



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

Department of Economics

# Foreign Direct Investments under Political Uncertainty

A case study of crop production in Ukraine

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# Abstract

Intense competition among companies and lack or unavailability of certain resources in country of company's origin force them to cross the borders, and start to hunt for new markets and cheaper inputs. However, by investing abroad the company is not only facing and dealing with cultural differences and new regulatory framework, but also becomes dependent on decisions and actions of different and to large extent unknown government. Moreover, the majority of the investments' flows are directed to developing countries, where power and capabilities of state authorities are considered to be more extensive than in countries of developed economies. The aim of this study is to investigate whether the presence of the political uncertainty in the host country have an impact on final investment decision. The study also describes how by using the means of capital budgeting, the value of political risk could be integrated into financial evaluation of an investment project.

Unlike previous studies that analyzed the macro-level data on correlation between Foreign Direct Investment flows and presence of political uncertainty, this study applies micro-level data. Empirically, the qualitative data for this study was collected from two agricultural companies involved in crop production in Ukraine, *Grain Alliance AB* and *Alpcot Agro AB* that are owned and operated by Swedish investing companies. Theoretical models were tested on the financial data from a third agricultural company, *Agroton Agro AB*, publicly traded Ukrainian agricultural producer.

Theoretically, the paper starts with basic Net Present Value analysis that enables to reflect general profitability of the analyzed company and shows the most simplified method of political risk integration into the project evaluation process. Further, the analysis is extended by the modified version of Return on Investment analysis. Return on Investment analysis used for the purposes of this study additionally includes Net Present Value calculations to account for the time value of money and political risk costs.

To present different possible scenarios and demonstrate the company's sensitivity to various political uncertainties, the analyses include changing variables such as discount rate and various political risks. It is shown that the larger the amount of risks incorporated, the lower the value of the investment project is. Such tendency raises a question of whether it is necessary to account for country's specific political risks. The results of this study show that in the case returns on investment are high, final investment decision in most cases is not influenced by the presence of political uncertainty in the host country.

# Sammanfattning

Konkurrensen mellan företag och tillgång på kapital i företagens hemland lockar dem att flytta investeringarna över landsgränserna. Företagen börjar då jaga efter nya marknader med billigare råvaror, arbetskraft och logistik. Men det handlar inte bara om att investera utomlands, det gäller också att kunna hantera kulturella skillnader, nya regelverk samt den politiska risken. Ett annat problem är att majoriteten av investeringarna går till utvecklingsländer som oftast styrs av auktoritära myndigheter och krånglig byråkrati. Syftet med denna studie är att undersöka om förekomsten av den politiska osäkerheten i värdlandet har en inverkan på det slutliga investeringsbeslutet. Studien handlar om värdet av att både budgetera kapital och den politiska risken, här sammanställs en ekonomisk utvärdering av ett investeringsprojekt i ett politiskt ostabilt land.

Tidigare studier har endast analyserat detta ämne på makronivå, men denna studie tar oss ner på mikronivå mellan utländska direktinvesteringar och politiska risker. Huvuddelen av studien bygger på två jordbruksföretag som bedriver växtodling i Ukraina, *Grain Alliance AB* och *Alpcot Agro AB* som ägs och drivs av Svenska investerare. Två teoretiska modeller prövades på finansiella data från ett Ukrainskt jordbruksföretag *Agroton Public Limited*.

Den teoretiska delen börjar med nuvärdesberäkning av framtida kassaflöden relaterade till dessa företag. En analys som gör det möjligt att reflektera över lönsamheten i det analyserade företaget samt visa hur stor den politiska risken är i utvecklingsprocessen. Analysen är även fördjupad genom en modifierad version av annuitetsmetoden. Denna typ av annuitetsmetod som används i den här studien innefattar dessutom en nuvärdesberäkning som tar hänsyn till pengars tidsvärde och politiska riskkostnader.

För att presentera olika tänkbara scenarier och visa företagens känslighet för politisk osäkerhet, omfattar analysen varierande värden på kalkylräntan (diskonteringsräntan) och ett antal politiska risker. Det visar sig att vid mer politisk risk blir värdet av investeringsprojektet lägre. Efter det konstaterandet så undrar man om det verkligen är nödvändigt att redovisa ett lands specifika politiska risker? Resultaten av denna studie visar att i det fall avkastningen på investeringar är hög så påverkas inte det slutliga investeringsbeslutet av den politiska osäkerheten i värdlandet.

# Abbreviations

CIS	Commonwealth of the Independent States
EU	European Union
EV	Expected Value
FAT	Fixed Agricultural Tax
FCF	Free Cash Flow
FDI	Foreign Direct Investment
FPI	Foreign portfolio Investment
IFR	International Financial Reporting
IRR	Internal Rate of Return
NPV	Net Present Value
PV	Present Value
ROI	Return on Investment
SLU	Swedish University of Agricultural Studies
VAT	Value Added Tax

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# 1 Introduction

According to the United Nations (2012), the world population reached 7 billion in 2011. At a growing rate of 1.10% per year, this figure would correspond to 8 billion in 2025 (www, United Nations, 1, 2012). Given this demographic trend and considering the scarcity of food and water, concerns about food security have markedly risen. Moreover, the significant increase in the worldwide food demand, results not only from the population growth, but also from its combination with the expected increase in household incomes in developing countries that enable people to consume more proteins (www, Investment International, 1, 2010). As a consequence, larger quantities of agricultural commodities would be required.

Together with demographic and economic growth, world energy consumption increased by 2.5% in 2011 (www, BP Statistical Review of World Energy, 1, 2012). Current energy production is largely based on non-renewable fossil fuels such as oil, natural gas and coal (*Ibid*). Due to their scarcity, the annual price increases, non-renewability and negative environmental externalities, renewable energy sources have become an attractive alternative. One of such potential alternatives is biomass partly produced from agricultural products such as corn, sugar cane, and soybean (www, EUROSTAT, 1, 2012). Consequently, agricultural products would be even in higher demand as they become essential for both worlds' food and energy supply.

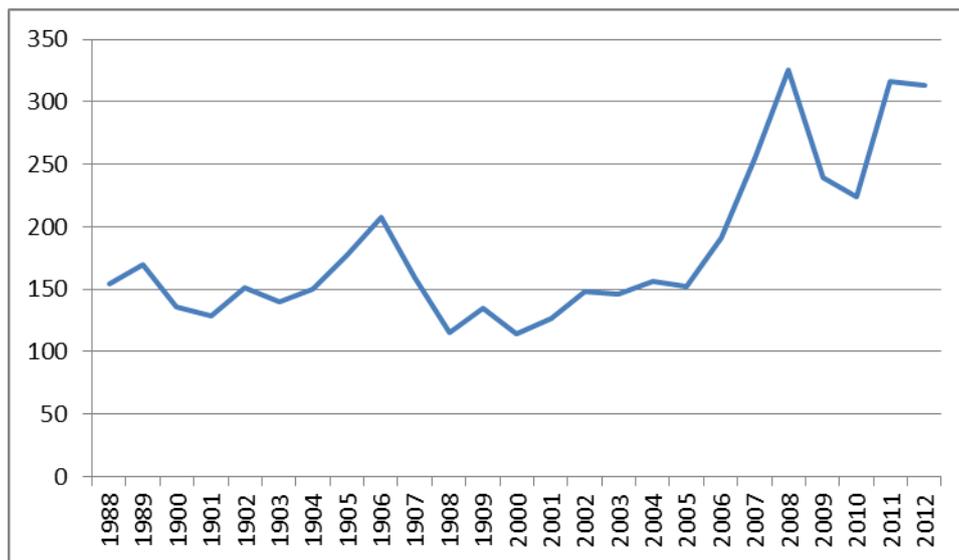


Figure 1. Historical development of prices for wheat (in dollars per ton) (www, Index Mundi, 1, 2013). Own modification

Limitation of agricultural production in certain locations due to unfavorable climate, poor quality of soil, water scarcity or increasing use of agricultural land for urbanization purposes, force companies and government to search for business opportunities in countries where such constraints are minimal or are not presented (www, Agrora Financial, 2013). Moreover, as it could be seen from Figure 1, despite being highly volatile, prices for agricultural commodities have a general tendency to increase. Figure 1 shows average yearly prices for wheat in years 1988-2012. Similar tendency could be viewed for most types of crops (www, Index Mundi, 2013) Furthermore, it is not only agricultural commodities that grow in value, but agricultural land itself (Kanks and Swinnen, 2010). Prices increases for agricultural commodities and land

as well as growing global demand for agricultural products resulted in significant number of Foreign Direct Investment (FDI) projects in agricultural sector. Another important incentive for FDI in land is that land ownership or long-time lease agreements are regarded by investors as more secure way of getting their returns.

