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FOREIGN DIRECT INVESTMENT – A PROPOSAL EVALUATION
EKONOMICKÉ ZHODNOCENÍ PŘÍMÉ ZAHRANIČNÍ INVESTICE

DIPLOMOVÁ PRÁCE
MASTER'S THESIS

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Pursuant to Act. No. 111/1998 Coll., on Higher Education Institutions, and in accordance with the Rules for Studies and Examinations of the Brno University of Technology an Dean's Directive on Realization of Bachelor and Master Degree Programs, the director of the Institute of is submitting you a master's thesis of the following title:

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In the Czech language:

Ekonomické zhodnocení přímé zahraniční investice

Instruction:

Introduction
Purpose and Objectives
Theoretical Approaches
Problem Analysis
Proposals
Conclusion
Literature

List of literature:

COHEN, S. D. Multinational Corporation and Foreign Direct Investment: Avoiding, Simplicity, Embracing Complexity. New York: Oxford University Press, 2007, 384 s. ISBN 0195179358.
HELFERT, E. A. Financial analysis: tools and techniques: a guide for managers. New York: McGraw-Hill, 2001, 485 p. ISBN 978-0071378345.
MÁČE, M. Finanční analýza investičních projektů. Praha: Grada, 2005. 77 s. ISBN 80-247-1557-0.
MOOSA, I. A. Foreign Direct Investment: Theory, Evidence and Practice. New York: Palgrave Macmillan, 2002. 329 s. ISBN-10 0333945905.

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ABSTRACT

Subject of master thesis is an evaluation of investment proposal. Theoretical part of the work is focused on analysis which helps with estimation of environment and industry in foreign country of investment. Foreign direct investment definition and history is mentioned as well. Main body of theoretical part is about investment preparation, evaluation of investment and building cash flow. Last part of theoretical bases is about exposure to exchange rate risks. Practical part deals with PESTLE and Porter's five forces analysis. It deals with FDI market and situation in Germany and lastly evaluates the investment proposal.

ABSTRAKT

Předmětem diplomové práce je vyhodnocení investičního návrhu do zahraničí. V teoretické části práce je důraz kladen na analýzy, jež pomáhají popsat okolí a průmysl v zemi investice. Je zde dána definice přímé zahraniční investice a práce se zmiňuje i o historii. Hlavní náplní teoretické části je příprava investice, způsoby vyhodnocení a stavba cash flow. Poslední kapitola se zabývá riskem, který vyplývá ze změn v kurzech měn. V teoretické části je provedena analýza PESTLE a Portrův model pěti sil. Jsou popsány přímé zahraniční investice v Německu a v neposlední řadě je vyhodnocena zamýšlená investice.

KEY WORDS

Discount rate, investment evaluation, foreign direct investment, cash flow, industry analysis

KLÍČOVÁ SLOVA

Diskontní sazba, vyhodnocení investice, přímá zahraniční investice, cash flow, analýza průmyslu

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DECLARATION

I hereby declare that submitted master's thesis is authentic and worked up independently. I also declare that citations are complete and copyrights are not violated (pursuant to Act. No.121/2000 Coll., on copyright and on laws related to copyright Act.).

Brno, 29th August 2014

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Signature

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Content

Introduction

Foreign direct investment in environment of small and medium size companies is key aspect for future of such companies especially in the Czech Republic. Czech's small and medium companies are still dealing with effects of financial crises and in some areas of industry, such as construction industry, it is even deepening. Companies are trying to find different ways of gaining customers, firms start to think about investing or creating a subsidiary abroad. Real question is how companies should embrace new foreign direct investments. It means selecting proper country, reading its industry and future economic development abroad, mainly how to create and evaluate foreign direct investment sensibly, that the decision about investing will be correct and it will bring another revenue stream and possible company growth on foreign market. Those are the problems and areas that this diploma thesis explores.

Sense of investment decision and evaluation is to give company correct information bases for prosperous future expansion. It is very difficult to gain correct information about investment for good decision. Reason being that investment is state of future and not all information is available to company or its management about future. Moreover not all problems and mistakes can be foreseen, which at least for me, makes it more interesting. Well done evaluation and decision could save life of company, but on the other hand if investment is not evaluated properly it might put company into serious problems.

The reasons above are why I decided to divide this work to several chapters and subchapters. The work is built in a way to give company information about basic attributes needed for successful investment. Practical part involves evaluation of one of the company investment proposal and gives overview about situation on German market and construction industry.

The first chapter of thesis deals with theory about analysing foreign market and particular industry. It also mentions analysis of the company itself. Purpose of this chapter is to present theory in situation when company is deciding which country to choose for foreign direct investment. Two analyses are mentioned in detail and that is Pestle analysis and Porter's five force model.

Second chapter is about foreign direct investment theory. It defines what foreign direct investment is. It gives overview of types of direct foreign investments and brief history of foreign direct investment.

Third chapter deals with investment as such. It speaks about creating investment and how to create company environment for employees to come with new investment proposals. Chapter deals with ways how to evaluate a financial investment proposal. There is a subchapter about creating a cash flow and what is the discount rate.

Forth chapter defines exposure to exchange rate and what risks it involves. It defines types of foreign exchange rate exposures and how it is possible to minimize them.

Practical part of the work starts with two major analysis to give a picture about German environment for company expansion. Second analysis deals with situation in construction industry on German market.

Next part of practical chapter deals with foreign direct investment situation on the German market and gives reader a picture of FDI in Germany as such.

Last part of practical chapter involves description of investment proposal and its evaluation. After each part there is also a conclusion which will be summarized in final conclusion.

Last part of diploma thesis gives advice to company how to behave and what to expect on German market and concludes the main topic of thesis, which is evaluation of investment proposal.

Goals of thesis

Main objective of this diploma thesis is evaluation of a company expansion to German market by evaluation of investment proposal.

Second part of this diploma thesis is analysis of German market for purposes of company expansion. This will be done by Pestle analysis and Porter's five force analysis. Lastly a description of FDI situation is given as well in practical part.

Theoretical part

First part of theoretical chapter is about company's entry to foreign country, thesis deals with basic analytical tools that company should use when they attempt firm expansion. Another important part of this chapter is entry modes which company could use to establish subsidiary or to begin conducting business in foreign country. Pestle and Porter's five force model are mentioned in more detail because those are tools that describe foreign market and industry and will be used in practical part.

1 Foreign market entry

This chapter deals with explanation of how to enter foreign market. Before even deciding about entry on the market abroad is made, company, which does not know what country to choose for its investment, is advised to do basic market, industry and country research. For this purposes this chapter talks about most basic tool for such analysis and these tools will be used in practical part as well.

1.1 Finding a correct country

Choosing which country to enter and in what way to enter new country is key decision to make for the company. Hollonsen (2011, p.62) states that factors affecting this decision are:

- Internal factors (financial analysis of the company, SWOT analysis).
- External factors (Pestle analysis, Porter's five force model).
- Desired mode characteristics.
- Transaction specific behaviour.

Important step when company consider entry to foreign market is to gain data about economic situation of the country and future development in particular country. Two most basic analytical tools are PESTLE analysis and Porter's model of five forces. These tools should give company's management basic overview of the situation in

country and future development in the country and industry environment. More tools should be used as well. Such tools are SWOT analysis, financial analysis of the company and Yips globalization drivers framework. It is impossible to do all of the analysis in the scope of this work. That is why only the basic ones will be done.

1.2   Pestle analysis

All organizations need to identify external factors within their environment that could have an impact on their operations. Many of these will be things that the companies have no control over, but the implications of which need to be understood according to team FME (2013).

Pestle analysis helps company to see environment which they are part of or they want to join. Pestle analysis stands for political, economic, social, technology, legislative and environmental factors that influence company. Those are so called external factors.

According to Grasseová (2008, p.178-811) Pestle analysis is one of the key element in strategic decision making about future of the organization. There are many ways how to create Pestle analysis to predict future environmental impact on the organization. Creating Pestle analysis for sole purposes of accurate future predicament is very difficult and time consuming for their creators. Furthermore creators of such tools have to be quite knowledgeable in particular field. Basic Pestle schematic is given on the picture below.

Picture 1 – Pestle analysis scheme

1.3 Porter's model of five forces

According to Porter (1998), the essence of formulating competitive strategy is relating a company to its environment. Structure of industry has a strong influence in determining the competitive rules of the game as well as strategies potentially available to the firm. The state of competition in an industry depends on five basic competitive forces:

- Threat of new entrance – possibility of new companies entering the market and barriers to enter market.
- Power of suppliers – how much bargaining power do suppliers have.
- Power of buyers – how much bargaining power do buyers have.
- Threat of substitutes – how easily can product be substituted.
- Rivalry among existing competitors – consequences of all points above create this point, as shown at the picture below.
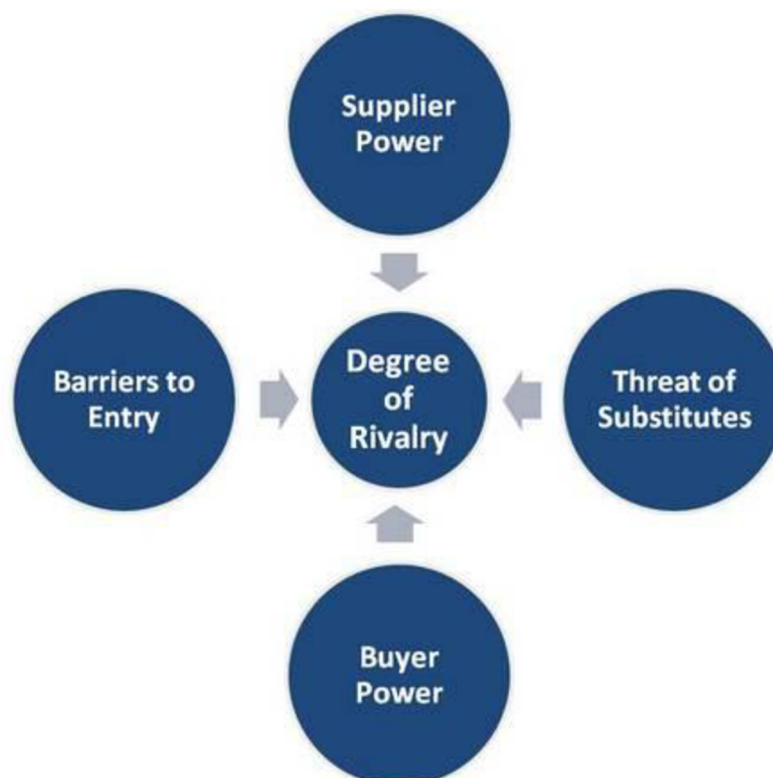
Picture 2 – Porter's five forces

Taken from Harvard business press review (2008, p.16): *"Understanding industry structure is equally important for investors as for managers. The five competitive forces reveal whether an industry is truly attractive, and they help investors to anticipate positive or negative shifts in industry structure before they are obvious. The five forces distinguish short-term blips from structural changes and allow investors to take advantage of undue pessimism or optimism."*

1.4 Entry modes

In knowledge and management innovation conference in Zadar (2013) was stated that market entry strategy are distinguished by risk their present for company, the control and commitment of resources they require and return of investment their present. There are two major types of entry modes:

- Non-equity mode, which includes export and contractual agreements.
- Equity mode, which includes joint venture and wholly owned subsidiaries.

1.4.1 Exporting and importing

This is probably the most common way how to enter new market. Exporting is activity of selling services or goods created in one country to another country. Exporting can be divided into two categories states Hollensen (2013, p.334):

- Direct exporting – Manufacturer or exporter is selling goods directly to buyer or importer in targeted area. This export method includes export through foreign agents and distributors. So the company is directly involved in marketing of their products in foreign market.
- Indirect exporting – It cannot be really considered as international market entry. Company is using another companies located in their country for carrying goods abroad. Such companies are independent from company who made the product.

1.4.2 Licensing

Licensing is a way to enter another market with a limited degree of risk. It is a method that does not require vast amount of capital, but involves greater responsibilities for the national company. There are two subjects in this method first is licensee and second is licensor. Licensor gives license and licensee has right to use it and handle it as it is written in Licensing agreement.

According to Davis (2008) licensor can use two ways of licensing:

- Stand-alone licensing agreement – It serves primary to specify legal bases for transfer of right and allow licensor to earn royalties or other compensation. Fees that licensee pays are then used to finance licensor's ongoing activities.
- Licensing plus licensing agreement – Royalties are used here not only as fee but serve as tool to support relationship with licensee. License agreement can be supplemented by contracts covering other aspects of R&D according to Hollenseen (2013, p.358).

1.4.3 Franchising

Franchising is a market's entry way that creates relationship between franchisor and franchisee. It is very similar to Licensing except that franchisor's tends to be more involved with franchisee. There are two types of franchising:

- Direct system – Franchisee is under the control of Franchisor and is being controlled and coordinated.
- Indirect system – Master franchisee in selected and is directly under Franchisor. Master franchisee then creates system of franchisee in appointed area and services this area.

Franchising has several advantages and disadvantages as stated at international conference in Zadar (2013). Main advantages are:

- Low cost.
- Low political risk.
- Easy expansion to different parts of the world.

Main disadvantages could be:
- Franchisee can turn into competitor in the future.
- Wrong franchisee can ruin brand name in area of his business.

1.4.4 Joint Ventures

Joint venture is a partnership between two or more companies. Companies that participate in joint venture are based in different countries, than is a country of joint venture, hence management of such foreign market entry could get complicated and difficult. Reason is that country where joint venture is located is not home country for either of participating companies. There are many benefits and reasons to set up a joint venture:

- New opportunities in existing sector might arise by combining complementary technology or management skills.
- Increase of speed of market entry.

The joint venture can be either a contractual non-equity joint venture or an equity joint venture.

1.4.5 Strategic alliances

Strategic alliance is very similar to joint venture. Basic difference is that strategic alliance is non-equity cooperation. This means that partners do not invest or give equity into alliance.

