will generate profits for the hotel. Thus, the lower break-even point the sooner hotel starts to generate profits. The options to lower the break-even point are the following: lowering the costs or raise the prices. This is exactly what can be seen in business strategies of hotels. A cost structure specifics of the hotel industry is in high fixed costs and low variable costs as it is common for services. The strategy of reducing fixed costs to drop the level of occupancy needed to break-even. This became a common practice during the crises 2008-2009.

Similarly, hotels have intensified efforts to increase sales from spa, food and beverage, which help them to reduce the pressure on room sales. Of late spa is recognized as one of efficient tool to increase hotel overall revenues.

In reaction to the growth in demand for spa and wellness hotels began increasingly opening spa amenities in order to capitalize on services such as beauty treatments, massage, healthy food, medical wellness and water therapies.

Today spas has transformed from amenities to profit centers, becoming sales drivers that help to improve room occupancy rates. Besides making a profit spa often became a part of a hotel strategy to fill rooms and attract guests. Moreover, adding a spa as a hotel operating department offered a solution to differentiate a hotel from its competition. Hotel with a “spa” in its name gain substantial visibility and attract guests. Thus hotel spa can be recognized as a marketing asset helping to attract visitors and therefore gain competitive advantage.

This leads to the substantial change in perception of spa by lodging industry executives occurs in present times. Not so long ago spa and wellness were observed as amenities which required big investment without high returns of investments (ROI). However, in the turn of new millennium the perception of spa and wellness amenities changed due to the growing body of evidence of substantial profit margins and ROI attributed spa and wellness facilities. Moreover, technology and service offerings which reflect changes in visitors demand represent an effort to drive up rates and revenues.

Spa and wellness facilities appear first within the upscale and luxury hotel segment. Moreover, spa and wellness facilities also exist as stand-alone businesses. According to recent study published by Schweder (2008) in the beginning of this century there were no hotels or resorts in the first class or luxury segment without spa and wellness component. It appears that for many full-service and resort properties, spas are as much a requirement as restaurants and meeting space (Sahlins & Peterson, 2007).

Schweder (2008) also adds that “spas are considered to be much more than an amenity. Spa operations are becoming a core competency and a substantial business driver for luxury hotels and an element that can help define the hotel’s philosophy and underpin its brand recognition” (p. 174).

Thus, an accelerating trend of spa and wellness offerings is occurring in global hotel chains in present times. At the same time high operating costs and increasing competition made it more

difficult for spas to generate profits. This leads to the creating a branded hotel spa, which allow to reduce the startup costs for the new spa hotels by replicating the hotel brand standards and using the revenue management techniques and benchmarking.

Opening spa division in hotels now became a matter of growing popularity. This is supported by the recent developments of the two biggest world hotel chains InterContinental Hotels Group and Hilton Worldwide hotels.

The biggest hotel chain InterContinental Hotels Group (IHG) which run several hotel brands such as well-known Crowne Plaza and Holiday Inn brands (including Holiday Inn Resort) in 2012 came up with idea to launch its first wellness hotel brand (IHG, 2014). This health and fitness-oriented hotel brand has got name as “EVEN” Hotels brand. EVEN hotels is conceived as a mid-priced chain offering a unique concept in the crowded, mid-priced, category of hotels dominated by Courtyard by Marriott and Hilton Garden Inn. The emphasis on wellness in the EVEN chain profile would be a main competitive advantage. IHG plans to open 100 EVEN Hotels within the next five years, the first hotel will be open in mid-2014. (Maxwell, 2014).

In addition IHG recognizes no problem opening of EVEN hotels right next to their other hotels such as Holiday Inns. This is because IHG believes that unique brand will attract different customers. This brand can be recognized as innovations in hotels industry focused on bringing the revitalization to guests through the new way of use of hotel space, which is adaptable during day and night. This reflects the need of travelers to feel energetic and ready to do their business throughout the day. Thus EVEN Hotels provides is an additional evidence of implementation of new concepts toward offering balance wellness and travel for tourists. IHG's independent proprietary research conducted by IHG 2011-2012 suggests that there are seventeen million people or about one in four travelers, who believe that their hotel stay does not accommodate their healthy lifestyle needs on the road (IHG, EVEN hotels, 2013).

Additional evidence of reflection of growing demand for spa and wellness can be drawn from the Hilton Worldwide hotels. Being the world second biggest hotel group Hilton opens the first spa division in their hotel in October 2010. By October 2013 this hotel chain runs 190 spa hotels in the world under the brand Eforea (Hilton hotels, 2013). This additionally proves that the focus on spa and wellness can create a unique hotel brand which helps customers to distinguish it from the big variety of accommodation offer existed. Thus this provides a strong rationale for spa hotels fast growth in coming years.

Those new hotel brands could be recognized as expanding and specializing the accommodation offer as well as innovations with the intention to increase market share and subsequently to surge profits.

In recent times the world economy shows crises phenomena more frequently than ever before, which has a direct effect on the international tourism industry sectors. The harder market conditions led to increasing competition among tourism destinations and businesses. Tourism companies, such as hotels implement different strategies to improve their performances, such as introducing new products, cutting costs etc. The reliable picture on firm's performances could provide financial indicators or ratios, which reflect the outcome of different business operations. According to Bell, company should gain a competitive advantage to ensure its long-term profitability (Bell, 2013).

Analytics is among the sources of competitive advantage. A number of businesses that rely on analytics in order to gain a competitive advantage are growing worldwide. A 2013 global survey results indicates that "67 percent of respondents reporting that their companies are gaining a competitive advantage from their use of analytics," up from 58 percent in 2012 and 37 percent in 2010 (Kiron, Boucher Ferguson, & Kirk Prentice, 2013).