## 1.1 Problem background

A possibility of acquiring or long-time leasing undervalued agricultural land in developing countries resulted in growing number of FDI projects undertaken in agricultural sector. According to the recent surge of FDI in land, more than 15 million hectares of agricultural land worldwide have been acquired or long-time leased since year 2000 (Görge *et al.*, 2009). As it was shown in Figure 1, prices for agricultural commodities are very volatile and often unpredictable. Therefore, most investors prefer to invest money in agricultural enterprises than simply speculating on commodities prices fluctuations (www, Investment International, 1, 2010).

There are plenty of reasons why FDI are increasing in number like *production conditions* (lower operating and transportation costs, cheaper raw materials, land and labor, more preferable taxation system or investment incentives), *demand conditions* (increasing demand for agricultural products in home country) or other *unique capabilities* of the host country (Johnson *et al.*, 2008, pp. 300-301). Nevertheless, even as according to Porter's Diamond the analyzed project possess all required "*competitive advantages*" (*Ibid*, 2008, 300), final investment decision is usually influenced by more factors than only those. According to Nehrt (1970, 2), investment decision is based on analysis of two different environments. First environment corresponds to country's general business climate and includes economic, social and administrative factors of host country. Second environment deals with country's political situation, and, according to the author, is one of the most important aspects to be considered in case of planning FDI. According to Kobrin (1978, 1), when operating the company in its home country, managing directors are usually familiar with specifics of operating business in that particular location and have an "*intuitive*" understanding of the business environment. However, by starting the company in another country, managers are forced to adapt to the regulations and business specifics existing in the host country. Consequently, they face new political and other types of risks. Such political risks are associated with "*host government interference*" (*Ibid*, 4) with the company's operations that could possibly lead to unwanted consequences for the investors. Unwanted outcomes could include different types of constraints on the company's business operations resulting in economic losses as well as a complete loss of the business. Therefore, the information on political environment could help investors to at least potentially measure and possibly reduce the political risk.

## 1.2 Problem

In recent years Ukrainian agricultural sector was enriched with rising amounts of FDI inflows (Table 1).

*Table 1. Total amount of FDI inflows into Ukrainian agricultural sector (Konov, 2010, 8). Own modification*

Year	2000	2005	2009	2010
FDI inflows (in million dollars)	74	301	1,128	1,208

Having the largest area in Europe, 603 628 km<sup>2</sup> (www, Index Mundi, 2, 2012), with large amount of available, highly fertile, agricultural land, favorable climate and excellent geographical location (access to the Black Sea and the Sea of Azov), Ukraine successfully attracts foreign investors in agricultural sector (www, Invest Ukraine, 1, 2011). However, despite those advantages, there are some pitfalls in initiating agricultural company in Ukraine as well. Disadvantages include politics, crime, corruption, moratorium on agricultural land, etc. (Crane & Larrabbe, 2007).

Being so far politically unstable, Ukraine is viewed as a risky country for starting a company in. Country's imperfect institutional framework and general political instability could lead to vague economic losses for investors. Therefore, the role of financial models that enable investors to detect and evaluate major political uncertainties before the initiation of investment project is becoming crucial (Kobrin, 1978).

A case study based on data from two Swedish investing companies operating in Ukrainian agricultural sector, more specifically, in crop production, would be presented in this study. Theoretical models were tested on financial data from Ukrainian publicly traded agricultural company. The analysis would start with a Net Present Value (NPV) analysis to assess general profitability and riskiness of investment project, and further extended through a model of political risks integration into risk management proposed by Bekefi and Epstein (2006). Second model is based on a Return on Investment (ROI) analysis that allows reflecting project sensitivity to certain political risks.

### 1.3 Aim and research questions

The aim of this thesis is to evaluate the impact of political environment on the company's business operations and to analyze the relationship between political instability and the investment decision process in FDI in land. The focus would be set on the following research questions:

- *How the information on the project-related political costs could be integrated into the investment decision-process?*
- *How does the change in one of the key variables, discount rate, influence the value of the analyzed company? What effect do the political risk costs have upon the investment rate of return?*
- *Does the information on political uncertainties influence the final investment decision?*

### 1.4 Outline

The study follows a standard structure for a thesis report (Figure 2) and is aimed to investigate the research problem presented in *chapter 1*.

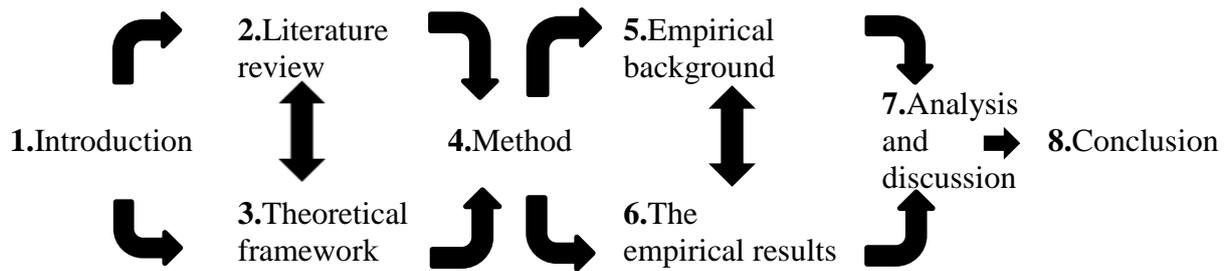


Figure 2. Illustration of the outline of the study. Own design.

*Chapter 2* is dedicated to a literature review. More specifically, part 2.1 gives a definition to FDI and political risk as well as provides a review of previous studies undertaken in the area of political risks and its affect upon the amount of FDI inflows. Part 2.2 presents quantitative and qualitative approaches of political risk assessment and integration.

*Chapter 3* describes theoretical framework used in the study and consists of two parts. Part 3.1 focuses on the NPV analysis, and part 3.2 describes model of risk integration developed by Bekefi and Epstein (2006).

*Chapter 4* presents study method, delimitations, and argues for choices done in this study.

*Chapter 5* is dedicated to empirical background. For convenience, it is divided into 3 main sections. Part 5.1 provides country's profile, describes its natural characteristics and political situation. Part 5.2 reviews Ukrainian agricultural sector, its farm structure and specifics of agricultural land leasing system, policies and taxes levied on agricultural producers. Part 5.3 provides companies profiles whose data was used for the purposes of this study.

Calculation process and results of the NPV and ROI analyses are presented in *chapter 6*.

In *chapter 7* the empirical findings are analysed. The chapter starts with providing answers on the research question stated in chapter 1. Following that, the analysis is continued with a discussion part that aims to correlate the study finding with previously performed studies described in the literature review.

Finally, *Chapter 8* shortly summarizes the main findings and results of the study, and provides suggestions for further research.

## 2 Literature review

Forecasting of when exactly and in which form a political risk would take place still remains challenging. Moreover, it is complicated to know in advance the exact amount of economic losses the company would experience in case the political risk takes place. Such complicated issues increased company's attention to question of political risks identification, measurement and management. The following section defines FDI and political risk followed by a review of studies conducted in this research area. The chapter ends by describing two main approaches used for political risk integration into investment evaluation process.

### 2.1 FDI under political uncertainty

#### 2.1.1 Foreign Direct Investments (FDI)

When performing an investment in another country (the host country), investment could take one of the two following forms: FDI or foreign portfolio investment (FPI) (Mankiw, 2001). FDI takes place when a foreign investing company operates investment project in another country by its own hands. For example, a bank invests in its filial in foreign country. In this case, it would be FDI as the filial is the bank's subsidiary controlled and operated by the bank. Alternatively, the same bank can use available funds to purchase stocks of some foreign company. In this case, it would be FPI, an investment project operated by residents of the host country, but financed with investors' funds from different countries. There are two key aspects that distinguish FDI from FPI. FDI as it was mentioned before is an investment undertaken in the host country by the resident(s) of another country (www, UNCTAD, 1, 2012). Such foreign investment must be based on the investors' active participation in the management of the company as well as company's long-time objectives. The second crucial characteristic is a sufficient degree of control over the business operations that should be equal or more than 10 percent of the voting shares of the company (IMF, 1993; OECD, 2008).