According to Campbell E., Reuer J.J. (2001, p.48) *Strategic alliance is variety of cooperative agreements between different firms to conduct share research, formal joint ventures, minority equity participation.*

Characteristics of strategic alliances are:

- Established usually between companies in high industrialized nation.
- Main target is often creation of new technology or product.
- Created often for short-term duration

Major risk of strategic alliance is the risk of the competitive collaboration. Companies can try to take advantage of the alliance to gain advantage over other.

1.4.6 Direct investments

This form of foreign market entry is most finance consuming, because company pays 100 % of the cost of either creation or acquisition of subsidiary in foreign market. There are two main ways how to conduct direct investment:

- Green field investment – Company builds a factory or subsidiary from ground up in foreign country. It is very costly and risky as well. Advantage of this approach is full control over subsidiary. However company needs to create supply chains, distribution chains etc.
- Acquisition – This method is less risky then Green field investment because outcome can be estimated more precisely then the one above. Also in comparison to Green field investment it gives company quick access to foreign market.

2 Foreign direct investment – FDI

This chapter deals with description of Foreign direct investment. Firstly, clear definition, which will be used in entire work, is mentioned. Secondly, brief history to FDI is given and last part of this chapter deals with types of foreign direct investment and differences between them.

2.1 Definition of FDI

According to John-ren (2000, p.6): *"Foreign direct Investment (FDI) is defined as investment in which firm acquires a substantial interest in foreign firm (above 10 per-cent share) or sets up a subsidiary in a foreign country".*

Moosa (2002, p.1) defines FDI as *"the process whereby residents of one country acquire ownership of assets for the purpose of controlling the production, distribution and other activities of a firm in another country".*

World investment report (UNCTAD, 1999) defines FDI as *"an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise, affiliate enterprise or foreign affiliate)".*

FDI could be understood as company expansion to different country with long-term goals of expanding and conducting business on foreign market. It could be done in way of acquisition of other company, gaining shares in company (above 10 per-cent share) or simply by establishing subsidiary so called green field investment.

When speaking about FDI it is important to mention difference between FDI and portfolio investment. FDI is long-term investment as it is clearly stated in all definitions above whereas portfolio investment is short-term in its nature.

For purposes of this thesis, first definition is satisfying, because it defines FDI clearly and purposes of this work is evaluation of company expansion in manner of setting company subsidiary in Germany.

2.2 Types of FDI

There are two ways how it is looked at FDI. FDI can be classified from the point of view of investor or from the point of view of host country. Caves (1971, p.1-27) classifies FDI from point of view of investor thus distinguishing FDI on vertical, horizontal and conglomerate FDI:

- Horizontal FDI – Company produces products and services roughly similar to those in home country. It is called Horizontal, because company duplicates same activities in their foreign subsidiaries. According to Protsenko (2003, p.4) this is caused by barriers which prevent exporting such as transportation costs or trade barriers.
- Vertical FDI – Moosa (2002, p.4) states that this type of FDI is used to be nearer to raw material sources (backward vertical FDI) or closer to customers through acquisition of retail chains (forward vertical FDI).
- Conglomerate – It combines Vertical FDI with Horizontal FDI.

Another classification is from point of view of host country. Moosa (2002, p.5) classifies three following types:

- Import-substituting FDI – This type of FDI involves producing goods, which were previously imported.
- Export-increasing FDI – Export-increasing FDI is used for sole purposes of rising export. Export of products is increased to countries where is high demand for such goods.
- Government-initiated FDI – Government tries to lower or eliminate deficit in balance of payment by luring investor to the country.

Further classification of FDI is given by Chen and Ku (2000, p.72). According to Chen and Ku FDI could be divided into expansionary and defensive FDI.

- Expansionary FDI – Company tries to exploit advantages in the host country.
- Defensive FDI – Organization tries to lower their cost by hiring cheaper local workforce.

2.3 History of FDI

This section of work serves as pointer of how much has FDI changed in recent history. According to Moosa (2002, p.16) there are two basic reasons why FDI started to growth in last century. The first is purely technological reason. Technology in last century advanced enough in transportation, communication, learning and development. Technological advance caused control of foreign subsidiaries and communication with them much easier, hence giving tools to control and operate foreign subsidiaries with much ease. Second reason was destruction that was caused by the Second World War. European countries and Japan needed US capital to rebuild after the war. US gained primary position in FDI during this period. US government created laws that favoured FDI.

Second big surge in FDI was in the 1980s. Aizenman (1992) believes that cause for the surge in FDI is worries about emergence of managed trade.

Thirds surge was in period from 1990 to 1992. Moosa (2002, p.17) believes there were three reasons for this surge:

- Increasing numbers of small companies became multinational.
- Share of service sector enlarged, diversity of FDI enlarged as well.
- Rose of countries that were outward investors.

Important reason is also the end of cold war and its consequence fall of SSSR. This removed direct obstacles to FDI and enlarged numbers of countries participating in FDI. Below table shows development in FDI throughout 20th century to year 2004. It is measured in stock relation to income.

Trends in FDI, 1913-2004

	1913/14	1930s	1950	1970/1	1980	1995	2003/4
Developed country	Outward stock of FDI/GDP (per cent)						
Canada	6	25	6	7	9	20	37
France	23	10		5		25	38
Germany	11	5		3	4	10	31
Japan	11	47		2	2	5	8
Netherlands	82	28		35	25	47	94
UK	49	18	9	17	15	28	65
US	7	8	4	8	8	18	17
Developing countries	Inward stock of FDI/GDP (per cent)						
Average colonies	42	61	35	14		19	
Average independent	36	37	17	9		14	
Average	40	51	30	13		18	26.4
Latin America					4	12	38
Asia					4	12	24
Africa					8	15	32

Table 1 – Trends in FDI (definitions may differ by year)

One more interesting timeframe is between years 1973 and 1930s. FDI is really high in Netherlands, UK etc. This is caused by colonies. Countries with highest FDI were countries with high number of colonies. As we can see number is lesser in the 1930s as the result of the First World War and new establishment of the world.

3 Investment

This chapter is about investment as such. At the begging of the chapter there is a mention about how to choose investment idea and what is the process of creating investment ideas in company. Later in the chapter there are evaluation methods for investment with their formulas. Chapter is also mentioning creation of cash flow and speaks about definition of discounting rate.

3.1 Investment decision

According to Pogue (2010, p.17), the theoretical literature assumes that correct appraisal techniques will automatically result into optimal choice of project. It is generally believed that investments simply emerge, projects are considered in isolation and qualitative factors are relatively unimportant. But the reality is different. Managers work in very lively environment, they are faced with complex decisions and cannot simply emphasize the formal appraisal techniques.

3.1.1 Process of choosing investment idea

Good project proposal for investment should fit to the firm's long term strategy goals. Of course if the project is interesting company could alter their long-term goals. Most important is the identification of interesting project proposal. Company should create such environment that encourages and rewards employees that bring forth such projects in all levels of the company.

It is also important to acknowledge those employees who bring ideas. It does not matter if idea they bring is entirely profitable, but acknowledging such employee creates atmosphere where more profitable ideas can be found.

In such environment there can be many project ideas and many of them could not be feasible or desirable of course. Firm can create a screening process that will evaluate new project ideas, hence top managers can focus on these which can bring profit.

Screening could involve basic analysis such as those that were mention in first chapter of this thesis.

After screening phase projects that have potential to bring profit to organization should be appraised. This is done by financial appraisal of such projects and evaluating their impact on the company. Methods such as expected future cash flow, assessment of the risk should be done at this stage of the process.

There are also non-financial ways of evaluating a project. Its impact on environment, legal concerns are so called qualitative factors. Many of these factors are externalities and are unlikely to impact otherwise viable projects.

With all of the information above it is possible to make a decision. Managers on different levels of company will decide about project of lower or higher importance with different impact on company. Projects which can impact entire company as well as projects that change strategic aims of company are decided by top management of the firm.

Investments that pass decision stage can be implemented. Implementation stage is the most important stage of entire process. Project has to be implemented properly, however some mistakes are to be expected. Managers should prepare themselves in advance to anticipate mistakes and deal with them accordingly. No two projects are alike because of this managers should be flexible and deal with situation that could cause delays or costs overrun.

3.1.2 Post-implementation stage

Investment decision making before and during projects are often quite hectic therefore valuable feedback after the end of the process is quite important. Reason for this is lack of time during implementation stage that can cause mistakes during process. It is not possible to learn from them during implementation, that is why audit after the end of the project is necessity. Managers should use feedback to learn from mistakes and improve. This audit should provide objective information about success of project in terms of objectives that were created by management. Comparison between plan for project and actual implementation of project is content of such audit.

Pogue (2013, p.19) states that such audit is in reality control device for expenditure decision making and it is started during first year of life of the project.

3.2 The Appraisal techniques

The appraisal techniques serve to evaluate investment proposals and its profitability or loss for the company.

In this chapter and its subchapters, basic appraisal techniques will be mentioned one by one. Each technique will be described and followed by its advantages and disadvantages.

3.2.1 Payback period (PB)

Weetman (2011, p.263) defines Payback period as *"calculation of the length of time required for the stream of cash inflows from a project to equal the original cash outlay. The most desirable project, under the payback method, is the one which pays back the cash outlay in the shortest time."* According to Pogue (2010, p.24) payback period is measure of time rather than profitability and it is often used as screening tool to filter investment proposals projects.

Basic pattern for calculation is: $Payback\ Period = \dfrac{\text{initial investment}}{\text{cash inflow per period}}$

Advantages of Payback period are:
- Using as a screening tool.
- Simplicity in arithmetic.

Disadvantages of Payback period are:
- Ignores the timing of cash.
- Ignores cash flow after the payback period.
- There is no consideration of time value of money.

3.2.2 Accounting rate of return (ARR)

Pogue (2010, p.25) states that Accounting rate of return calculates a percentage rate of return using average accounting profit of the project life together with the capital outlay. The latter can be expressed as either the initial outlay or the average investment over the project life. Once estimated, the accounting rate of return of the proposal is compared to a required rate of return established by the company.

Basic difference between accounting rate of return and payback period is in using accounting profits rather than cash flows.

Basic pattern for calculation is: $Average\ investment = \dfrac{average\ return\ during\ period}{average\ investment}$

Advantages of accounting rate of return are:
- Tool to measure likely hood of success of the project.
- Takes into account all of the profits expected over project life.

Disadvantages of accounting rate of return are:
- No consistent definition.
- Based on profits which are subject to different interpretations.
- Timing of the inflows ignored.

3.2.3 Net present value method (NPV)

This technique tries to correct disadvantages of previous techniques. Pogue (2010, p.28) informs that "*All forecast cash flows associated with a project are converted to present values. The net present value is the difference between the projected discounted cash inflows and discounted cash outflows. The decision criteria are to accept projects exhibiting a positive net present value and reject projects with a negative net present value.*"

This technique is preferable with shareholders since positive net present value should yield a same increase in shareholder wealth.

Basic pattern for calculation is: $NPV = \sum_{n=1}^{N} \frac{P_n}{(1+i)^{n+T}} - \sum_{t=0}^{T} \frac{K_t}{(1+i)^t}$

NPV ... net present value
K_n ... capital outflow in k- year
T ... whole time of starting investment
N ... economic period of life of investment

P_n ... money inflow in n year
t ... year of working investment
i ... discount rate
n ... each year after starting the investment

Why is NPV better then accounting rate of return and payback period according to Atrill and McLaney (2009, p.272):

- The timing of the cash flow – Net present value takes into account time value of money by discounting the various cash flows according to the time of their expected arise.

- The whole of the relevant cash flows – Net present value takes into account all relevant cash flows and it is not important when they arrive. However it treats them according their date of occurrence. Basically all relevant cash flows have impact on the decision.

- The objective of the business – Positive Net present value enhances wealth, whereas negative net present value lowers it.

Advantages of accounting rate of return are:

- Accounting rate of return is consistent with objective of shareholders.

Disadvantages of accounting rate of return are:

- It is problematic to identify future cash flows.
- Project is accepted or rejected on specified rate of return.

3.2.4 Internal rate of Return (IRR)

Weetman (2011, p.272) defines Internal rate of Return as *"the discount rate at which the present value of the cash flows generated by the project is equal to the present value of the capital invested, so that the net present value of the project is zero."*

Internal rate of return is more complex for calculation. It is an attempt to solve polynomial equation that has many solutions. Usual way is to establish a positive net

present value and negative net present value, and then interpolate between them as mentioned by Pogue (2010, p.29).

Once internal rate of return is calculated, manager can compare it with return of other projects and select the best option. The internal rate of return must be same or bigger then cost of capital in order to recommend an investment.

$$\text{NPV} = \sum_{n=0}^{N} \frac{C_n}{(1+r)^n} = 0$$

General pattern of internal rate of return:

NPV= net present value   *r=internal rate of return*

N= total number of periods C_n*- period cash flows, where n is positive integrer*

Advantages of accounting rate of return are:

- Very precise method.
- Gives same result as net present value method.

Disadvantages of accounting rate of return are:

- Difficult to calculate.

3.3 Cash flow

Preparing reliable cash flow for the project is one of the most difficult and demanding part of investment preparation. Correctly predicted cash flow leads to correct calculation and correct decision whether to invest or not. Cash flow requires to make many assumptions and estimates of future events according to Dyson (2010, p.443).All methods stated above except accounting rate of return rely on establishing expected cash flow and discount rate.

Speaking about cash flow there are several factors which can considerably influence cash flow such as relevant costs, taxation and inflation. Costs could further be divided into relevant costs, irrelevant costs and opportunity cost.

3.3.1 Relevant and irrelevant costs

Relevant costs are such which will make impact on future investment. Relevant costs can also be defined as extent of cash outflows that will results from investment implementation. All costs which will not affect future cash flow are irrelevant, such costs are called irrelevant costs.