Every decision made in a business has financial implications, therefore any firm is a system of financial relationships and cash flows, which are activated by management decisions. Thus financial analytics remains the main method to evaluate the business performance. Financial analysis was used for the evaluation of economic performances of the spa operators in the Czech Republic in third empirical chapter. This chapter provides a systematic look on the usefulness of each class of ratios within the framework of financial analysis and select ones with the high explanatory power. Thesis offers valuable information for the asset management, as it test and verifies the practical usefulness of the operating and financial indicators. Moreover the importance of such analysis is backed by recent publication by Singh et al. (2012) where hotel asset management concept is discussed (Singh, Kline, Ma, & Beals, 2012). The hotel asset management is a relatively new concept which emerged in 1990s as a reflection of the hotel industry structures evolution.

In addition it is necessary to add that since mid-1990s, value creation emerged as a critical performance goal and became one of the primary goals of modern management.

Today creation of shareholder value is primary goal of modern management (Moles et al., 2011). This concept is focused on financial performance, asset utilization based on different ratios or indicators. The company's financial ratios are similar to lab-test results in medicine. In combination, and over time, these data offer valuable insight into the health of a firm - its financial condition and profitability.

The use of ratios varies according to business objectives and the thesis presents the most important classes of indicators that reflect different areas of business processes.

Ratio analyses prepared for several years show the trends and therefore may indicate possible improvements or problems. Thus it may represent a valuable tool for analysis focused to reveal the causes of these trends which finally yield in better management.

## **5.2. Conclusions**

This thesis has verified and confirmed all four research hypotheses and has answered the research questions. The structure of the study reflects the main research goal to provide a complex analysis of tourism in EU economies with its implications for the tourist businesses economic performances.

Hypothesis #1. Tourism is an important component in economies and international trade in EU 25 countries was confirmed in extensive examples provided in the first empirical part of the thesis.

Hypothesis #2. Hotels are key sector in the infrastructure of the tourist destinations. Hotels are the indicator of the efficiency of the tourism industry. This hypothesis was verified and confirmed in the second empirical chapter. Hotel sector according to statistics have a prominent position in EU travel market as it generates above EUR 53.2 billion in added value and comprises 150 000 enterprises. Thus, their performances to a major extent could indicate the overall performance of the EU tourism industry. In addition, econometric analysis of hotel operating indicators such as occupancy and ADR has verified the options to measure hotel performances.

Hypothesis #3. Spa specialization as an indirect factor in increasing the efficiency of the hotel facility as spa amenity reduces the pressure of seasonal fluctuations in demand on profits.

Statistical analysis of tourists performed for the Czech Republic has confirmed the lower seasonal fluctuations in demand of spa visitors.

Hypothesis #4. Financial analysis is an appropriate tool for the evaluation of hotel performance was supported by the practical application on spa operating companies in the Czech Republic. Since every decision made in a business has financial implications, accounting information and financial ratio analysis are still the best available option to analyze the company's performances (Higgins, 2012). In addition it was found that companies show their results in relation to their location, confirming the Sattler's important dictum that location is important for hospitality businesses profitability (Vallen & Vallen, 2012).

Until now tourism as a category of international trade to a big extent remains unstudied. Therefore, present research adds to the existing literature by establishing and verifying the following empirical evidence.

1. Tourism contributes external balance of the economy. This was shown in the first empirical chapter of the thesis.
2. The growing economic significance of tourism will affect the macroeconomic development of the country. This was confirmed using the recent data for the Czech Republic, where despite the decline in GDP in 2012 by 1.0%, tourism showed positive developments both in receipts and in number of tourists. Therefore it could be assumed that without the tourism net exports, that were estimated as 2,2 billion of euro in 2012, the GDP decline would be even worse.

The significance of international tourism for the economy is dependent on its share in the structure of overall exports. For countries like Cyprus and Greece with the highest share in export of tourism services tourism is important for their macroeconomic stability as it was shown in the first empirical chapter.

Tourism is tightly related with the general business cycle. Thus it rises and downs according to the global macroeconomic conjuncture. However, given to the importance of tourism as a third largest sector in EU economy and its capacity to generate demand and wealth it can be assumed that two-sided effects occurs. The significance of tourism in recent years has grown to the point where tourism has a power to exert effect on macroeconomic environment. Considering the equation of GDP as,  $GDP = C + I + G + NX$ , tourism has an ability to affect a several variables as it could influence consumption, investment, and net exports.



Analysis of tourism and hospitality organizational structures in the framework of international trade show following benefits connected with it. Companies can achieve their goals to expand its global market share using international trade. Thus international trade is a factor for tourism development. Moreover, tourism doesn't have quota or other restrictions, thus it represents a good option to realize strategic business objectives by means of international trade.

Finally the thesis provides an application of financial ratio analysis to spa operating companies. There are thousands of indices or ratios. In this thesis indices were classified on the basis of their explanatory power and therefore usefulness for the company's performance evaluation.

Additionally the thesis settles the terminological inconsistency of economic performance indicators.

### **5.3. Practical implications of the thesis**

The results of research might be useful for decision makers in tourism industry as far as it provides an in-depth analysis of tourism economic effects in 25 EU economies. By implementing ratio analysis to hotel performance thesis provides valuable information to investors and managers. Financial ratios help investors determine which businesses to buy into. These ratios also help business leaders discern whether particular strategies are working. Recent financial and accounting publications have clearly established that financial analysis remains the core concept producing the reliable results with a wide range of application. This thesis would be also useful in teaching of tourism and international trade related subjects for both Bachelor and Master students.

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