By investing abroad, the company could receive a bunch of benefits in the form of cost savings due to cheaper operating, input, labor and transportation costs (Johnson *et al.*, 2008, 301) as well as adding revenues by gaining economies of scale or by getting access to the new clients. Moreover, foreign investments provide advantages not only to the investors themselves, but to the host country as well. FDI projects create new employment opportunities and transfer skills, technologies and knowledge between countries.

#### 2.1.2 Political risks

Despite being widely used in today's financial literature, there is still no agreement on a definition of a term "political risk". Most authors such as Carlon (1969), Weston and Sorge's (1972), Baglini (1976) and Kobrin (1978) describe political risk as an "*interference of host government with company's business operations*" (Kobrin, 1978, 1). According to Kobrin (1978, 5), many authors consider political risk as a specific "event" resulting from government actions such as nationalization or expropriation. Such Agtmael (1976) concentrates his attention on the process of nationalization and general political instability. Hershbarger and Noerager (1976) in their work concentrate on such negative impacts as government enforcement of specific contracts, discriminatory policy, etc. Nehrt (1970) goes deeper and starts his analysis from investment climate. He threats it as an integration of business and political environments. Business climate according to him consist of economic,

social and administrative environments, and political risks are viewed as risks of nationalization or expropriation.

Continuing the literature review, there are three more authors who investigated the concept of political risk in depth. Robock (1971) states that a governmental action could be regarded as political risk only if it has a potential to significantly influence business activities. Another key element of his definition is whether political risk is a continuing or discontinuing event. According to Robock (1971), in case political uncertainties possess continuing characteristics, they are predictable, and, therefore, could not be regarded as political risks. However, when uncertainties are rapidly emerging, they become highly unpredictable and should be viewed as potential risks. Nevertheless, author agrees that it is difficult to distinguish between those two types of risks. Robock (1971, 9) also introduces a concept of company's related political risks. The author divides all political risks into "macro" and "micro" risks. "Macro" risks are associated with risks applied to all companies in the particular location, while "micro" risks are directed on specific companies.

Root (1972, 355) describes political risks as "*a loss of profit potential and/or assets*" caused by various politically-related events (hostilities, taxation, import restrictions, etc.) in home or host country. The author also underlines the difference between political risk and uncertainty. Uncertainty he relates to a potential governmental acts, while risks to the general instability of the host country political system.

Haendel *et al.* (1975) also distinguish between political risk and uncertainty. The key element of their work is, however, information access. Authors argue that availability of clear information about the host country political environment could enable investors to distinguish between uncertainties and risks. Political risks, according to Haendel *et al.* (1975), are possible to evaluate and avoid accordingly.

Summarizing all of the above, more recent authors such as Hanne (2008, pp. 20-21), McKellar (2010, 3) and Vadlamannati (2012, 112) define political risk as risk associated with potential losses of investment returns as a result of political actions or general instability in the host country. However, Villar (2011, 19) adds that risks could result not only from host country conditions, but from "*international environment*" as well. Moreover, all political risks could have positive, negative, or no impact on the investment equity (Kobrin, 1978, 10). Next section will review studies on the relationship between FDI and political instability.

### 2.1.3 Political risks and FDI

The empirical evidence on the effects of political uncertainty on the investment decision and FDI inflows remains insufficient. However, in recent years, due to the increased concerns, studies on these issues were conducted. Most of the undertaken studies as for example of Nigh (1985), Schneider and Frey (1985), Biswas (2002), Busse and Hefeker (2007), Jakobsen (2010), Méon and Sekkat (2012) have shown that political risks do have an impact on FDI, and that presence of political uncertainty and internal hostilities in the host country negatively affect the amount of FDI inflows in the country. Méon and Sekkat (2012) in their work argue that FDI inflows are becoming less sensitive to political issues, the more global the business became and the more internationalized capital flows are. To opposite results came Wheeler and Mody (1992) who have not revealed any correlation between political risk and U.S. FDIs.

Most of the studies on political risk and FDI were carried out using macro-level data in its analysis (Vadlamannati, 2012). Unfortunately, such approach could not provide reasoning on why some investors are less sensitive to political risk than others (*Ibid*). Additionally, previous studies neglected the company's risks management strategies, i.e. how the company could address forthcoming risks (*Ibid*). Furthermore, according to Vadlamannati (2012), the impact of political risk on the firm's business activities usually varies differently depending on the home and host country specific conditions, business area of the company, its supply chain, etc. In other words, political impact is often country- and project- specific, and for its analysis requires narrower micro-level analysis.

The increasing recognition of the need to have better insights into political issues created a demand for an adequate methodology of political risk definition and measurement. Next section would focus on various methodologies coming from qualitative and quantitative approaches of political risk evaluation.

## 2.2 Approaches of political risk integration

The process of political risk quantification and integration into the financial model of project evaluation remains complicated due to difficulties with determining costs of political risks. Companies are using various methods that could be conditionally divided into two main groups based on the approach to the risk integration. The following part is shortly presenting quantitative and qualitative approaches of political risk integration.

### 2.2.1 Qualitative Approach

Qualitative approach was introduced in the mid-1970s by American companies that worked with FDI projects (Bekefi & Epstein, 2006, 8). In order to compare political, social and business conditions in different host countries, companies employed specialists from political science and economics fields who were grouped into internal risk-assessment groups (*Ibid*). The group usually worked on detailed country's profile, trying to evaluate possible problematic areas that could potentially have a negative impact upon the company's activities in the country of analysis. According to Bekefi and Epstein (2006, 8), political risks under this approach are assessed qualitatively and do not include company's specific related risks. The results could not be, therefore, directly included into the decision-making process.

### 2.2.2 Quantitative Approach

Based on the shortcomings of the qualitative approach, attempts to quantify risk were made and a range of quantitative methods were developed.

#### *Scorecard*

According to the scorecard method, different political and economic factors (Kobrin, 1978, 37) are chosen and given a numerical score (Bekefi & Epstein, 2006, 8). For example, country with a high level of inflation is assigned score 10 in a scale 1-10, while country with a low level of inflation is assigned score 1. Following the assignation of the scores, all the indicators are summarized, and a final number corresponds to the country's level of political stability. Such scoring is time-consuming and, therefore, is usually performed by specialized agencies. Hanne (2008) in his work on political risks provides a detailed listing and short information

on all specialized agencies that provide such data. The scorecard method is considered to be very helpful in case two or more potential host countries are compared (Bekefi & Epstin, 2006, 8). Still this method, as the previous qualitative approach, neglects the company's related risks and could not be integrated into the final financial evaluation.

### *Statistical analysis*

Statistical analysis pays attention to related to company political risks. The analysis is done by internal or external risk specialists who start with identification of the company's related risks (Bekefi & Epstin, 2006, 9). Following that, risks are rated by relevance, and likelihood of each risk emerging is forecasted. Knowing the value of the risk and its likelihood, the expected value (EV) is calculated. Accomplished calculations are then integrated into different spreadsheet-based applications such as Crystal Ball. Crystal Ball is an application used for the business forecasting based on the Monte Carlo model (www, Oracle Crystal Ball, 2013, 1). By entering analyzed data and forecasting possible levels of the risk likelihood, users of the system ends up with two outcomes: the sensitivity analysis and the cumulative probability curve (Bekefi & Epstin, 2006, 9). The sensitivity analysis focuses user's attention on the political risks (variables) that could have the biggest impact on the company's business activities (www, Oracle, Crystal Ball, 2013, 1). The cumulative probability curve predicts future economic performance of the company based on various scenarios (*Ibid*). On the contrary to scorecard method, statistical analysis quantifies risks and considered company's specific risks (Bekefi & Epstin, 2006, 9).

### *Scenario-based method*

Scenario-based method implies risk mapping performed in the form of a graph that plots the probable frequency of political risk on the horizontal axis and the expected severity on the vertical axis (Bekefi & Epstin, 2006, 9). The formula used for the calculations is following:

$$\text{Risk exposure} = (\text{risk}) \times (\text{likelihood}) \times (\text{outome}) \quad (2.2.1)$$

### *Adjusted-discount rate*

Discount rate is used in the financial evaluation models that require the cash flow calculations like NPV and ROI analyses (Brealey *et al.*, 2008). More detailed information on this method is given in the next chapter of this study. Briefly, the adjusted-discount rate is a widely used tool that allows integrating political risks into financial evaluation process by taking into an account risks values. According to Bekefi and Epstin (2006, 9), the adjusted-discount rate must include three following elements: costs of capital, the risk-free rate and a risk-adjusted "beta". Cost of capital is the return forecasted by managers and, accordingly, the return investors expect to get (Brealey *et al.*, 2008, 18). The risk-free rate is usually compared to long-term governmental bonds rates (Bekefi & Epstin, 2006, 9). Finally, a risk-adjusted "beta" stands for the difference the investors could earn on this particular investment project and in the market (*Ibid*).