Cost must exhibit following properties to be assumed relevant as stated by Pogue (2010, p.41):

- Future – *"The cost must not have already been incurred prior to the investment decision being made."* Such costs cannot be influenced by any subsequent decision. E.g. expenditure on market research prior considering investment.

- Incremental – Cost is caused by actions which belong to investment project which is being considerate. It is not a common cost which would happened normally even without a planned investment. E.g. allocation of corporate overheads is not relevant, because such overheads are not caused by investment project.

- Cash – Accounting rate of return is the only appreciation technique that does not use cash flow. All other appreciation techniques use cash flow for different purposes. E.g. depreciation and the book value of existing equipment is excluded from the appraisal.

3.3.2 Opportunity costs

This is another type of cost that might be relevant for decision. An opportunity cost is a benefit foregone by choosing one opportunity instead of the next best alternative. Cause for such costs could be limited resources and its allocation for alternative uses. Pogue (2010, p.43) states following examples:

- Transferring employee from one part of company to another could result in lost contribution.

- Decrease of profits from existing products could be caused by introduction of new product.

- Warehouse, which could be rented.
- Use of materials from current stock which otherwise would be sold.

3.3.3 Taxation

Successful investment project will most probably increases profitability of the business, which most probably increases tax liability on the increased profits as well. Range of increased tax liability might be lowered if the assets invested qualify for taxation depreciation. Taxation depreciation might be use to reduce taxable profits and thus tax liability increase. It is usually assumed that tax is payable in the year following the liability arising for timing of the cash outflow.

Pouge (2010, p.45) states this example. In the case of United Kingdom, there are two types of allowance which help to reduce additional taxes. Allowances are dependent on the type of investment. First allowance is called first year allowance (FYA) or a writing-down allowance (WDA). There also could be a balancing allowance which make possible to dispose asset of for amount less than greater than its written-down value. Governments are trying to help companies to invest by increasing or creating capital allowances. E.g. United States law, the American Recovery and Reinvestment Act (2009) has 50% depreciation allowance, and section 179 allows companies to deduct up to $250,000 of costs of qualifying assets. It used to be only $133,000.

According to Moosa (2002, p.161) taxation on international level involves imposition and levying of taxes on cross-border transactions. Thus giving rise to problems, since there is more than one tax system in place.

There two types of tax incentives: First is to attract foreign investors and second is done by encouraging exports. However in terms of speaking in European Union tax system between countries have been successfully easier to overcome.

There are still events of double taxation in the European Union. Speaking from investor point of view, company should found out as much as possible about country tax system and predict it to their future cash flow.

3.3.4 Inflation

Inflation rates in developed economic countries are currently close to zero. However in history when inflation rates were volatile it proves as cause of major problems for investment plans.

Estimation of cash flow that will stream from sales, revenue, operating costs and working capital is quite difficult. General assumption is when revenues and costs rise proportionally, inflation will not have big impact. There are two mistakes with this assumption. Cash flows such as revenues, material, labour costs show differing degrees of influence by inflation. Some cash flows do not adjust to rate of inflation at all where others do not fully adjust. Secondly, when using rate for discounting cash flow, managers tend to use nominal rate and this is inappropriate and inconsistent to use a nominal rate to discount cash flows that are not adjusted for the effect of inflation as stated by Pogue (2010, p.50).

3.4 Discount rate

Clearly the rate of return on investment is very important to company. Techniques as net present value and internal rate of return use so called discount rate. It enables transition of expected future cash flow to its present value equivalent.

Net present value uses discount rate directly in its calculation. Internal rate of return uses this technique indirectly. There are two main methods how to establish discount rate. First is weighted average cost of capital and second one is capital asset pricing model.

3.4.1 Weighted average cost of capital (WACC)

WACC uses the market-related information for the financing source of the company, hence it is only applicable when the systematic risk, indulging its financial component, of the assets of the firm is unaltered. When company wants to use WACC method, the

new project have to be similar with the old one in areas of risk and composition of existing assets, otherwise WACC cannot be used as stated by Pogue (2010, p.53).

$$WACC = \frac{E}{V} * Re + \frac{D}{V} * Rd * (1 - Tc)$$

Re=cost of equity   *Rd=cost of debt*

E= market value of the firm's equity   *D=market value of the firm's debt*

V= E + D   *E/V= percentage of financing that is quity*

D/V= percentage of financing that is debt   *Tc=corporate tax rate*

3.4.2 Capital asset pricing model (CAPM)

In the case that WACC cannot be applied, there is Capital set pricing model. Using this model will lead to improved decision in comparison with WACC. Pogue (2010, p.54) states that CAPM adjust for the risk of each specific project by estimating a project specific beta factor. The beta factor is a measure of systematic or unavoidable risk specific to the firm or project.

$$\overline{r_a} = r_f + \beta_a (\overline{r_m} - r_f)$$

Where:

r_f = Risk free rate

β_a = Beta of the security

$\overline{r_m}$ = Expected market return

4 Exposure to foreign exchange risk

Moosa (2003, p.65) defines foreign exchange risk as *"Variability of the base currency value of assets, liabilities and cash flows resulting from a variability of the exchange rate. Therefore foreign risk arises when a form indulges in international operations involving currencies other than the base currency, including importing, exporting, investing and financing. As a result, the firm will be posed to assets, liabilities and cash flows denominated in currencies other than the base currency."*

Foreign exchange risk is normally classified into three types:
- Transaction exposure.
- Translation exposure.
- Economic exposure.

Speaking about foreign exchange risk, it is important to mention hedging. Hedging is term used in foreign exchange risk. Hedging is a process of defending organization from exchange risk. All above mentioned types of exchange risks have different ways how a company can hedge against them.

Important thing to mention is question whether to hedge or not. This question cannot be answered generally and it depends on case from case bases. In some cases hedging can protect company from lose of money in other it could be called waste of money. Company hedge against future problems and it is unclear if problem will come or not, hence question whether to hedge or not.

Evans and Folks (1979, p. 114) defines following point in hedging strategy:
- Select type of exposure that company will face (transaction, translation, economic).
- Set objectives involving guidance in solving future problems in objectives (hedge might be in conflict with future company's objectives).
- Making sure that objectives are in line with maximising shareholder value and that they might be implement.

- Putting managers in charge of each exposure, and writing down criteria for judging each manager.
- Writing down any constrains of the use of hedging techniques.
- Finding and identifying channels through which exchange rate ideas are taken into operating decision thus affecting exposure to foreign exchange risk.
- Creating a system which will monitor and evaluate hedging operations.

4.1 Transaction exposure

Buckley (2004, p.136.) defines transaction exposure as *"cost or proceeds (in home currency) of settlement of a future payment or receipt denominated in a currency other than the home currency may vary because of changes in exchange rates"*. It is clearly a cash flow exposure.

Transaction exposure could for example arise from, as Moosa (2003, p.124) mentions, foreign currency asset or a liability that is already on a balance sheet or a contract about future foreign currency cash flow.

There are ways how a company can manage transaction risk:
- Forwards contracts.
- Futures hedging.
- Money market.
- Currency options.

4.1.1 Forwards contracts

Khosla (2014, p.72) defines forward contracts as *"agreement to buy or sell an agreed amount of currency at an agreed rate an agreed point in the future"*. Moosa (2003, p.124) gives following definition: *"Forward hedging of foreign currency payables and receivables entails locking in the rate at which the payables and receivables are converted from a foreign currency into base currency. This is achieved by buying forward in the case of payables and selling forward in the case of receivables."*

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There are some important things to know about forwards contracts. Not all currencies have forwards markets and some markets are for up to ten years. Using forwards contracts can still cause bad debts and bank credit risk.

Covering in forward market

Spot rate $/€:1.20
Forward rate(90days) $/€:1.10
Spot rate in 90days $/€:1.15

Total cost €
909,090
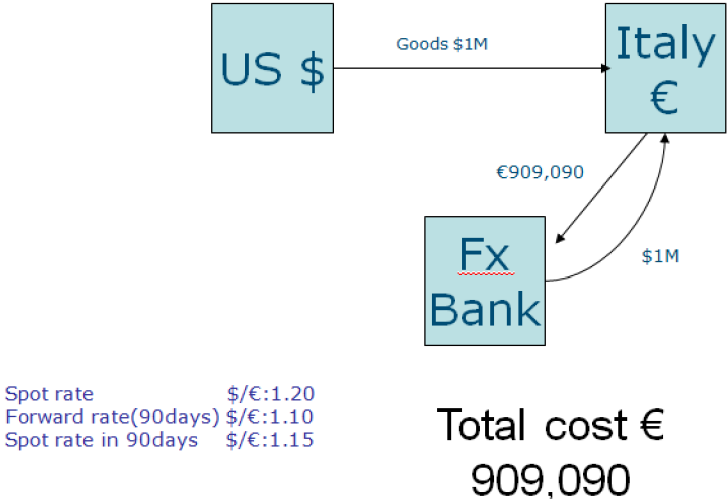
Picture 3 – Covering in forward market

On the picture above is basic example of forward. Spot rate is "*today's market rate at which one currency can be exchanged for another currency*" according to Khosla (2014, p.34).

At this example bank has absorbed the risk and it will off-loaded by finding a customer who is searching for contract in opposing direction.

4.1.2 Futures hedging

Futures contracts and forward contracts are very similar, the consequences are the same. Basic differences are, as stated by Moosa (2003, p.126-128), qualitative differences rather than quantitative, this is caused by standardization and involvement of marking-to-market in futures contracts. To hedge the amount of payables or receivables exactly might not be possible, because there is standardization with futures contracts regarding their size. More likely case is that the date on which the receivables are due does not

coincide with a settlement date. Reason is future contracts that are standardised with respect to the settlement date. Even when the case is that size and settlement dates are the same, marking-to-market risk will bring some variation. Thirdly, some variation might be caused by changes in the margin account associated with any future position. Forward hedging might be more appealing due to standardisation of future contracts. However Telser (1981, p.1-22) wrote that future markets exist, because future markets are superior to informal forward markets. Future markets have good written rules, committees for solving disputes and a limited membership. On the other hand forward contracts rely only on the good faith of individual parties.

4.1.3 Currency options

Definition of option by Khosla (2014, p. 54) is *"buyer has a right, no obligation to buy or sell specific amount of currency at a specific exchange rate"*. Basic terminology has two important words. First is call – it means right to buy. Second one is put, which means to sell.

Option has one huge advantage. It is a right! There is absolutely no obligation to make the contract if the exchange rate is bad. On the other hand it is only advantage to certain degree because outcome is not known and it heavily depends on correct forecast of future exchange rates.

4.1.4 Money market

Moosa (2003, p.135) defines money market hedging as taking money market position to cover expected payables or receivables. It means borrowing and lending the base currency and the currency of denomination.

Khosla (2014, p.64) states basic pointers for money markets as follow:

- Money market use short term borrowing and spot market to hedge against risk.
- Create a deposit in the same currency for a foreign currency payment.
- Foreign currency receipt it is advised to be borrowed in that currency.
- Attention should be put on tax treatment on interests payments and receipts.
- Money market could improve cash flow by gaining receipt early.

4.2 None monetary way

There is also hedging by using non monetary way. Managing of transaction risk by none monetary way could be divided into:

- Do nothing.
- Invoice customer in home currency.
- Netting.
- Matching.
- Leading and lagging.

Netting, matching, leading and lagging are described in the next subchapter.

4.2.1 Netting and Matching

Moosa (2003, p.141) states that, netting would arise when a company has both payables and receivables in the same currency. Then only net exposure should be covered. Netting exposure might involve same currency or currencies with correlated exchange rates. Example would be if a company had payables and receivables in same currency and position are of equal size, then the net position will be zero and there is no need to do anything about it.

There are two types of netting. First is bilateral netting, which is used for individual companies. Second one is multilateral netting which is centralized.

Matching is very similar to netting with only couple distinctions. The most important is matching takes place between external companies. There are two types of matching.

- Parallel matching as defined by lse.co.uk (2014), *"firm offsets outflows in one currency with outflows denominated in a closely correlated currency"*.
- Natural matching.

4.2.2 Leading and Lagging

This technique is based on timing of the realisation of foreign currency payables and receivables. Leading is called paying currency dues sooner than later in moment when

currency is expected to appreciate it. However if the base currency is expect to depreciate it is good to pay payables later. This is called lagging

Moosa (2003, p.157) states example in which, firm require prepayment, since there are expectations of depreciating in currency. Company would face some problems, mainly:

- The payer might not agree to pay if there are not some incentives such as discounts.
- Future sales efforts might be hampered if pressed for prepayments.
- Extent in which original invoice price includes the expected depreciation of the currency, receiving firm is partially protected.

4.3 Translation exposure

According to Buckley (2004, p.29), *"translation exposure arises as a result of the process of consolidation of foreign currency items into group financial statements denominated in the currency of the parent company"*.

There is often misunderstanding between what items could be viewed as translation and transaction exposure. Such items which belong to the translation exposure are:

- Borrowings and lendings denominated in foreign currency.
- Cash pass from borrower to lender created cash flow exposure.

According to Moosa (2003, p.168) there are three methods how to hedge translation exposure:

- Fund adjustment – This means altering amounts or the currencies of planned cash flow of the company or subsidiary to lower exposure to the currency of the subsidiary.
- Entering forward contracts – Similar to forward contracts above.
- Exposure netting and balance sheet hedging – Used by multinationals companies with offsetting positions in more than one currency.

4.4   Economic exposure

Buckley (2004, p.35) states that economic exposure is possibility that the present value of future operating cash flow of a company or subsidiary, in home country currency, may change, because of fluctuation in foreign exchange rate.

It could be said economic exposure is rather external force then internal therefore it is not directly under the force of management.

Practical part

Practical part of the work is divided into four main chapters. It starts with environment analysis of German market and concludes environment on the market.

Second part deals with construction industry which is target of investments. It defines main competitors on the market and includes Porter's five forces analysis.

Third part deals with foreign direct investment environment in Germany and last part deals with evaluation of investment proposal. After each part conclusion is given and at the end there are recommendation for company and final conclusion of thesis.

Entire practical part is made with investment in mind. Company would like to establish subsidiary on the German market in the construction industry, in which it conducts business in the Czech Republic. It focuses mainly on the area of measurement and regulation of energy. More details about company and areas of its interests are given in the last chapter.

5 PESTLE analysis

This part of the thesis deals with PESTLE analysis in its impact on the investment. It is better to do more than just one analysis, because of not enough space in the theses itself author decided to do only Pestle analysis. It should give a picture about environment in Germany for the company.

This chapter is divided into subchapters and each of them deals with one part of Pestle analysis. Lastly, conclusion is given at the end of this chapter.

5.1 Political factors

Modern German country, as we know it, can be dated from summer 1989 when peaceful revolution started. Revolution ended on third October 1990 and Germany was unified. Germany is part of the European Union and North Atlantic treaty organization (knows as NATO).

Main political parties are:

- The Social Democratic Party of Germany (SPD) – It is one of the oldest political parties in the world. It strongly supports NATO. Their main body of electors is located in big cities and industrialized regions of Germany.
- Christian Democratic Union (CDU) and Christian social union (CSU) – Both parties maintain their own structures and do not run opposing campaigns. Their electors´ base consists of Catholics, Protestants, rural interests and among all economic classes. Bots their programs are rather pragmatic.
- Green party – It is party of environmentalists and it is smaller than parties stated above.
- The Free Democratic Party (FDP) – It is composed of middle and upper class Protestants. FDP consider themselves as heirs to the European liberal tradition. It is weak on state level.
- The Party of Democratic Socialism (PDS) – It is basically a successor to the communist party. It renounced most of extreme aspects of their predecessors.

Basic knowledge of political parties and political events in Germany is not only important for German population. It is important for investors as well as other countries in the European Union. Reason is that Germany in one of the major players in the European Union. It has powerful economy and Germany is very technologically advanced country. It is largest net contributor to the European Union. It is big producer of steel, cement, chemicals, machinery, vehicles and electronic. As stated above political situation in Germany is very important for entire European Union and political decision have impact on not only European Union, but other countries as well. Political decision can hugely influence investments, FDI and economics of the country as well as economics of European Union.

Server CountryWatch creates measurements of political stability. First is political risk index which is, as stated on country watch (accessed 2014), *"a proprietary index measuring the level of risk posed to governments, corporations, and investors, based on a myriad of political and economic factors. The Political Risk Index is calculated using an established methodology by CountryWatch's Editor-in-Chief and is based on varied criteria including the following consideration: political stability, political representation, democratic accountability, freedom of expression, security and crime,*

risk of conflict, human development, jurisprudence and regulatory transparency, economic risk, foreign investment considerations, possibility of sovereign default, and corruption."

Countries can score from zero to ten, where zero is highest political risk and ten is lowest. Germany scores nine. There are couple countries with higher score, such countries are Switzerland, Sweden, Austria and Australia. Score of nine is very good sign for investors and it shows very high political stability.

Second index is the political stability index. As stated on CountryWatch (accessed 2014) this index stands for *"proprietary index measuring a country's level of stability, standard of good governance, record of constitutional order, respect for human rights, and overall strength of democracy. The Political StabilityIndex is calculated using an established methodology* by CountryWatch's Editor-in-Chief and is based on a given country's record of peaceful transitions of power, ability of a government to stay in office and carry out its policies vis a vis risk credible risks of government collapse. Threats include coups, domestic violence and instability, terrorism, etc. This index measures the dynamic between the quality of a country's government and the threats that can compromise and undermine stability.*" It is scored similarly as political risk index.

Germany scores nine and half which is the highest score of all countries.

5.2 Economic factors

Germany has quite powerful economy. It is fifth in the world in purchasing power parity and European's largest. Industrial sector of German economy accounts for 30 % of GDP (gross domestic product). Core of their economy is manufacturing and relating services. As mentioned above Germany is quite advanced in production of steel, cement, chemicals etc. German economy strongly rose between years 2004 – 2007. Reasons for this are reforms that were made in areas of labor, capital markets, external competiveness and fiscal consolidation.

Germany was hit quite hard by economic crisis in recent years. German economy started to growth back in the second half of 2009 and in year 2010. However German

economy dropped again in first half of the 2012 and first half of 2013 as visible on the table below. This table shows GDP growth rate from year 2012 to 2014.
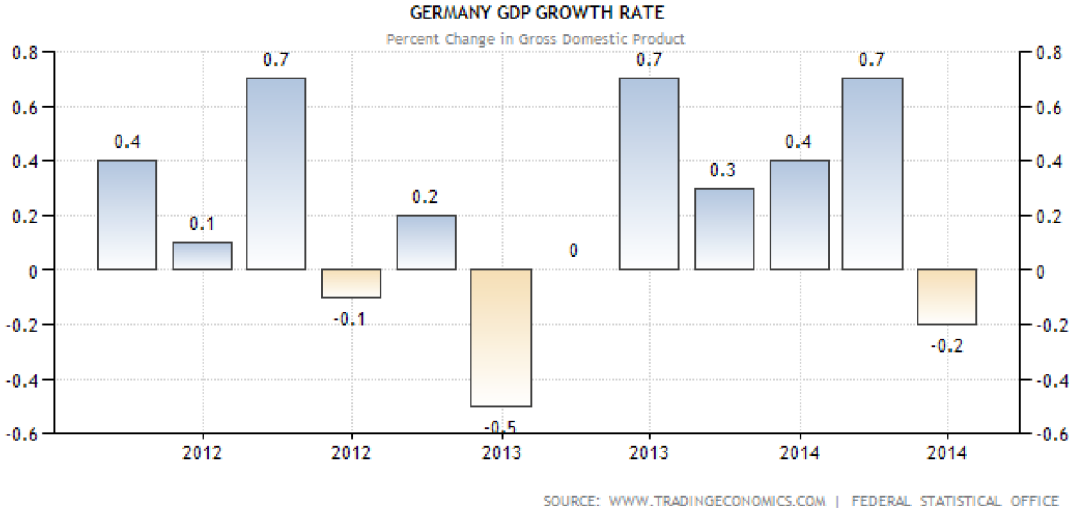

Table 2 – Germany GDP growth rate

On the other graph reader can see damage caused by crisis in Germany in comparison with Slovakia, Austria and United Kingdom.
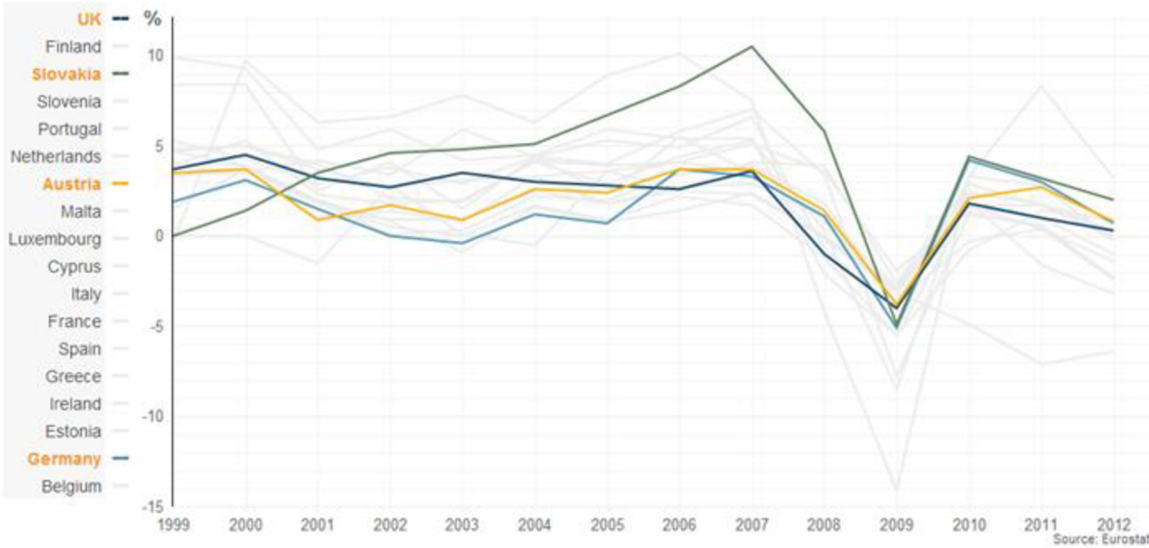

Table 3 – Economic crises comparison

As visible on the graph German economic did not drop so drastically as others and recovered better as well.

Main question is how does German economic situation look now and what is the forecast for the economy? This work will take into account important economic data

such as population, gross domestic product (GDP), GDP Per Capita, Real growth, inflation rate, debt, public deficit, exchange rate and unemployment rate.

Category	2011	2012	2013	2014	2015 (estimation)
GDP (US$bn)	3304,44	3625,11	3425,95	3651,82	3712,39
GDP per capita (US$)	36127,05	37321,82	38219,83	38291,62	
Real GDP growth %	3,3	0,7	0,4	0,8	
Inflation %	2,3	2	2	1,5	1,9
Government debt (% to GDP)	85,8	88,5	85,9	83,9	79,8
Exchange Rate (EUR/USD)	0,72	0.78	0.75	0.75	
Unemployment rate %	6	5,6	5,2	5,1	5,8
Population (mil.)	82	81,750	80,716	80,966	80,865

Table 4 – Basic economic indicators

As we can see from the table German economic situation is quite stable. Germany managed to lower government debt and its forecast is very good. Estimated GDP in 2015 is rather overestimated in my opinion when we compare it to previous years. Inflation rate fluctuates around 2 % which is very good and unemployment rate is moving from 5 % to 6 %.

Composition of GDP by sector of German economy is agriculture 0,8%, industry 28%, services 71,2% as stated by indexmundi (acces 2014).

All three rating agencies give to German rating AAA in case of Moody's rating it is Aaa. As for the outlook in rating there are no indicators that it could get lower.

5.2.1 German's import and export

Germany is heavily export oriented economy. Its export made 52 % of GPD. Most of the exported products are industrially produced goods and services.

Main partner for German export, as stated by economywatch.com (access 2014) are France (9,5 percent), United states (7,9 percent), United Kingdom (6,6 percent), China

(6.1 percent), Switzerland (4.5 percent), Russia (3.3 percent). European Union creates 58,2 percent of entire exports of Germany.

Primary exported commodities are: motor vehicles, machinery, chemicals, computer and electronic products, electrical equipment, pharmaceuticals, metals, transport equipment, foodstuffs, textiles, rubber and plastic products.

On the other hand most imported good originates in Netherlands. Most important import partners are European Union (54.8 percent), China (8.9 percent), US (5.5 percent), Switzerland (4.2 percent), Russia (3.3 percent).

Most imported commodities are: machinery, data processing equipment, vehicles, chemicals, oil and gas, metals, electric equipment, pharmaceuticals, foodstuffs, agricultural products.

5.3 Social factors

As mentioned above Germany has population around 81 million inhabitants, which is the most populated country in the European Union. Main language of Germany is of course German language.

Concerning ethnic groups in Germany, majority is German origin. As stated in Information Please Database (2007), German population is about 91,5 % of entire population. Other ethnic groups are Turkish (0,7 %), Greek (0,4 %), Polish (0,4 %) and other (4,6 %).

Of course Germany is open to different believes. Protestant believers are about 38%, approximately 34% are Roman Catholic, 2% are Muslim and remaining 26% have either no religion or belong to other unspecified religions.

Quality of social life and life as such could be measure in several ways:

- Human development index (HDI) – It measures quality of life in countries all around the world. It has been created by United Nations Development Programme. Main criteria are longevity, education and economic standard of living. Germany belongs to highest category which is Very high Human development and it is on tenth place.

- Life satisfaction index – It was created by Psychologist Adrian G. White and measure subjective life satisfaction. The data was taken from a metastudy and try to associate subjective happiness with parameters such as health, wealth and basic education access. Germany´s score is 240 same as Colombia, Panama and Kuwait and it is on 35th position. Take from White (2007).

- Happy planet index – It measures human well-being with environmental impacts. It was created in 2006 by New Economics Foundation. Indicators of happy planet index are subjective life satisfaction, life expectancy at birth and ecological footprint per capita. It was created with one idea in mind, that is idea of objective of most people is to be happy not wealthy. Germany scores 48,1 and it is on 51th place. Highest score has Costa Rica with score of 76.1, as stated by New economics foundation(2012)

5.4   Technological factors

Technological factors are not important in this case. Since technology which is used on Czech market is usually from Germany or Austria. There is basically no difference between technology used on German market or Czech market. Moreover REGO Ltd. buys some devices on German and Austria markets, hence it is well educated in technological factors. For reasons stated above technological factors will have no impact on company operation on foreign market.

5.5   Legislative factors

There are two important acts which will influence this foreign investment. First are of course taxation acts in Germany and second are acts about construction industry particularly involving construction of heating system and planning of these. This work is not possible to cover German construction law system and it is not trying to do so. It is enough to state, that laws involving construction are key for the company.
On the other hand this work can mentioned taxation in Germany. Information about German tax system is gained from German trade and invest web-pages (2014). Stock companies and limited liability companies are subject to corporate income tax.

Important part of this law is that companies who are not based in Germany are only liable to corporate income tax on income generated inside Germany. Corporate income tax is levied as a flat nationwide tax at a rate of 15% of taxable corporate income. Additionally so called solidarity surcharge has to be paid. Surcharge is 5.5% of the 15% corporate income tax.

Partnership types of companies are subject to personal income tax. Personal income tax rate starts at 14 % of annual income exceeding the tax-free allowance of 8,354 Euros. It ends at 42 % which is annual income of 52,882 Euros or more. This tax is progressive and also applies for personal income tax for employees.