The process of the discount rate adjustment remains complicated and troublesome (Bekefi & Epstin, 2006), not least, due to the cash flows sensitivity to the discount rate. The higher the discount rate used in the calculation, the lower the final result would be (Brealey *et al.*, 2008). As no one wants to miss profitable projects, it is important to estimate the correct value of the discount rate and not to exaggerate the amount of project related political risks, i.e. not to

include fudge factors (*Ibid*). Currently adjusted-discount rate was estimated based on the countries scorecards provided by professional agencies (Bekefi & Epstein, 2006). However, according to Bekefi and Epstein (2006), such approach to problem treatment could be considered as too broad, missing out company's related political risks.

## 3 Theoretical framework

According to Damodaran (2003), political risks could be integrated into financial evaluations by one of the two following methods: by using the adjusted-discount rate or by subtracting the cost of political risks from the value of free cash flows (FCF). Based on this, NPV analysis and model of political risk integration recommended by Bekefi and Epstein (2006) were chosen for the purposes of this study and are described in the following chapter.

### 3.1 The Net Present Value Analysis

The NPV analysis is based on one of the fundamental principles of economics that “*a dollar today is worth more than a dollar tomorrow*” (Brealey *et al.*, 2008, 14). Consequently, when investors are spending their money on particular investment, they expect to get enough money back to cover both their initial investment costs and *the time-value of money*, i.e. the sum they lose when money loses their value over time (*Ibid*). The NPV analysis is, therefore, used for calculating whether the investors would get enough profit. In order the NPV analysis to take place, FCF and discount rate must be determined.

#### 3.1.1 Free cash flow

FCF is the amount of money available for the distribution among company’s investors after subtracting the amount of cash required for the necessary maintenance of the business (Brealey *et al.*, 2008). FCF are calculated using data from accounting documents such as the statement of income and the statement of cash flows. There are a few ways of measuring FCF (Chartered Financial Analyst Institute, 2008). However, for the purposes of this particular study next formula was chosen:

$$FCF = EBIDTA + depreciation\ and\ amortization - tax - interests - investment \quad (3.1.1)$$

In the above formula, *EBIDTA* represents company’s total earnings before interest, tax and investment expenses are paid. Total earnings are company’s total revenues after all production and operating costs are subtracted (Chartered Financial Analyst Institute, 2008, 197). *Depreciation* stands for the decrease in asset value (Brealey *et al.*, 2008). *Interests* represent the cash paid back to lender(s) for using his/her money (Chartered Financial Analyst Institute, 2009, 203). *Investments* correspond to changes in working capital (*Ibid*, 203). *Tax* is a levy or charge imposed on the company based on its profits and country’s tax policy (Alexander *et al.*, 2011).

#### 3.1.2 Discount rate

The discount rate is used for calculating the Present Values (PV) of the FCFs, i.e. for adjusting the FCF value to a particular period of time. Discount rate plays an important role in the NPV analysis as the higher the value of it, the lower the PV of the investment project would be. This, in turn, could influence the investors’ opinion on whether the investment project is worth financing or not. Due to the sensitivity of the NPV value in regard to the discount rate applied, it is important to avoid fudge factors, i.e. not to overestimate the value of the political risks and their impact upon the company’s business operations (Brealey *et al.*, 2008).

There is no clear guideline on how to measure the discount rate. Some companies are using countries scorecards (Bekefi & Epstein, 2006) and others prefer to use a *risk-free rate* that is equal to the minimum return investor expects to get from a risk-free investment project (Brealey *et al.*, 2008). The discount rate could be also adjusted to a particular political environment by integrating into the value of the discount rate the risk premium paid for doing business in specific country (Damodaran, 2012). Average risk-premium for Ukraine estimated by independent analysts is 8.8% (www, Damodaran, 1, 2013). However, Stultz (1999) and Damodaran (2003) in their works are arguing that the country's risk-premium could be excluded in case the project-related risks are directly diversified between uncorrelated investment projects, i.e. investment portfolio includes investment projects from different business segments.

### 3.1.3 Present Value, Net Present Value and Internal Rate of Return

The PV could be obtained using the following formula (Brealey *et al.*, 2008, 15):

$$PV = \text{discount factor} \times C_1 = \frac{1}{(1+r)^t} \times C_1 = \frac{C_1}{1+r_t} \quad (3.1.2)$$

In the above expression  $r$  stands for the discount rate,  $C_1$  – FCF and  $t$  – year.

It is also recommended to use shortcuts for annuity and perpetuity to make the process easier and faster. Perpetuity is based on an idea that cash flows would continue in infinity, i.e. would never end up, and is calculated in the following way (Brealey *et al.*, 2008, 40):

$$PV \text{ of perpetuity} = \frac{\text{cash flow}}{\text{discount rate}} \quad (3.1.3)$$

Annuity assumes that the FCF would be paid each year in the same amount for a specific period of years (Brealey *et al.*, 2008, 42):

$$PV \text{ of annuity} = C \times \left[ \frac{1}{r} - \frac{1}{r(1+r)^t} \right] \quad (3.1.4)$$

When the PVs are known, the NPV is calculated by subtracting the required cost of investment from total sum of PVs (Brealey *et al.* 2008, 15):

$$NPV = PV - \text{required investment} \quad (3.1.5)$$

NPV rule states that investments with positive NPV should be accepted and with negative rejected (Brealey *et al.*, 2008, 17). However, in the situation when NPV is equal to 0, there are no economic profits or losses resulting from the investment project, and project could be either accepted or rejected. The rate that makes the NPV equal to 0 is known as Internal Rate of Return (IRR). To find out the IRR value, NPV expression must be solved in regard to the IRR (Brealey *et al.*, 2008, 122):

$$NPV = C_0 + \frac{C_1}{1+IRR} + \frac{C_2}{(1+IRR)^2} + \dots + \frac{C_T}{(1+IRR)^T} = 0 \quad (3.1.6)$$

Such approach to calculation could be time-consuming. Therefore, a simple graphic could be of better use (Brealey *et al.*, 2008). By plotting at least three values of the NPV and the discount rate on the graphic, a line is drawn between them, and an approximate value of the discount rate that makes NPV 0 is determined. However, the graphic results are not precise and are subject of errors. Therefore, the most accurate and easiest way is to use Excel program software or specialized calculators.

IRR is often used for comparison of two or more projects when the one with highest rate is chosen. In case no comparison is done, the rule of the IRR states that “*investments that offer rates in excess of their opportunity cost of capital*” (Brealey *et al.*, 2008, 17) should be accepted. Opportunity cost of capital reflects the return investors could possibly ear in the market (*Ibid*, 18). Cost of capital promoted by independent analysts for agriculture industry is 6.02 % (www, Damodoran, 2, 2013). Additionally, the IRR value could be compared with a discount rate applied in the NPV analysis. If the IRR exceeds the value of the discount rate, the project should be accepted, and if not- rejected.

### 3.2 Integration of political risks into risk management

The model of political risk integration developed by Bekefi and Epstip (2006) was chosen for the purposes of this project. It is based on the ROI analysis additionally including the costs of political risks related to the investment project.

The model is divided into 4 main steps (Figure 3) including not only risk measurement and investment evaluation, but further approaches of risk management and risk communication. Due to the specifics of this research and time limitation, only step A “*Risk Identification*” and step B “*Risk Assessment and Management*” of Figure 2 are considered.



Figure 3. Process of political risks integration into the risk management (Bekefi & Epstin, 2006, 12)

3.2.1 Political Risk Identification

To manage political risks effectively, the company must identify project-related potential political risks. According to Bekefi and Epstein (2006), it is also crucial to clearly divide political risks into two categories: those that could have an impact on the company’s operations and those that cannot be directly correlated to the company’s activities. Last should be excluded from consideration to avoid fudge factors, i.e. not to overestimate the total amount of risks (Brealey *et al.*, 2008).