Below is a graph comparing tax burden in countries of the European Union.

Table 5 – Average corporate tax in European countries

Lastly all business types are subjects to the trade tax which is applies by local municipalities. As stated on German trade and invest, "*The taxable income of the company is multiplied with the tax base rate (3.5 percent) which results in the so-called tax base amount. The tax base amount is then multiplied with the corresponding municipal multiplier; which results in the sum total of trade tax which is due.*"

Last tax that will be mention here is so called VAT (value added tax). Rate of value added tax in Germany in 19 %, which is below European average. This tax is added to

the prices of the products or services created by companies, hence it is paid only by end user of product or service.

5.6 Environment factors

Most important factor is connected with subchapter above. Company need to find and study acts concerning environment with their scope of business. It means projecting heating systems, these standards are country specifics and written in country law.

German environment face following issues: air pollution from coal-burning industries, vehicle exhaust. Germany also faces acid rain from sulfur dioxide emissions and heavy pollution of the Baltic Sea from industrial effluents from rivers in eastern Germany. Country is ranked as seventh in GHG output. There are no natural hazards except flooding.

5.7 Conclusion of PESTLE analysis

Most important factors of the analysis for the purposes of investment are definitely economic factors and taxation in Germany. It is good to know political situation so company is ready for changes in legal system, which have direct impact on the investment. However German political situation is very stable and there are no expectations of changes for the future regarding its stability.

German economic situation is on very good level. Event thought recent financial crisis hit Germany hard. Germany got over it and economic situation in Germany is improving as documented above. Current crisis between Russia and the European Union should not influence German economic a lot. Since Russia is not as big importer to Germany or Germany to Russia.

Social factors should not affect investment as well. Composition of population is very similar to Czech Republic and both cultures know what to expect from each other.

Legal factors mainly taxes have big economic impact on investment and its cash flows. Acts regarding construction norm needs to be understood and learn by company if it wants to operate on German market.

Technical factors are irrelevant as stated in analyses and environmental factors include again only environment norms regarding construction and its involvement into environment.

6 Industry analysis

This chapter deals with industry analysis. It is divided into three parts. First part gives overview of construction industry in Germany, mainly from economic point of view. Second part lists biggest players in the industry. Last part deals with Porter's five force analysis. At the end conclusion is given to this chapter.

6.1 Construction industry in Germany

Construction industry is one of the most important economic sectors in the country. It is largest sector in entire European Union in terms of investment. It provides 2,5 million workplaces for people. Total volume of building investment was around 260 billion Euros in 2012. We can see development in this industry from year 2011 to 2012 on the table below.

Germany		2011	2012	year to date
Output	% py	13.6	-1.3	0.0 (Sep 13)
Gainfully employed	% py	2.5	1.5	-1.4 (Sep 13)
Productivity	% py	11.1	-2.7	1.1 (Aug 13)
Main construction sales	% py	12.5	0.5	-2.0 (Sep 13)
Orders on hand	months	2.7	2.8	3.0 (Nov 13)
Construction permits (residential)	% py	19.0	-3.0	4.0 (Sep 13)
Construction permits (non-res.)	% py	3.0	-6.0	-9.0 (Sep 13)
Business expectations[1] (balance)	%	-5.8	-6.2	-1.2 (Nov 13)
Business situation[1] (balance)	%	-6.7	-3.9	0.8 (Nov 13)
Capacity utilization[1]	%	72.0	72.0	72.7 (Nov 13)

1 Source: ifo Institut

Table 6 – Development in construction industry in Germany 2011 – 2012

As we can see on the table and when we compare it with information in PESTLE analysis construction market in this period reflects entire economic situation of the country. We could assume it is really important sector for Germany for this reason. Important question is if the rise or drop in construction market reflect in economic situation of the country or is it the other way around? Meaning that overall drop in economic situation of the country reflects in the construction industry.

Second graph in this part gives overview of construction of residential building and non residential building in period of 2006 to 2013.

Germany: construction
2006=100, volume, seasonally adjusted quarterly data

— Residential building   — Non-residential building

···· Forecast Residential building   ··· Forecast Non-residential building
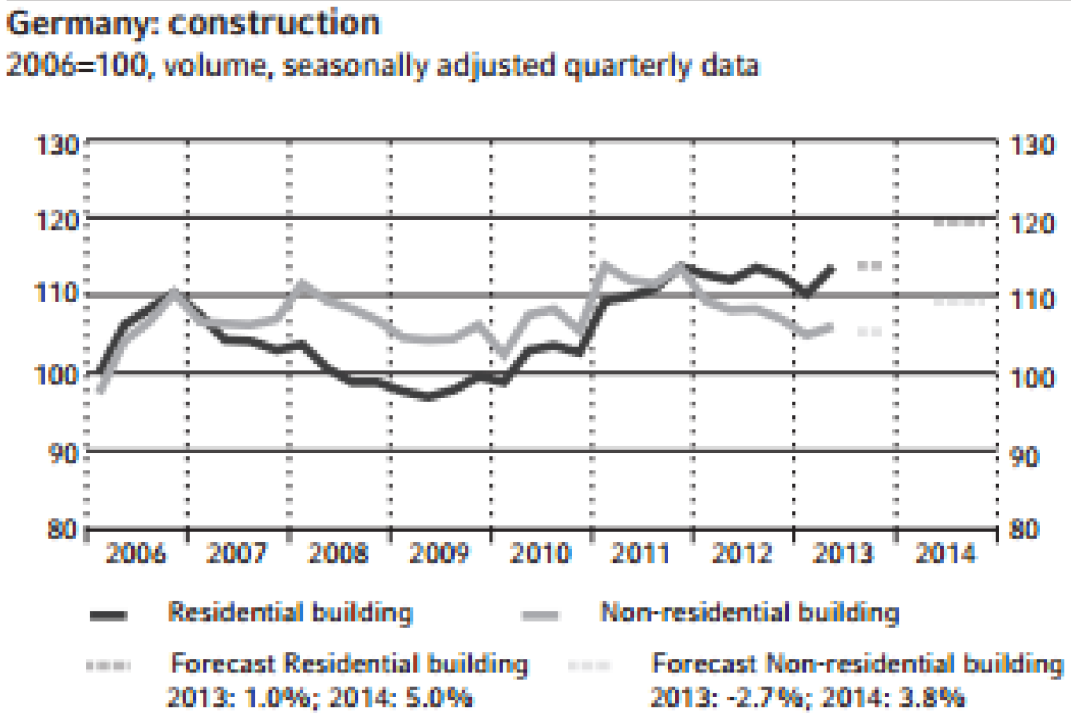2013: 1.0%; 2014: 5.0%   2013: -2.7%; 2014: 3.8%

Table 7 – Development in construction industry in Germany 2006 – 2013

Reasonable assumption here is that drop in year 2007 was caused by financial crisis, however on overall economic situation had impact in year 2009. We could assume that construction industry in Germany was one of the first sectors that were hit by financial crisis and from this sector it continued to others. Graph is rather positives even there was a drop from year 2007 in construction of residential building it was not a big drop. Non-residental building graph is around same position with some fluctuation up and down. We can state that German construction market is very stable market. Reason

could be that inflow of investments cause to construction to remain on approximately same level.

Forecast for the year 2014 by German trade and invest (2013) states, that companies in the sector can expect higher turnover in the year 2014. Turnover will rise at housing sector (5 %), public construction (3,5 %) and commercial construction (2,5 %). Industry as such should generate approximately 98,6 billion Euros in 2014.

So far reports from 2014 are very good. Estimated growth was even higher that it was expected. German construction industry federation stated, that industry achieved highest quarterly turnover, since 2000. Table that follows show estimated growth of industry.

Table 4: Germany construction & engineering industry value forecast: $ billion, 2012–17			
Year	$ billion	€ billion	% Growth
2012	110.5	85.9	10.9%
2013	93.0	72.3	(15.8%)
2014	99.4	77.3	6.9%
2015	103.7	80.7	4.3%
2016	107.0	83.3	3.2%
2017	111.8	87.0	4.5%
CAGR: 2012–17			0.2%
SOURCE: MARKETLINE			MARKETLINE

Table 8 – Estimated growth of industry 2012 – 2017

6.2 Industry major players

First company is Bauer AG. This company is part of global group of companies, which operates in the construction, construction machinery, engineering sector and related services. Company two major subsidiaries are Bauer Maschinen and Bauer Resources. Bauer Maschinen manages equipment segment. Bauer Resources as name says manages resource segments of the market. Company had revenue over 1,869.8 millions of USD in 2012 and employs over ten thousand people. Following graph shows Bauer's revenues and profitability.
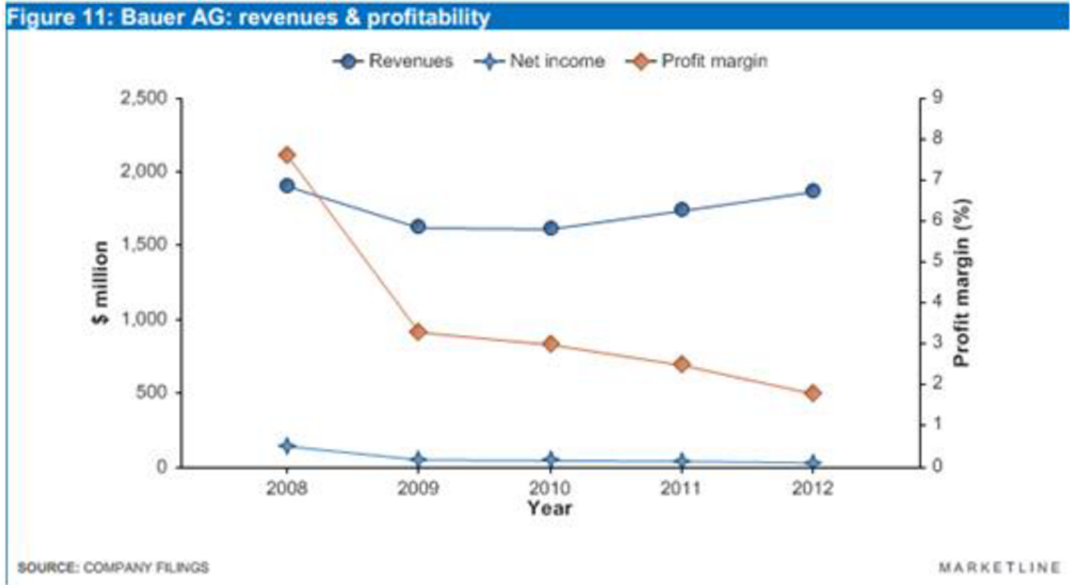
Table 9 – Bauer AG: revenues and profitability

Second important company is Bilfinger Berger SE. Company operates in Europe, Asia, Africa and the U.S. Its headquarters are in Germany. It operates in areas of process industry, energy, financial and public sector. It has four major segments which are industrial services segment, power service segment, building and facility segment and construction business segment.

Company revenue for year 2012 is 11,837.8 million USD and employees over 37 thousand people. Following graph shows Bilfinger's revenues and profitability.
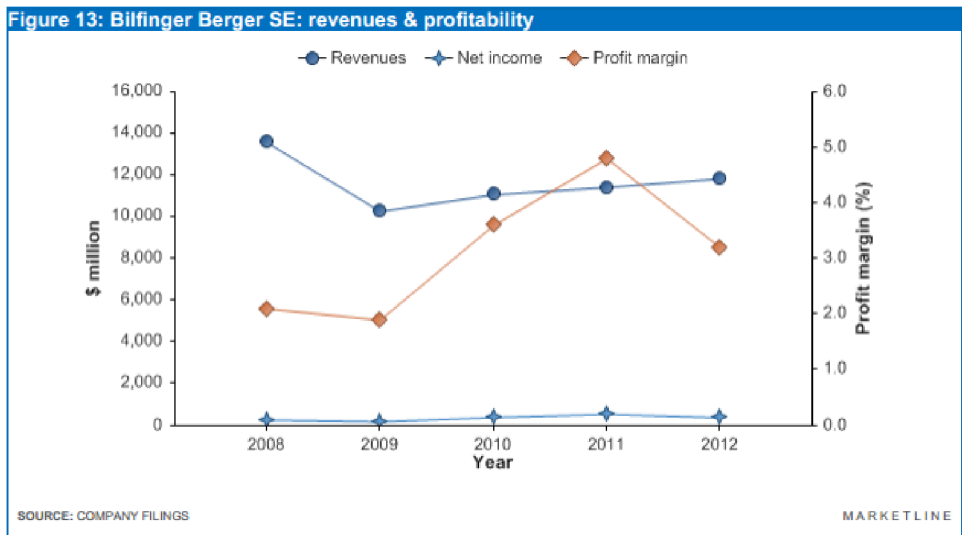

Table 10 – Bilfinger SE: revenues and profitability

Next company is Strabag SE. Its core markets are German market and Austrian market. It is one of the European leading companies and has subsidiaries in Arabian Peninsula, Canada, Chile, China and India. Main company segments are transportation infrastructures, building construction and civil engineering. Company revenue in 2012 is 18,067.3 million USD and has over 74 thousand employees. . Following graph shows Strabag's revenues and profitability.
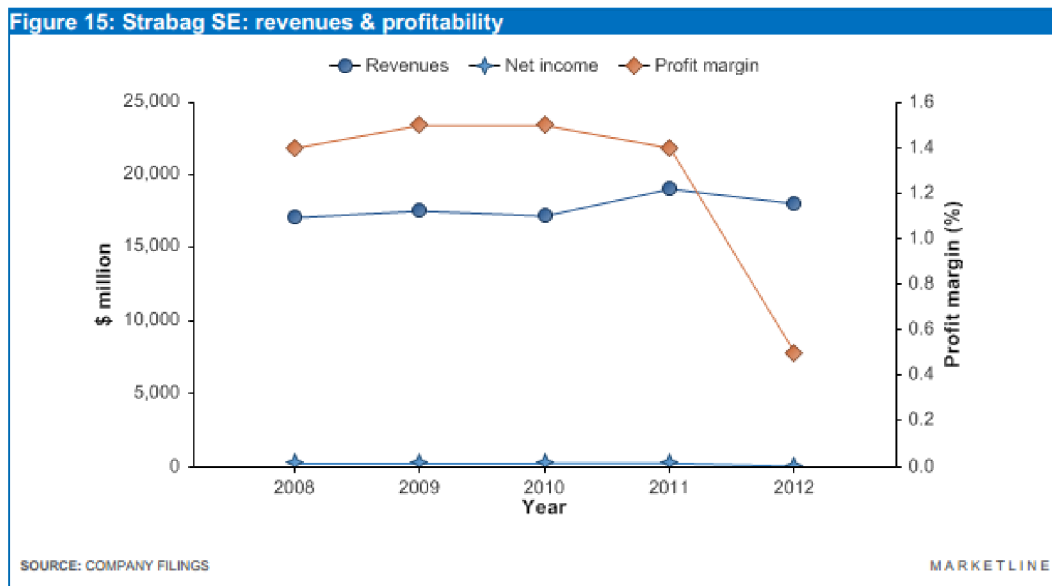

Table 11 – Strabag SE: revenues and profitability

Last important player on the market is Hochtief Ag. It is also German construction's company. Hochtief AG operates in Europe, North and South America, Australia and Asia. Company is divided into business divisions: Hochtief Asia Pacific, Hochtief Americas, Hochtief Europe and Hochtief concessions.