*Reputation*

It is important to remember about the company’s reputation (Bekefi & Epstein, 2006). Reputation can be viewed as company’s image among key shareholders that include next parties: customers, suppliers, lenders, stockholders, employees, distributors, social activist groups, general public, governments and media. Reputation is an intangible asset represented in a form of a company’s brand (Alexander *et al.*, 2011). It gives a special type of credibility (Mankiw, 2001, pp. 388-389) that, in turn, creates positive outcomes as premium prices and a possibility to attract more investors and qualified employees.

Reputation costs are not of so big concerns for agricultural producers as service companies. Still, as the main amount of revenues depend on the amount of production sold to regular external customers, the delay in delivery due to corresponding delays in specific certification done by government could lead to significant losses resulting in the loss of contract or even total loss of the valuable customer.

3.2.2 Political Risk Assessment, Measurement and Integration

After the process of risk identification is completed, last should be integrated into traditional risk analysis models such as ROI analysis (Bekefi & Epstein, 2006). The model recommended by Bekefi and Epstein (2006), consists of 6 following steps (Figure 4):

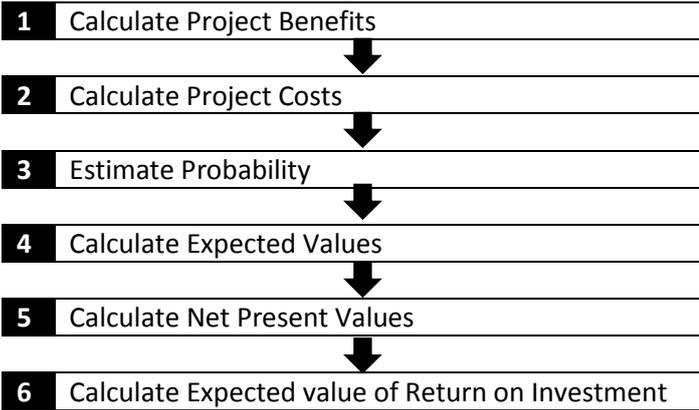


Figure 4. Stages of political risk integration (Bekefi & Epstein, 2006, 25)

### *Step 1 – Calculate Project Benefits*

All benefits resulting from the new investment project are estimated. For example, by moving production activities abroad, the company could reduce its transport costs or access cheaper inputs.

### *Step 2 – Calculate Project Costs (Including Political Costs)*

Project Costs include three following types of costs: costs required for the maintenance of the company's business operations (fixed costs), investments costs and potential political costs. As in step 1, all the costs should be assigned a value and summarized.

### *Step 3 – Estimate Probability*

The probability of risk benefits and costs taking place is approximated in percent.

### *Step 4 – Calculate Expected Values*

Expected Values (EVs) of the project related benefits are calculated by multiplying step 1 "Calculate Project Benefits" by step 3 "Estimated Probability". Accordingly, EVs of the project related costs are found by multiplying step 2 "Calculate Project Costs" by step 3 "Estimated Probability". Based on that, the formula for calculating EVs is following:

$$\text{Expected value} = (\text{Estimated benefit or cost}) \times (\text{Estimated probability}) \quad (3.2.1)$$

### *Step 5 – Calculate Net Present Values*

NPVs of project-related costs and benefits are calculated applying traditional NPV means and should be done for each separate item. More detailed information on the NPV method was given in previous part of this chapter.

### *Step 6 – Calculate Expected Value of Return on Investment*

NPVs should be summarized and included in the ROI calculation. Table 15 provides a structure of how this procedure could be hold. The formula for ROI calculation chosen was the purpose of this study is following (Bekefi & Epstein, 2006, 33):

$$\text{Return on Investment} = \frac{\text{Total Benefits} - \text{Total Costs}}{\text{Capital Costs (Investment)}} \quad (3.2.2)$$

## 4 Method

This dissertation follows a deductive research approach, i.e. the study starts with a selection and elaboration of theoretical framework followed by collection and analysis of the related to the study data (Robson, 2002). In order to provide complete answers on the research questions listed in chapter 1 as well as to correlate theoretical financial models of political risk integration with a current business practices, a multi-strategy design, particularly a sequential exploratory design was chosen.

The sequential explanatory design implies that the study starts with the collection and analysis of the qualitative data, followed by the quantitative analysis (Robson, 2002). This particular study is based on the set of individual case studies that belongs to the typical data collection techniques used in qualitative studies (*Ibid*). Additionally, the final quantitative analysis would have been incomplete and impossible without a detailed description of country's profile and its business environment. Information on the country was collected using document analysis and interviews, techniques that are also widely applied by the qualitative studies (*Ibid*). Following the qualitative data gathering and analysis, focus was done on the quantitative part of the analysis. The whole study follows fixed, pre-established theoretical framework. The theory dictated the analysis flow as well as the direction of the interview questions in qualitative part of the study. Additionally, the results of the study were based on the quantitative models that involve statistical analysis of the financial data and the simulation of such key variables as discount rate and political risks in order to reflect the project sensitivity and main findings. Such methods are used by the quantitative studies.

The following chapter argues for the choices done in this study and describes the process of the quantitative and qualitative data collection and analysis.

### 4.1 Choices related to study

This part explains and justifies the choice of country, industry and companies involved in this study.

#### 4.1.2 Choice of country

According to its size of territory, 603 628 km<sup>2</sup>, Ukraine is ranked 46<sup>th</sup> among the worlds' countries and first among European (www, Index Mundi, 2, 2012). The county's estimated total population in 2011 was approximately 46 million people, from which nearly 80% are Ukrainian (*Ibid*). Ukrainian national currency is Hryvnia (UAH) and estimated GDP in 2011 was 329 497 thousand dollars (*Ibid*).

Based on the country's characteristics further described in chapter 5, Ukraine could be viewed as a country of big investment opportunities. Moreover, the current editions of the law of Ukraine "On the regime of foreign investment" (2005), the law of Ukraine "On Investment activity" (2012) and the Constitution of Ukraine (2012), prioritize foreign investments. Still, the investment climate of the country remains unfavourable what is reflected by world's rankings. According to the IFC (International Finance Corporation) and the World Bank ranking of the ease of doing business, Ukraine was ranked 152 out of 183 countries in 2012 (place 149 in 2011). Another example of Ukrainian unfavorable investment climate is statistical data on the total amount of country's FDI inflows that remains very low (Figure 5).

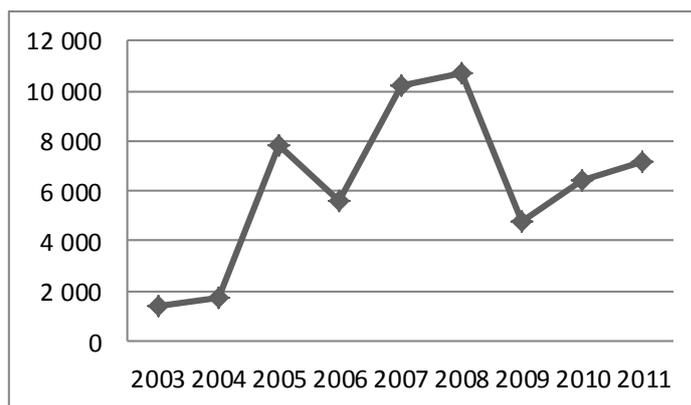


Figure 5. Amount of FDI inflows in Ukraine (years 2003-2011) (The World Bank, 1, 2013)

The total sum of FDI inflows in 2012 was equal to 7 million dollars (www, The World Bank, 1, 2013). For comparison, total amount of FDI inflows into Poland, country of similar natural characteristics to Ukraine, in the same year were around 15 million dollars (*Ibid*).

Among the reasons that lie behind such poor country's performance is a complicated business environment in Ukraine. Complex tax system, bureaucracy, cases of corruption, unstable political situation and significant control from government side from one side, along with great investment potential from other side, made Ukraine a perfect choice for the purposes of this dissertation. Last but not least, the choice of the country was also conditioned by the author's origin from Ukraine, and her knowledge of local language that simplified the process of data collection and analysis.

#### 4.1.2 Choice of industry

The selection of agricultural industry was based on three following reasoning:

##### *Increasing attractiveness of the agriculture sector*

As it was mentioned in chapter 1 of this dissertation, demand for agricultural products as well as prices for land are steadily increasing. Consequently, this tendency flourishes interest of investors in this particular business segment.

##### *Competitive advantages of Ukrainian agricultural sector*

The choice of Ukrainian agricultural sector, more specifically crop production, was dictated by significant difference in total costs spend per hectare of crops in Ukraine and the European Union (EU) accordingly that makes this sector especially competitive and attractive for the foreign investors. For comparison, total cost per hectare of wheat in Sweden is equal to 2,452<sup>1</sup> dollars (Grön Konkurrenskraft, 31, 2012) while in Ukraine the same costs amount to 915,6<sup>2</sup> dollars (www, Agro Invest, 1, 2013). Moreover, there is an appreciable difference in land leasing prices. In year 2012 an average price of leasing one hectare of arable land in Ukraine was 40 dollars (Pers. Com., Karnaukh, Bruno, Sjöblad, 2013) and in Sweden – 252<sup>3</sup> dollars

<sup>1</sup> SEK 16,000. Exchange rate of 1 USD dollar 6.505 for one SEK respectively (www, XE, 1, 2013)

<sup>2</sup> UAH 7,412. Exchange rate of 1 USD dollar 8.09 for one UAH respectively (www, XE, 1, 2013)

<sup>3</sup> SEK 1,637. Exchange rate of 1 USD dollar 6.505 for one SEK respectively (www, XE, 1, 2013)

(www, Jordbruksverket, 1, 2012). Adding to costs savings, the possibility of creating a farm of 50 thousands hectares of arable land or more, gives investors the fruitful potential to reach an economy of scale, possess more competitive advantages than competitors, and, consequently, earn greater profits.

#### *Importance of agricultural sector in Ukrainian total economy*

Ukraine was always associated with agricultural production. Therefore, 41,6 million hectares of arable land available (www, Index Mundi, 2, 2012) together with rich natural resources and comparatively low production costs, made this industry sector very attractive for both internal and external entrepreneurs and investors. Naturally, it also plays an important role in the country's economy. The share of agriculture in the total GDP in Ukraine amounts to 10.4% (*Ibid*). Moreover, Ukrainian agricultural sector is a significant employee and a big player on foreign trade arena. Clear that such important business segment is a subject of even greater governmental control that results in business constraints like moratorium on agricultural land, various policies, etc., that, in turn, create an ideal breeding ground for different types of political uncertainties.

#### 4.1.3 Choice of companies

Attitude to political uncertainties and investment climate in Ukraine could vary depending on country of investor origin. For example, one of the main direct foreign investors in Ukraine by the amount of cash inflows is Russian Federation (Konov, 2012). Since Ukraine and Russia have similar business environment characteristics, Russian investors have an advantage over other countries as they understand how the business in Ukraine functions (Kobrin, 1978). Based on asymmetry of investors' knowledge and time-constraint of this study, it was decided to limit case studies to two Swedish investing companies who performed the FDI investments into Ukrainian agricultural sector.

Two major companies were eliminated and interviewed, Grain Alliance AB (further – Grain Alliance) and Alpcot Agro AB (further – Alpcot Agro). Companies' profiles are presented in chapter 5 of this study. The number of Swedish investors in the Ukrainian agricultural sector can be surely extended by including FPI investments. However, due to specifics of the research questions and, again, time-constraints, they were excluded as the total sum of the investment in their case and, accordingly, risk-sensitivity is much lower than in FDI projects.

In order to clarify the information on the land leasing system, the process of obtaining governmental grants and specifics of income tax imposed on agricultural producers in Ukraine two more interviews were additionally conducted with a Ukrainian agricultural company “Technological Agricultural Company United” (further – TAKU). TAKU is a privately-owned agricultural company specialized on the production of corn and soybean (www, TAKO, 1, 2003). The company was founded in 2005. Its current land bank is located in central part of Ukraine, and amounts to 60 000 hectares (*Ibid*).

According to Bhattacharjee (2011) and Robson (2002), the selection of the companies should not be opportunistic. In other words, the preliminary objective of the selection process is to find companies relevant to the study and not simply convenient. Two Swedish investing and one Ukrainian company were chosen both because of their direct connection to the study performed and willingness to participate.

## 4.2. Qualitative assurance of research process

To assure the quality of the data used, all information gathered through the interviews were triangulated and validated by analysing the companies' financial annual reports, documents, web-sites, study-related governmental data and articles on business environment in Ukraine.

The research area of this study could be regarded as sensitive to ethical issues. Therefore, no real business plans were used in the quantitative section of this study as they could potentially touch the companies' operational and business confidential data. Instead, the company's real financial results were applied in the financial evaluation models that imposed additional delimitation on the study. Moreover, due to the ethical reasoning the financial data used in theoretical models calculations was gathered from a third company - Agroton Public Limited (further – Agroton). Agroton is one of the biggest agricultural producers in Ukraine that is publicly traded on the Warsaw Stock Exchange market. The fact that the company is publicly traded results in two outcomes: the company could be viewed as an investment option, and the financial data is open and truthful.

## 4.3 Gathering and analysis of the empirical data

Following part describes the process of data collection and analysis.

### 4.3.1 Gathering of the empirical data

In order to build up a theoretical framework of this study, a literature review using the sources of SLU (Swedish University of Agricultural Studies) library and SLU databases (PRIMO, Web of Science, Libris, Epsilon, etc.) was conducted. Main keywords used were: FDI, FPI, political risk, political uncertainty, integration of political risk, NPV, ROI and capital budgeting. Empirical data was also collected from financial reports of the considered companies and through interviews. All financial statements have been prepared in accordance with International Financial Reporting (IFRS) adopted by the EU, and consist of several enclosures. However, for the purposes of this study, only two main forms were analysed: *the statement of income* and *the statement of cash flows*. Notes to the annual reports were also reviewed in order to meet the specific requirements of the NPV and ROI analyses. The process of data adjustment to the requirements of the NPV and ROI analyses is described in chapter 6 of this dissertation. The whole documentation set of Alpcot Agro and Agroton were gathered through companies' official web-sites. Annual reports of Grain Alliance were obtained during the interview from a representative of the company.

As suggested by Robson (2002), the interviews could be of *structured*, *semi-structured* and *unstructured* types. This study started with an unstructured interview with a representative of the TAKU. Due to the personal contact with the company, interview was performed in informal way, using the telephone, and lasted for more than one hour. Gathered data helped to evaluate the main advantages and disadvantages of operating the agricultural company in Ukraine as well as preparing more specific list of questions for further interviews. Second interview was done with TAKU chief accountant to complete and clarify the information on Ukrainian tax system and governmental grants available for agricultural producers. The interview was of structured type when the respondent got fixed questions in advance. The interview was performed through the telephone and by the duration was less than half an hour. The interview with a representative of Alpcot Agro was also of the structured type, and

followed the interview guide presented in Appendix 4. The interview with a representative of Alpcot Agro was done using the means of the telephone and lasted for less than half an hour. Last interview with a representative of the Grain Alliance was of semi-structure type. Correspondent received in advance a set of question (Appendix 4) that were used as an interview guide and freely modified through the conversation. The interview was done face-in-face and lasted for more than an hour.

Shuy (2002) states in his study that distance interviews could negatively affect the quality of the gather data. However, as it was mentioned by Denscombe (2007) and Robson (2011), it is a highly increasing trend that enables to cut travel and other related costs as well as better fit in the schedule of the study. Not least, this way of interview was proposed and considered to be comfortable by the respondents.

#### 4.3.2 Analysis of the empirical data

To reflect the project sensitivity to different political risks, two financial evaluation models were chosen: NPV and ROI analyses. All methods have its cons and those two are not exceptions. The biggest disadvantage of using NPV analysis is its sensitivity to the discount rate used (Brealey *et al.*, 2008) that is additionally very difficult to determine (Bekefi & Epstein, 2006). Even minor change in the value of the discount rate would have a considerable effect upon the final evaluation value of the company. Going further, the NPV analysis fails to include company's future plans and flexibility of the managerial behavior, for example, the company's ability to answer on specific constraints. The conclusion is, therefore, that NPV analysis is useful for initial evaluation of the company's performance, but should be extended with more advanced tools of capital budgeting.

The calculations are followed with the model similar to one recommended by Bekefi and Epstein (2006) that is based on the ROI analysis. The main disadvantage of the ROI calculation is its disregard of the time value of money applied in the NPV analysis and project-related costs. To improve that Bekefi and Epstein integrate the NPV calculation and costs of political risks into the model. Another disadvantage of the ROI analysis is the possibility to calculate the final value of the investment project in different ways depending on the inputs included. In order to be consistent, this study follows the final formula proposed by Bekefi and Epstein (2006).