Hochtief Europe ties together all core businesses and manages them from headquarters. It also develops, builds, operates and manages real estate and infrastructure.

Company revenue in 2012 is 35,514.3 million USD and it has over 80 thousand employees. Following graph shows Hochties's revenues and profitability.
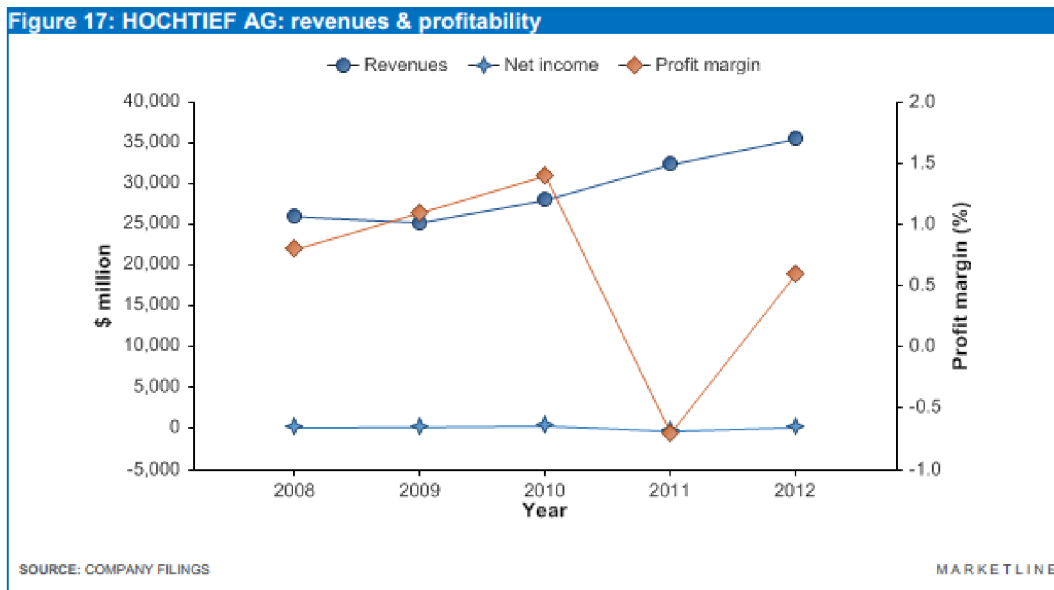
Figure 17: HOCHTIEF AG: revenues & profitability

SOURCE: COMPANY FILINGS — MARKETLINE

Table 12 – Hochtief AG: revenues and profitability

6.2.1 Porter's five force model

Following sub-chapter will be analyzing construction and engineering industry in Germany with accordance to Porter's five force model.

6.2.2 Buyer power

There could be two types of buyers either big ones such as government or big international companies or small ones such as households. In case of big buyers they usually invite players to tender for contracts. Hence the big buyers have more powerful positions. Buyers also set basic parameters of the contract and product. However companies can influence buyers requests.

As we stated in parts above (industry overview) German construction industry market is getting better and forecast for future predicts even bigger rise. Consequence is increase in number of projects.

Moreover buyers on this market do not decide mainly on price. Important factors are also maintenance, efficiency of the project etc. Also this is not retailing business so customers have usually no brand loyalty. This strengthens buyers power, but projects

are more likely of huge importance to buyers and negotiating with company about project as such is normal which lowers buyers power. Overall we can say that buyer's power is moderate.

6.2.3 Supplier power

Generally in this industry are two types of suppliers, distributors of materials and components and sub-contractors. Company subsidiary will be in place of sub-contractors, therefore only suppliers for it are distributors of components. Regulation sector of construction market is heavily divided into several companies which sells different types of components. It is not likely that they can be substituted since they all are using their own software. Thus it can be stated that supplier power is high.

6.2.4 New entrants

Threat of new entrants to the market is largely influenced by two barriers in this industry. First is level of law regulation which is quite high and also big contracts are usually awarded to companies with good reputation, there making it unlikely, that new entering companies could receive such contracts, this is the second barrier.

On the other hand new entrant does not require big capital to enter the market. Construction projects are very different in size, which makes entry for company that is focusing on narrow segment easier. Company can build reputation this way. As stated above at buyers power this industry relies little on brand. Major importance is quality, price and performance. Also good economic situation in Germany will most likely bring more new companies to the country. There is moderate threat of new entrants.

6.2.5 Threat of substitutes

There is little treat of substitutes in construction industry. It is unlikely that buyers will find alternative way how to satisfy their demands. Even when renovating structures there is no way how to substitute that. Moreover buildings are in constant depreciation which makes construction industry only viable choice how to modernize them.

6.2.6 Degree of rivalry

German construction industry is divided. There are big companies alongside with smaller ones. Construction industry in Germany is a growing industry, which makes it more open for new entrants but also it means more new projects for existing companies. Big companies do not focus only at one segment of the industry but operate rather in entire industry. This is where specialized smaller company can create environment and find customers for their services. Degree of specialization of small company is important for success. Smaller companies which try to operate on more segments of the industry have small chance of success, on the other hand specialized company on one product in one segment have big chance to succeed on German market. Therefore we can say that degree of rivalry is moderate.

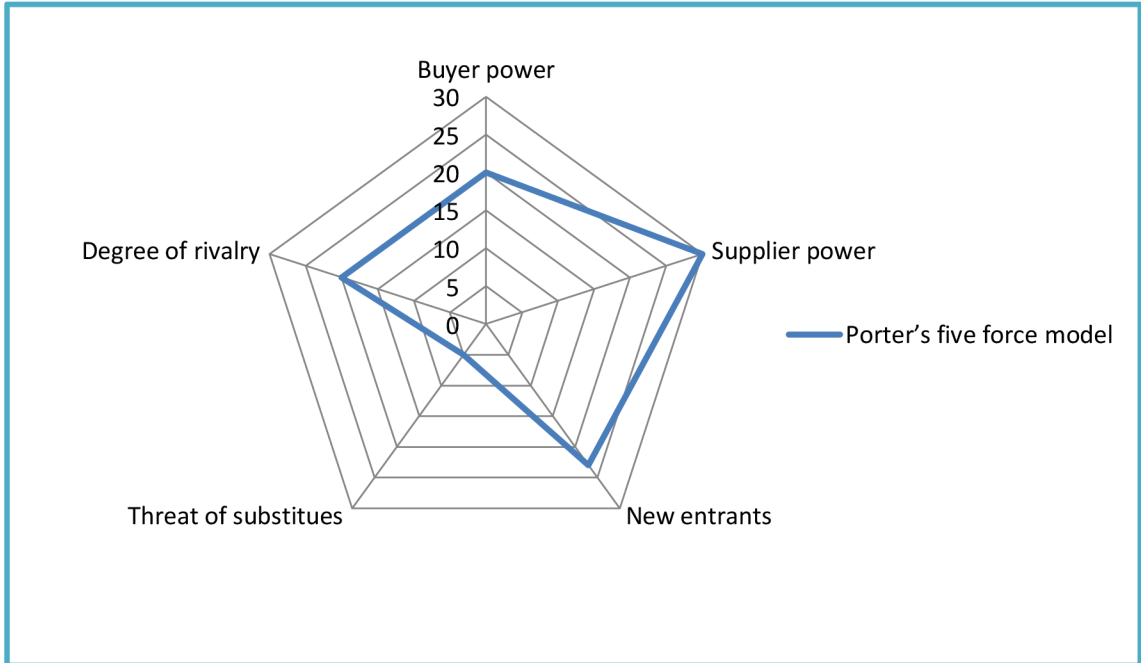Below is graph which states results of analysis.

Table 13 – Porter´s five force model

6.2.6 Degree of rivalry

German construction industry is divided. There are big companies alongside with smaller ones. Construction industry in Germany is a growing industry, which makes it more open for new entrants but also it means more new projects for existing companies. Big companies do not focus only at one segment of the industry but operate rather in entire industry. This is where specialized smaller company can create environment and find customers for their services. Degree of specialization of small company is important for success. Smaller companies which try to operate on more segments of the industry have small chance of success, on the other hand specialized company on one product in one segment have big chance to succeed on German market. Therefore we can say that degree of rivalry is moderate.

Below is graph which states results of analysis.

Table 13 – Porter´s five force model

6.3 Conclusion

To conclude this part, it can be stated that German construction market is rather open for new investments. This is cause by growth of the construction industry as well as German economy. Future predictions are also positive and show no signs of decline in future years.

There are many big players on the market alongside small ones. Possibility for successful entrance on the market could be stated as high. Company need to behave according Porter's five force analysis. It means rather than being focused on many products, choose only one and specialized in it. Furthermore company can start with smaller projects and get better reputation thus increasing possibility of getting better larger projects and improving its market competiveness.

7 FDI in Germany

This chapter deals with Foreign direct investment situation in Germany. Purpose of this chapter is to give information and overview of why to invest or not to invest to Germany.

United Nations Conference on Trade and Development (UNCTAD, 2013) stated that there was a sharp rise in FDI in Germany. Foreign direct investment in Germany was around 6,5 billion Euros in year 2012. One year later this figure rose to 23,4 billion Euros, which is basically 400% rose in time of one year! Germany moved in the ladder of most attractive investment location from 40th place to 14th among all economics. This is very good information for investors. German economic is getting stronger and stronger, it could be expected that it will bring even more investors thus moving up in the ladder. Germany is on the third place of most attractive countries for investment. First place belongs to China and second is United States. Growth of investment is expected until 2015 as it is visible on the graph below.

Table 14 – Most promising investor economies for FDI in 2013 – 2015

Furthermore Ernst and Young study (2012) shows, that Germany received many good marks for many business location factors, factors range from infrastructure, energy technology to information and communication sector. On the table below is shown Strengths of the German Business Location.

Table 15 – Strengths of the German Business Location

As we can see, Germany scores very well in all categories on the graph. The UNCTAD World investment Prospects Survey 2012 to 2014 claims, that Germany is most attractive location for business on entire Europe continent.

7.1 Inward FDI

Germany ranks seventh as recipient of foreign direct investment, according to (UNCTAD), 57 % of foreign direct investment stocks originate from the European Union countries and 9% originates from rest European countries. Inward foreign direct investment from North America is 23 % and 6 % is from Asia. Germany is largest recipient of new Chinese foreign direct investment projects.
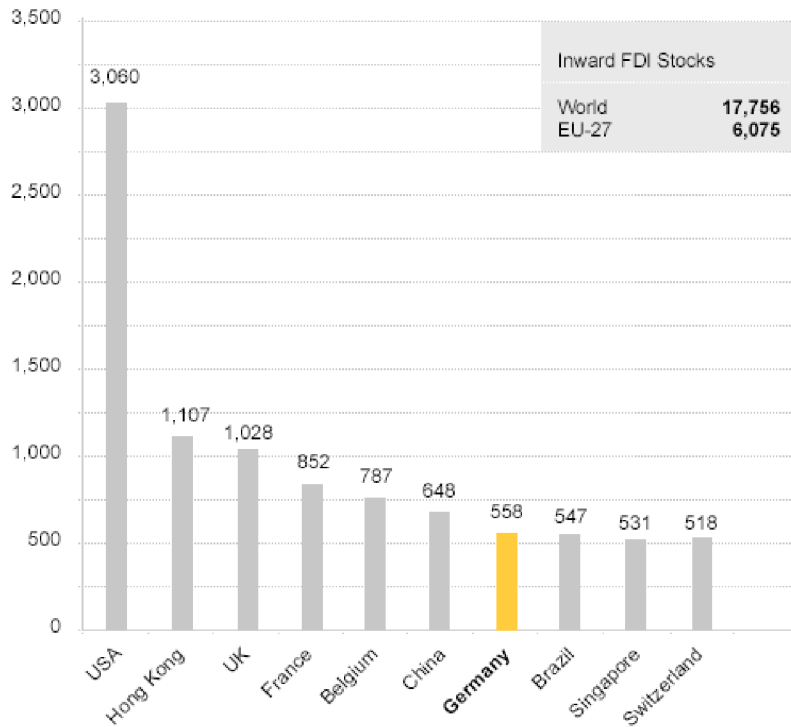
UNCTAD Ranking of Inward FDI Stocks (2012, in EUR bn)

Table 16 – Ranking of Inward FDI Stocks

Table above shows this subchapter in numerical numbers for better picture.