The analysis of the gathered numerical data was done using solely tools of the Microsoft Excel. Spread sheet tables containing the obtained results are provided in Appendix 1, 2, 3, Tables 14 and 15.

## 4.4 Delimitations

The study undertaken is a subject to a number of constraints. From empirical point of view, it cannot be generalized due to the following reasons:

- Quantitative analysis is based on the financial data from only one company – Agrotion.
- Qualitative data is collected from only three agricultural companies. Moreover, attitude to the political environment in Ukraine is analyzed on the information from only two companies that are, moreover, limited nationally, i.e. main investors are citizens of one particular country – Sweden.

From theoretical perspective, the study is delimited by only applying NPV and ROI analyses, excluding other tools of capital budgeting and qualitative methods of risk integration listed in chapter 1.

Additionally, the study is delimited analytically. First of all, real financial results of Agroton are used instead of business plans. Secondly, the amount of political risk and uncertainties included in the ROI analysis depends on the risk-attitude of the investor. In this particular study the choice of the political risks were done according to the qualitative data collected through interviews and document analysis, and was based on the frequency of these events previously taking place.

Even despite the study results cannot be directly compared with previous findings, theoretical models of risk integration tested in this study, could be applied to any company and any location by simply integrating different data.

## 5 Empirical background

This chapter is divided into three main parts. First part provides an insight into country's profile and its current political situation. Second part describes regulations applied to the agricultural business in Ukraine. Finally, the last part shortly presents the companies involved in this study.

### 5.1 Ukraine

#### 5.1.1 Country's profile

Ukraine is located in Easter Europe and borders seven countries (Figure 6); Moldova and Romania on the southwest; Hungary, Slovakia and Poland on the west; Belarus on the north and Russia on the northeast. The country has a total area of 603 628 km<sup>2</sup> (www, Index Mundi, 2, 2012) that makes it the largest country in Europe (www, Maps of World, 2013).



Figure 6. The map of Ukraine (www, Lonely Planet, 1, 2013)

On the south, Ukraine is bordered by the Black Sea and the Sea of Azov (Figure 6). Availability of 19 ports (www, World Port Source, 1, 2013) as well as country's location between the EU and Russia Federation provide an easy and fast access to important markets in the Middle East, the EU, North Africa and in the countries of the Commonwealth of Independent States (CIS) (EC, 2010). CIS was founded in 1991 in order to unite the economic space of the countries former members of the Soviet Union (www, CSI, 1, 2013). At present, the union includes 12 following countries: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine.

Most territory of Ukraine could be characterized by plains that account to 95% of the country's total territory with an average level above sea of 175 m (www, Encyclopædia Britannica, 1, 2013). Last 5% of the territory, are mountains presented by two mountain sections: the Carpathian Mountains on the west (the highest peak is 2 061 000 m above sea level), and the Crimean Mountains on the Crimean peninsula (the highest peak is 1 546 000 m above sea level).

Ukraine has an extensive network of rivers and lakes. Total amount of rivers is approximately 23 000 with a total length of 180 000 km (www, Internet Encyclopedia of Ukraine, 1, 2001). The majority flow to the Black Sea and the Sea of Azov, with some exceptions, rivers that run northward to the Baltic Sea (*Ibid*). The overwhelming majority of rivers could be characterized as small (*Ibid*). However, there are a few big rivers, and the largest one is the Dnepr, with a total length of 2 200 km. The Dnepr crosses the territory of Ukraine from north to south (www, Encyclopædia Britannica, 3, 2013). The network of lakes is represented by 3 thousand natural lakes with a total area of 2 000 km<sup>2</sup> (www, Internet Encyclopedia of Ukraine, 2, 2001). Swamps are common for the Carpathian Mountains, oblasts of Chernihiv and Rivne (www, Photo Ukraine, 1, 2013). They amount to 6 569 000 hectares, and most are continued to be drained for agricultural purposes (*Ibid*).

Most territory of Ukraine is characterized by a temperately continental climate, except the Crimean peninsula that lies in a subtropical belt (EC, 2010). Table 2 summarizes agro-climate zones of Ukraine. In general, the country experiences warm summers (July is the hottest month of the year), followed cold winters (January is the coldest month of the year). The amount of precipitation common for most parts of Ukraine is around 600 mm. However, the number is usually lower in the south (300-400 mm) and significantly higher in the Carpathian Mountains where it could be up to 1600 mm (www, Legislation of Ukraine, 1, 2013).

Table 2. Climate zones of Ukraine (EC, 2010, 10)

Zone	Location	Share of total area	Average yearly precipitation	Temperature
Humid	Northwest	35%	600 mm	-4/+17
Warm	Easter/central	25%	500 mm	-6/21
Semi-arid	Central/east	25%	450 mm	-6/21
Arid	South	15%	360 mm	0/23

Another important county's characteristic, is its location in one of the "chernozem" ("black earth") belts. Chernozem is a dark-colored type of a very fertile soil that is considered to give higher yields on crops (www, Encyclopædia Britannica, 2, 2013). The soil is valuable due to its high percentage of humus (up to 15%) and of other useful elements such as phosphoric acids and phosphorus (*Ibid*).

Additionally, Ukraine has a well-developed transport infrastructure that includes roads, railways, ports (both sea and river), pipelines and aerial transportation. Railways by its total length are third in Europe, 21 700 kilometers (www, Ukrzaliznytsia, 1, 2012). Total length of the highways is approximately 170 000 kilometers, from which 97% are paved and 3% – unpaved (www, Ukravtodor, 1, 2008). Aerial transport is represented by 412 airports with the biggest ones in the following cities: Kiev, Dnepropetrovsk, Kharkov, Lvov, Donetsk, Odessa and Simferopol (www, State aviation Service of Ukraine, 1, 2013). Pipelines are mostly used

for the transportation of Russian natural gas and are subject of endless disputes between Ukraine and Russia.

Listed advantages such as favorable climate, high quality of soil, developed infrastructure and close access to important export markets make Ukraine attractive for the investors. On the other side, the country remains politically unstable and, consequently, risky.

### 5.1.2 Political situation

On 24 August 1991 after the Soviet Union dissolution, Ukrainian parliament adopted the Act of Independence, and declared country's independence. Today Ukraine is a republic with semi-parliamentary and -presidential system that implicates the separation of legislative, executive, and judicial branches (www, WNU, 1, 2013).

The head of the state is the president elected by popular vote for a five-year term (www, President of Ukraine, 2013) and the main legislative authority is the Ukrainian parliament – Verkhovna Rada (Supreme Council). It includes 450 seats and is responsible for the election of the prime-minister and of the judges for the Ukrainian highest judiciary body – the Supreme Court of Ukraine (*Ibid*).

Ukraine is subdivided into twenty-four oblasts (provinces) and one autonomous republic – Crimea (www, Administrative Divisions of Countries, 2011). Additionally, two cities have a special status equal to the status of oblast: Kiev for being the country's capital and largest city, and Sevastopol for housing the Russian Black Sea Fleet.

The first president of the independent Ukraine was Leonid Kravchuk followed by Leonid Kuchma in 1994 (www, WNU, 1, 2013). In 2006, according to preliminary results, presidential elections won Viktor Yanukovich (*Ibid*). However, most foreign observers and Ukrainian citizens believed that result was achieved through corruption that in the end led to massive campaigns of civil resistance known as the Orange Revolution (www, Foreign Affairs, 2005). The Supreme Court called for new election that was officially won by the opposition leader, Viktor Yushchenko (EC, 2010). Nevertheless, Viktor Yanukovich became the next Ukrainian president after winning the presidential election held on January 2010. The Central Election Commission and international observers confirmed the fairness of the voting. Viktor Yushchenko was always considered to be West-oriented politician, while Viktor Yanukovich is known as being a pro-Russian president (EC, 2010, 10).

Despite noticeable progress in political development, Ukraine still faces a lot of challenges. A study conducted by the Millennium Challenge Cooperation (MCC, 2008) underlines such problematic politically-related issues as corruption and the complexity of the legal system.