7.2 Conclusion

Germany is currently best country in entire Europe for investment. It is in the middle of rise of its foreign direct investment and it will continue to rise in year 2015. German market supports incoming investments and country as such welcomes them, since they stimulate German own economic situation.

8 Investment proposal evaluation

Last chapter of practical part of the thesis deals with evaluation of the investment proposals. Chapter starts with basic introduction of the company and its business here in the Czech Republic. Then investment idea and proposal is introduced. Methodology of evaluating proposal is created. Investment proposal is evaluated and risk of foreign exchange exposure is discussed as well.

8.1 Rego Ltd.

REGO Ltd. is a company which operates on the Czech market for more than twenty years. It is conducting business in the construction industry exactly in a subsector dealing with energy flows in buildings (heat, electricity etc.). It is called measurement and regulation (MaR). Company does business only on the Czech market.

Company has twenty employees and the basic capital of 7 millions of the Czech crowns which is approximately 347 thousands of USD.

Rego Ltd. focus mainly on sub industry of energy saving. It has several products:

- Measurement and regulation – It measures flows of energies such as heat, air, electric energy etc. Company then installs regulations tools and can manage energies in any building or area.

- Creation of distribution boards – Company creates distribution boards according the wishes of customer or in accordance with project at hand. It does not create only standardize distribution boards but also can create atypical one.

- Management of energy flow – Company creates its own system which can either customer use to manage energy flow in its object or company could do it for him. Then customer is informed with any changes of energy flow.

- Designing of measurement and regulations for building – Company is able to design any project. From measurement and regulation for historical building, factories, open-grounds to manufacture of micro threats.

- Service – Company is able to service changeable heating devices.

- Technical advices – Company gives technical advices in area of measurement and regulation. Company basically goes through your systems at your building and tells the customers efficiency and could help him plan and build more efficient system.

Company did many good projects in the Czech Republic. Its expertise and work was used on Castles, exhibition grounds, historical archives and big factories. It conducts business in entire Czech Republic. However recent bad condition in Czech construction industry, caused for company to start thinking about penetrating foreign markets. Rego Ltd. has no experience with foreign investment and expansion to different country. Company would like to use its knowledge and experience gained in the Czech Republic and start penetrating same market in different country.

Company in its long existence made several small and big investments. Couple years after its origins, company bought new headquarters in Kohoutovice. It is building with three floors and Rego Ltd. resides on top floor. Rest of the building is for hire. There are currently several restaurants and shops. Another important investment was a construction of assembly facility which is located opposite to company entrance.

There were several other smaller investments as upgrade of car fleet, upgrading hardware and software and purchase of machinery.

8.2 Investment project

Investment project started as an idea of company expansion to foreign country without any clearer form. Analysis, which is above, was done for the reasons of clarifying investment project and laying down its parameters.

At first, company wanted to enter foreign market with all products which they provide on the Czech market. However it would require major investment and risk would be too high without even evaluating the proposals.

Therefore analysis where conducted to understand better, what source of environment, risks and problem could company face. This thesis deals only with basic analysis, which was done. However, most important parts were and industry overview and Porter's five force model. Based on this work following investment proposal was made.

Company decided to establish a subsidiary in Germany. This subsidiary is going to be very narrowly focused on only one company product. This product will be designing of measurements and regulations, in reality it means that subsidiary will make plans for measuring devices and their implementations to entire building system or designing the system as such. This work is very difficult for project architects. Company has to employee very good project architect since slightest mistake can lead to high damages on property and its value. Example would be wrong atmosphere in historical vault that would cause destruction of century old drawing and furniture. This sector of market is very specialized.

Subsidiary will basically work as sub-contractor for project. It would provide designs for measurement devices and their systems.

Company estimates that it will need 3 project architects. Office space will be hired and not bought to save costs. In addition new subsidiary also need at least one salesman, who will negotiate current contracts with customers and will search for possible new contracts on the market. In addition company need to buy software and hardware required for designing the projects.

Furthermore project will be estimated in time frame of five years. It is not financially big investment it is rather attempt of slowly establishing company subsidiary and slow penetration of the German market. Additional investments would follow if the situation of the subsidiary would improve and more work would be available.

Overview of investment requirement:
- Office space.
- 4 new employees (3 projects architects and one leader and salesman in the same person).
- Hardware and software requirements for work.
- Car.
- Marketing.
- Basic work tools such as cell phone etc.

Start of the investment is not yet stated and company is still considering it. In this work we will assume that start is this year. Since investment is not so financial high company does not consider any form of financing the investment from different sources.

8.3 Planning of the cash flow

In this part it is very important to estimate future cash flow preciously, because methods that will be used for evaluation of investment heavily depend on correct estimation of cash flow. Methods for evaluation will be net present value and internal rate of return.

8.3.1 Determination of rules

For our purposes we will assume that investment will last for five years in same condition. It is difficult to predict changes. Following calculation will be used in same estimation of prices and salaries. Because of this it will be necessary to adjust depreciation with expected taxation, which is for Germany stated above.

Evaluation will comprise of two possible scenarios. Reason being that we cannot say how much work will subsidiary gain each month so we need to predict this. We could estimate expenses, however revenue depends on work done. Currently we do not know amount of work that will actually be done. Scenarios are trying to estimate possible future hence simulate possible progress of investment. Scenarios are:

- Realistic scenario – This scenario assumes that amount of project will be same as in the Czech Republic. This could be nicely estimated, because company in the Czech Republic has also three project architects. Revenue is estimated by average of smaller project that company does in one month or used to do. Big projects are unlikely to be done in first two years on new market.
- Pessimistic scenario – This scenario assumes that revenues will be lower. And it will take longer to reach desirable revenue.

First table shows predicted cash flow for realistic scenario, all prices are in Euros.

Costs	First year	Second year	Third year	Fourth year	Fifth year
Office rental	13872	13872	13872	13872	13872
Employees salaries	139920	139920	139920	139920	139920
Starting marketing	1000	1000	1000	1000	1000
Office equipment	3000				
Car	7000				
Yearly marketing	500	500	500	500	500
Patents	1000				
Travel expenses	500	500	500	500	500
Energy	200	200	200	200	200
Total	166992	155992	155992	155992	155992
Revenue					
Revenue from projects	160 000	170 000	200 000	200 000	250 000
Depreciation					
Car	1400	1400	1400	1400	1400
Inflation	1,02	1,04	1,06	1,08	1,1
After inflation	1372,5	1 346,20	1320,8	1286,3	1272,7
Income before tax	-8 365	12 662	42 687	42 722	92 735
Income after tax (15,8%)	-8365	10661	35942	35971	78082

Table 17 – Cash flow for realistic scenario

Most difficult projection is as mentioned above revenue stream from projects. It is estimated as average revenue based on company history and recounted into Euro. Theoretically speaking range of the revenue in one year can be possibly from 50 000 to 400 000 Euro. Lower revenue stream in first year of investment is caused by couple factors. Mainly company is new on the market, taking into account analysis in part six and seven, it will take time to gain customers and bigger projects. Therefore revenue is slightly increased each year. Year five estimates that company will gain first major big project.

Second table shows pessimistic scenario.

Costs	First year	Second year	Third year	Fourth year	Fifth year
Office rental	13872	13872	13872	13872	13872
Employees salaries	139920	139920	139920	139920	139920
Starting marketing	1000	1000	1000	1000	1000
Office equipment	3000				
Car	7000				
Yearly marketing	500	500	500	500	500
Patents	1000				
Travel expenses	500	500	500	500	500
Energy	200	200	200	200	200
Total	166992	155992	155992	155992	155992
Revenue					
Revenue from projects	100 000	130 000	150 000	180 000	180 000
Depreciation					
Car	1400	1400	1400	1400	1400
Inflation	1,02	1,04	1,06	1,08	1,1
After inflation	1372,5	1 346,20	1320,8	1286,3	1272,7
Income before tax	-68 365	-27 338	-7 313	22 722	22 735
Income after tax (15,8%)	0	0	0	19131	19142

Table 18 – Cash flow for pessimistic scenario

Revenues here are assumed to be much lower, those revenues are really very pessimistic. Drop in revenues here is caused by lack of projects, projects with small income and struggle of the company to penetrate the market.

8.4 Evaluation

There are three stages of evaluation. Firstly discount rate needs to be counted. Work will operate only with net present value and internal rate of return, because these are the most precise evaluation methods.Net present value and internal rate of return will have their own subchapters.

8.4.1 Discount rate calculated by CAPM

Using formula for calculation of discount rate via CAPM as stated above results into following formula.

$E(r_i) = r_f + \beta [E(r_m) - r_f]$; where:

E (r_i) discounted rate

r_f = risk free rate of Germany bonds which is 0,96 %

β = is taken from (NEW York online, beta Europe), beta is 0,96

r_m = expected rate of return of market which is 13.83% by S&P 500 index.

$E(r_i) = 0,096 + 0,96(0,138 - 0,096) = 1,056*0,042 = 4,4\%$

Discount rate is 4,4%.

8.4.2 Net present value of the investment

By establishing discount rate, it is possible to calculate Net present value of the investment. There are going to be two calculation of net present value. For recommendation of the investment the result of net present value must be positive or zero.

Net present value for realistic scenario will be calculated first. Pattern for Net present value is:

$$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} \; ; \text{where:}$$

C_t = net cash inflow during the period

r = discount rate

t = number of time periods

By putting into formula we get following numbers:

$$NPV = \frac{-8365}{(1+0{,}9709)^1} + \frac{10661}{(1+0{,}9246)^2} + \frac{35942}{(1+0{,}8890)^3} + \frac{35971}{(1+0{,}8548)^4} + \frac{78\,082}{(1+0{,}8219)^5} =$$

$$-4\,244{,}25 + 2878{,}23 + 5332 + 3039{,}23 + 3889{,}8 = 10\,895{,}01$$

Result of the NPV calculation for the realistic scenario is positive number, therefore investment can be recommended.

Following formula takes into account pessimistic scenario.

$$NPV = \frac{-68\,365}{(1+0{,}9709)^1} + \frac{-27338}{(1+0{,}9246)^2} + \frac{-7313}{(1+0{,}8890)^3} + \frac{22272}{(1+0{,}8548)^4} + \frac{22375}{(1+0{,}8219)^5} = -34687{,}2 -$$

$$7380{,}6 - 1084{,}9 + 1881{,}78 + 1114{,}65 = -40\,155{,}87$$

Result of the NPV calculation for the pessimistic scenario is negative, therefore investment cannot be recommended.

Key input for net present value calculation was net cash inflow during period. It is important to realize in this proposal it is biggest variable. Net cash inflow is very difficult to estimate, thanks to volatile bases of the business itself. Therefore it was estimated from history of the company. Realistic scenario estimation was estimated by company itself by screening their old business invoices. Pessimistic version was estimated by similar rule only company took into account years, when it was not doing so well, in this particular field. Furthermore company tried to predict number of contracts that can be gained on German market. However it is still an estimation and reality could be different. Realistic scenario in necessity for the company, in order to achieve their goals on German market.

8.5 Internal rate of return

By calculating internal rate of return percentage, company can find out what discount rate would put net present value to zero. Following graph shows relationship between net present value and discount rate.

Internal rate of return is such value of discount rate, where net present value changes from positive to negative numbers.
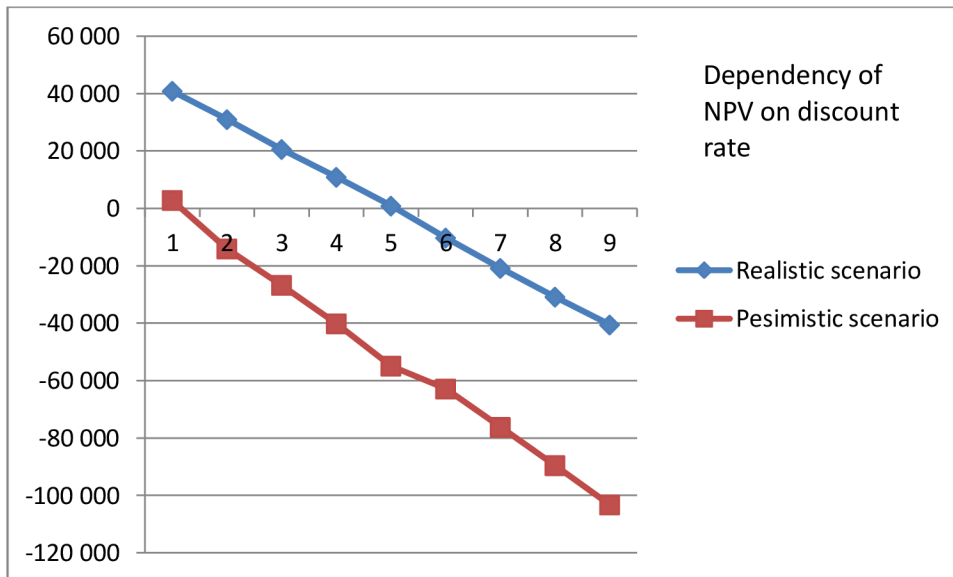
Table 19 – Internal rate of return

Values are:

- Realistic scenario- 5,05%
- Pessimistic scenario – 1,15 %

Because IRR by realistic scenario is higher than discounted rate established (4.4%), project can be evaluated as acceptable and efficient.

8.6 Foreign exchange risk exposure in particular investment

This subchapter deals with types of foreign exchange risk and their possible influence to evaluated investment proposal. What follows is yearly exchange rate development of Euro to Czech crown:

Table 20 – Exchange rate (Euro to Czech crown)

Graph above represents movements between currencies. Big rose between October and November 2013 was cause by intervention of Czech national bank. Otherwise it could be said that, since then there was a slow rise in exchange rate with fluctuation. Rise is between 27.5 to 28 Czech crowns for Euro. Czech national bank stated that it would like to keep course around same level. Another big changes are not expected, however the change in October was not anticipated and announced in advance, which makes future changes possible but unlikely.

Second table shows daily exchange rates in July of 2014. Slow rise is quite obvious on this table. For companies which face exchange rate risks on daily bases, it is of a big significance, however for this proposal it is not. Key factors for this proposal is forecast of exchange rate on quarterly stated or monthly bases, since investment does not force REGO Ltd. with often risks with exchange rates.

Jul - 2014				
Mon	Tue	Wed	Thu	Fri
	1 27.433	2 27.432	3 27.439	4 27.444
7 27.434	8 27.437	9 27.433	10 27.440	11 27.440
14 27.439	15 27.431	16 27.446	17 27.440	18 27.433
21 27.468	22 27.485	23 27.454	24 27.480	25 27.482
28 27.481	29 27.490	30 27.509	31 27.570	

Table 21 – Exchange rate (Euro to Czech crown) in July 2014

Transaction exposure is most important exposure for this investment. Company will invest money into Germany therefore future exchange rate is important. Above we stated that rate is slowly rising, which means the later the investment will be made more money will company spend on exchange rate. Good idea is to buy forwards or future contracts to avoid exchange rate exposure so much.

On the other hand company must be aware of changes from Euro to czk. Reason being if Czech national bank decides to return course back on the level of October 2013, it would not be advisable to change Euro to czk, since it was bought in higher exchange rate.

To help to keep risk of exchange rate at minimum it is best that money earned in Germany stay in Germany and supports local business and is used for future business expenditures or further investments. Those are all short-term solution.

In long-term company can decide that Czech market is no longer main market and will focus on German market. In that case it is advisable to transfer main production and main parts of company to German market. Reason being that company should operate mainly in country with main market focus, it will lower their foreign exchange exposure.

Translation exposure in case of this investment is caused by translating financial statements and reports from one currency to the other. It should be translated via monthly or weekly exchange rate so confusion of data by exchange rate is minimal. Wrongly translated data could cause wrong decision. Managements can think they are

getting their production high but in reality it could be on medium level. Or production in fact can be higher than couple months ago but wrong translation of financial statements could cause actions to higher production even it is not necessary, hence wasting capital.

Economic exposure cannot be totally hedged if company operates on more than one market. To help minimize economic exposure company could use costs to generate sales which should be denominated in the same currency. Minimize equity investment. However these are rather general advices than concrete how to deal with economic exposure.

8.7 Conclusion

Financial evaluation of investment was made in this part by net present value method. From two possible scenarios one that was accepted is realistic scenario. Furthermore company should conduct further analysis to narrow down stream of revenue. This will help with establishing more precise cash flow, thus lowering risk of the investment.

Recommendation

Recommendation part will be divided according to practical parts of this diploma thesis. Pestle analysis has shown that company need to understand German taxation system. It is a key feature for success on German market. Secondly, construction acts needs to be understood and known by heart! Company must without any doubt understand legal system and main acts connected with construction industry. Understanding German construction law and norms is key for succeeding in this investment.

It was concluded from industry review that company should move to German market with haste. Situation is about right now. Market is open and there is a room for future growth. This time period gives company time to move on the market and established itself there. It could give it even head-start.

Success factor is to specialize in one product. Company cannot broaden its range of product in order to establish itself on new market. Company should choose only one product, which shows greatest potential and specialize itself deeply in that product in order to penetrate successfully.

Main recommendation from investment appraisal part of the work is that realistic scenario for investment was evaluated as satisfying and company can invest and expect the return if the expectations and numbers giver are sound.

Company could conduct more research to narrow down expected revenue and volume of projects that could be done in Germany. It is most important number in analysis and by making it more precise entire evaluation of investment would be more precise as well.

Company is recommended to use forward or future contracts to lower price of foreign exchange exposure, because price of the euro is slowly rising. Also it is advisable not to expose itself to foreign exchange rates too often.

Revenue streams should be kept on German market and use to strengthen position on German market rather than expose them to exchange rate. It will possibly increase revenue and company will be safe from exchange rate exposure.

Lastly, company is recommended to translate their financial statements on weekly or monthly exchange rate courses rather than do it yearly. Wrongly translated documents could cause wrong decisions leading to capital loses.

Conclusion

To conclude this diploma thesis, I am confident that targeted aim of the work was fulfilled. Theoretical part of the work sets theoretical background for entire work.

First chapter deals with bases for company expansion. It mentions analysis of the company, environment and targeted industry that has to be done in order to fully understand foreign market and chose correct approach to conduct business in it. Chapter also defines basic enter nodes and describes them.

Second chapter is about foreign direct investment. It states clearly definition of foreign direct investment. Definition is followed by brief history and types of foreign direct investment.

Third chapter of theoretical background deals with investment as such and it is main chapter of theoretical part of thesis. It describes creation and evaluation of investments. It deals with creation of cash flow as well. Last subchapter is about discount rates.

Last chapter of theoretical background states risk associated with foreign exchange rate exposure. It describes types of exposure and list way how to minimize risk for companies operating on foreign markets.

Practical part follows theoretical. Theories describes in theoretical part are practically used in this part. Part starts with analysis of German market and environment. This is done via Pestle analysis. Areas of possible future problems are found and descriptions of them are given.

Sixth part deals with industry analysis. It describes economical situation in German construction industry, which is targeted industry for investment. It lists main players in the industry and lastly Porter's five force analysis is done. Analysis defines ways how to penetrate market and behave on the market.

Seventh chapter describes foreign direct investment situation on German market. States why country is attractive for investors and gives more information about investment environment in the country.

Last part deals with evaluation of investment as such. Two scenarios are given for investment consideration. By calculating discount rate and net present value the realistic scenario is recommended and mainly discussed. This part also shows relationship

between net present value and discount rate. Suggestions are given how to minimize exposure to foreign exchange rate.

Diploma thesis ends with recommendation for the company which are summarize from practical chapters.

List of literature

AIZENAMN, J., 1992. *Foregin Direct Investment as a Commitemnt Mechanism in the Presence of Mangaged trade,* NBER working paper NO.4102.

ATRILL P., McCLANEY E., 2009. *Management accounting for decision makers*, Hrlows, England, New York: Financial Times/ Prentice Hall, ISBN 9780273723622.

BUCKLEY A., 2004. Multinational finance, Harlow: FT Prentice Hall, ISBN 9780273682097.

CAMPBELL E., REUR J.J, 2001. *International alliance Negotiations: Legal Issues for General Manageres*, Indiana university Kelley school of business, Business horizont copyrights.

CAVES, R. E., 1971. *International Corporations: The Industrial Economics of Foreign Investment*, Economica, vol.38.

CHEN, T. J. and KU. Y. H. (2000), *The effect of foreign direct investment on firm growth:The case of taiwan manufactures,* Japan and the World economy, vol. 12: 153-72.

DYSON, J.R., 2010. *Accounting for non-accounting students*, Harlow, England. New York, Financal Times Prentice Hall, ISBN 9780273722977.

EVANS, T.G. and FOLKS W.R., 1979. *Defining objectives for exposure management. Business International Money Report*, 2 February.

GRASSEOVÁ, M. 2008, *Analýza podniku v rukou manažera*, 1. vyd. Brno: Computer Press,a.s., 325 s. ISBN 978-80-251-2621-9.

HOLLENSEM, S., 2011. *Global marketing a decision-oriented approach,* 5th ed., Prentice Hall/ Pearson Education Limited. ISBN 9780273726227

JOHN-REN, C. 2000, *Foreign direct investment*, Houndmills, Basingstoke, Hampshire: Macmillan Press , New York , St. Martin's press 2000. ISBN 031223404X

MOOSA, I. A., 2002. *Foreign direct investment: theory, evidence, and practice*, Basingstoke : Palgrave. ISBN 0333945905

MOOSA, I.A., 2003. *International financial operations: arbitrage, hedging, speculation, financing and investment*, Houndmills, Basingstoke, New Yrok: Palgrave Macmillan. ISBN 0333998596

POGUE M., 2010. *Corporate investment decision: principles and practice*, McGraw-Hill Education, ISBN 9781606490648.

PORTER, M.E., 1998. *Competitive strategy techniques for analyzing industries and competitors,* New York; London: Free press. ISBN 0684841487.

PROTSENKO, A., 2003. *Vertical and Horizontal foreign direct investment in transition countries*, Inaugrual- Dissertation, Ludwig-Maximilians- University Munchen.

TELSER, L.G., 1981. *Why are these organized futures markets.* Journal of Law and Economics,24, 1-22

TWAROWSKA K, KAKOL M., 2013. *International business strategy reasons and forms of expansion into foreign markets,* International conference 2013 Zadar, Croatia, make learn

UNCTAD, 1999, *World Investment Report: Foreign Direct Investment and the Challenge of Development* (New York: United Nations).

WEETMAN P. 2011 *Financial and management accounting: an introduction*, Harlow, England, New York: Pearson Education, ISBN 9780273718413.

List of lectures

KHOSLA, R. 2013. *Foreign exchange exposure,* distributed in Financial Accounting at the Nottingham Trent University, on November the fifth 2013.

Internet sources

Index Mundi - Country Facts. 2014. Index Mundi - Country Facts. [ONLINE] Available at: http://www.indexmundi.com/. [Accessed 4 August 2014].

EconomicSectors - Construction industry - Construction industry in Germany - Federal Statistical Office (Destatis). 2014. EconomicSectors - Construction industry - Construction industry in Germany - Federal Statistical Office (Destatis). [ONLINE] Available at: https://www.destatis.de/EN/FactsFigures/EconomicSectors/Construction/ConstructionIndustry/Tables/ConstructionIndustryGermany.html. [Accessed 3 August 2014].

Countrywatch analysis of the Germany, available from https://www.coutrywatch.com. [Accessed 3 August 2014].

Country statistical profile: Germany - Country statistical profiles: Key tables from OECD - OECD iLibrary. 2014. Country statistical profile: Germany - Country statistical profiles: Key tables from OECD - OECD iLibrary. [ONLINE] Available at: http://www.oecd-ilibrary.org/economics/country-statistical-profile-germany_20752288-table-deu. [Accessed 2 August 2014].

Economic Forecast Germany Year end. 2014. [ONLINE] Available at: http://www.port-of-spain.diplo.de/contentblob/4099520/Daten/3813260/GTAIEconomicoutlook20132014.pdf. [Accessed 2 August 2014].

Germany:- Economic Survey of Germany 2014 - OECD. 2014. Germany: Economic Survey of Germany 2014 - OECD. [ONLINE] Available at: http://www.oecd.org/germany/economic-survey-germany.htm. [Accessed 5 August 2014].

FDI flows by partner country. 2014. FDI flows by partner country. [ONLINE] Available at: http://stats.oecd.org/Index.aspx?DataSetCode=FDI_FLOW_PARTNER. [Accessed 9 August 2014].

Foreign direct incestem, accessible from: http://www.gtai.de/GTAI/Navigation/EN/Invest/Business-location-germany/fdi.html. [Accessed 5 August 2014].

German economical informatik, 2014. Economical rates of Germany, accessible from http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/. [Accessed 5 August 2014].

Germany - Foreign direct investment. 2014. Germany - Foreign direct investment. [ONLINE] Available at: http://www.indexmundi.com/facts/germany/foreign-direct-investment. [Accessed13 August 2014].

Germany construction market.2014. [ONLINE] Available at: http://www.echarris.com/pdf/8235_International%20Focus%20on%20Germany%20FINAL.pdf. [Accessed 4 August 2014].

Germany | Data. 2014. Germany | Data. [ONLINE] Available at: http://data.worldbank.org/country/germany. [Accessed 3 August 2014].

Germany | Economic Indicators. 2014. Germany | Economic Indicators . [ONLINE] Available at: http://www.tradingeconomics.com/germany/indicators. [Accessed 2August 2014].

Germany - Economy Data - Data from Quandl . 2014. Germany - Economy Data - Data from Quandl . [ONLINE] Available at: http://www.quandl.com/c/germany/germany-economy-data. [Accessed 1 August 2014].

Calendar . 2014. Germany Foreign Direct Investment | 1971-2014 | Data | Chart | Calendar. [ONLINE] Available at: http://www.tradingeconomics.com/germany/foreign-direct-investment. [Accessed 5 August 2014].

Harward Business review, unknown author 2008, Harvard business school publishing corporation, available at: www.hbrreprints.org. [Accessed 1 August 2014].

Construction and Engineering sector in Germany reportMarketline |. 2014. Marketline |. [ONLINE] Available at: http://www.marketline.com/. [Accessed 15 August 2014].

Sector Report Germany Industry in Focus. 2014.[ONLINE] Available at: https://www.corporate-clients.commerzbank.com/files/sector_reports/branchenreport_en.pdf. [Accessed 14 August 2014].

Taxation system in Germany, 2013, German trade and incest, accessible from http://www.gtai.de/GTAI/Navigation/EN/invest.html. [Accessed 15 August 2014].

Free Management eBooks - Online Library. 2014. Free Management eBooks - Online Library. [ONLINE] Available at: http://www.free-management-ebooks.com. [Accessed 10 August 2014].

The Word factbook- Germany, available from https://www.cia.gov/library/publications/the-world-factbook/geos/gm.html. [Accessed 14 August 2014].

UNCTAD, 2013, World investment report. 2014. [ONLINE] Available at: http://unctad.org/en/publicationslibrary/wir2013_en.pdf. [Accessed 12 August 2014].

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List of abbreviations

ARR – accounting rate of return

CAPM – capital assets pricing model

Czk – Czech crown

e.g. – exempli gratia

FDI – foreign direct investment

FME – free management ebooks

IRR – internal rate of return

Ltd - Limited

NATO - North Atlantic Treaty Organization

NPV – net present value

PB – payback period

R&D – research and development

UK – United Kingdom

UNCTAD – United Nations Conference on Trade and Development

US – United States

WACC – weighted average cost of capital

VAT - value added tax

GDP – gross domestic product