## 5.2 Ukrainian Agricultural Sector

### 5.2.1 Farm structure and land leasing contracts

#### *Farm structure*

In the Soviet Union all agricultural land was operated under one of the following forms: kolkhozes, collective farms, and sovkhozes, state agricultural associations (www, Encyclopedia of Difference, 1, 2013). Kolkhozes were the farmers' associations operated and

financed by their own means (Pers. Com., Karnaukh, 2013). The amount of the salary depended on the number of days worked by the farmer, and was often paid in kind, i.e. grain, meat, nutrition, etc. (www, Encyclopedia of Difference, 1, 2013). Sovkhozses, on the contrary, were owned and financed solely by the government (*Ibid*). Farmers were treated as usual employees that had a fixed monthly salary paid in cash (Pers. Com., Karnaukh, 2013). The remaining amount of land was divided between individual farmers in the form of small land plots (EC, 2010). Millions of such plots were subtracted from the land owned by kolkhozses and distributed between its members that possessed only usufructuary rights.

In 1988, after the Soviet Union collapse, the privatization process was initiated (EC, 2010). Small household plots were kept by kolkhozses members who previously used them. The average size of plots was 2,8-3 hectares (Pers. Com., Karnaukh, 2013). Left amount of the land was converted in the following way. Sovkhozses were transformed into the big state-owned farms (EC, 2010). Land belonging to kolhozses was divided between its members based on the number of years he/she worked. Size of the plot, in this case, did not exceed 3 hectares per person (Pers. Com., Karnaukh, 2013).

Nevertheless, the privatization process is still not completed as there are ownership limitations left. One of such limitations is a moratorium on agricultural land, i.e. the ban to sale the land. The moratorium was supposed to be lifted in 2012, but a recent governmental act has extended it until 2016 (www, Ukrainian Agribusiness Club, 1, 2012). No official comments were given on this subject. Among the possible reasons are: unavailability of the transparent market and lobbying of disinterest powerful groups.

Today, Ukrainian farms could be divided into two main types: individual and corporate (EC, 2010, 30). Corporate farms are large-scale agricultural enterprises successors of sovkhoses. Their average size is 2 000 hectares and total amounts of 15 000 of such farms are currently registered in Ukraine (*Ibid*, 30).

Individual farms are subdivided into family farms and household plots (EC, 2010, 30). Based on its name, family farms are run in the form of family business, i.e. employ family members, and are aimed to do profit by externally selling own agricultural products. Their average size varies between 7 to 140 hectares, and this type of farming is becoming more popular covering approximately 4 million hectares of Ukrainian total agricultural land (*Ibid*). Household plots are primarily aimed to cover family's own consumption. However, with high enough market demand, unnecessary agricultural commodities are usually also sold externally. Average size of household plots, as it was mentioned before, is 3 hectares, and in 2006 there were more than five million of such farms registered in Ukraine (*Ibid*, 31).

#### *Land leasing contracts*

Since the moratorium on agricultural land forbid to sell it, the only possible variant is to lease the land. According to the Law of Ukraine "About the lease of land" (2013), term of leasing contract under law could not exceed 49 years. First contract is usually signed for 3-5 years with father possible resigning for 10, 15, 20 or 25 years accordingly (Pers. Com., Karnaukh, Sjöblad, 2013). However, the average term typically range from 5 to 10 years (Pers. Com., Bruno, Karnaukh, Sjöblad, 2013).

The price of the land is determined by the government based on the land location, use purposes, its quality, environmental and historical value. Due on January 2013, the average

price of the land in Ukraine was 20,635 UAH per hectare (www, State Agency of Land Resources in Ukraine, 1, 2013). This figure is used as the basis for the calculation of the annual rental and tax payments. The average price of leasing one hectare of agricultural land in Ukraine is 40 dollars (Pers. Com., Bruno, Karnaukh, Sjöblad, 2013).

### 5.2.2 Agricultural Policy in Ukraine

The main features of Ukrainian agricultural policy are described in the Law of Ukraine “About the basic principles of the state agrarian policy for the season till 2015” (2005). Agricultural policy in Ukraine is based on three following long-term objectives established until year 2015: food security, international competitiveness, and development of the rural areas.

#### *Governmental support grants*

Agricultural producers in Ukraine are entitled to a number of government support grants. However, a lot of work still should be done in this area as the process of retaining those funds is still complicated, not transparent, and the amount of grants is not sufficient (Pers. Com., Bruno, Karnaukh, Sjöblad, 2013).

### 5.2.3 Taxation system

Regardless of whether the company is owned and operated by resident(s) or non-resident(s) of Ukraine, all companies involved in the production and processing of agricultural commodities are entitled to pay following taxes:

#### *Fixed Agricultural Tax (FAT)*

According to the Law of Ukraine “On the fixed agricultural tax” (2008), all the agricultural companies involved in the production (cultivation), processing and realization of agricultural products in Ukraine are subject of FAT, if the total revenues from sale of company’s own agricultural commodities exceed 75% of the company’s total gross income. FAT could be viewed as a simplified tax system as it is paid instead of seven following taxes: company’s tax on income, tax on land, tax on owners of transport vehicles, municipal tax, charge for geological exploration carried by the governmental means, purchase price of the trade pattern and fee for special use of natural resources (more specifically, water). The sum of the FAT is calculated on the basis of the company’s total amount of agricultural land and value of land according to the governmental expertise. Due on 2012, the tax rate of the FAT was 0.15%. Therefore, if, for example, the company had 1 000 hectares of agricultural land valued as 3 000 UAH per hectare, and conditions on realization are met, the sum of the total tax would be as followed:

$$FAT = 3.000 \text{ UAH} \times 0.15\% \times 1.000 \text{ ha} = 4.500 \text{ UAH}$$

#### *Value Added Tax (VAT)*

According to the Law of Ukraine “On the value added tax” (2008), VAT is calculated at two rates: 20% on domestic sales and imports of good, and 0% on the export. VAT refund on export is left on the company’s special account and could be used for financing its production operations (Pers. Com., Lugneva, 2013).

## 5.3 Companies' profiles

The following information on companies' history and business activities was collected through companies' official sites and annual reports. The analyzed companies are operated by either Ukrainian management teams or foreign managers experienced in leading business in post-Soviet countries. Additionally, all companies report on their active participation in social projects in local villages.

### 5.3.1 Grain Alliance AB

History of Grain Alliance goes back into 1998, when an American entrepreneur Alex Orlov has founded The Harvest Moon East Ltd. (further - HME) (www, Grain Alliance, 1, 2013). Initially, the company was a provider of tillage services, but already after a few months in Ukrainian agricultural segment, it has started with crop cultivation and processing. In 2008, the company was joined by Swedish-Ukrainian team of investors that a few months later had acquired HME. New company got a name Grain Alliance.

Today, the majority of Grain Alliance is owned by Ukrainian Investment AB a subsidiary of Claesson & Anderzèn AB, a Swedish investing company (www, Grain Alliance, 1, 2013). The company majors in the following business activities: crop cultivation and cattle farming. The company's current land bank is equal to 45 000 hectares (www, Grain Alliance, 2, 2013). Land is equally (each farm is 8 000-10 000 hectares) and proportionally (distance between farms is equal or less than 80 km) distributed between four regions of Ukraine: Kiev, Poltava, Chernigov and Cherkassy (Figure 7) (*Ibid*). As it could be seen from the map, the areas are very closely located that, first, enable more sufficient control, and, second, allows to use the machinery in a more efficient way (*Ibid*).



Figure 7. The Map of Ukraine (www, Russia-Ukraine-Travel, 1, 2013). The red circle points to the area the Grain Alliance operate in (www, Grain Alliance, 1, 2013)

Grain Alliance has invested into four grain elevators, three of which has a direct railroad access and in-house laboratory. As on December 2011, the company's total net book value of property, plant and equipment was equal to 153 421 thousands of SEK. None was pledged as a security for the bank loans. Grain Alliance total income in 2011 was 46 084 thousands of SEK. The Company has cultivated 35 110 hectares of land and harvested 216 745 ton of

grains and oil seeds that resulted in total revenues from crop production exceeding 174 608 thousands of SEK.

### 5.3.2 Alpcot Ago AB

Alpcot Agro is an agricultural enterprise with business activities in Russian Federation and Ukraine. The company was founded in 2006, and in 2009 it becomes publicly traded on NASDAQ QMX First North in Stockholm (www, Alpcot Agro, 1, 2013).

Due to the specificity of the research questions listed in chapter 1, the following information is primarily focused on company’s business activities in Ukraine, excluding company’s operations in Russia.

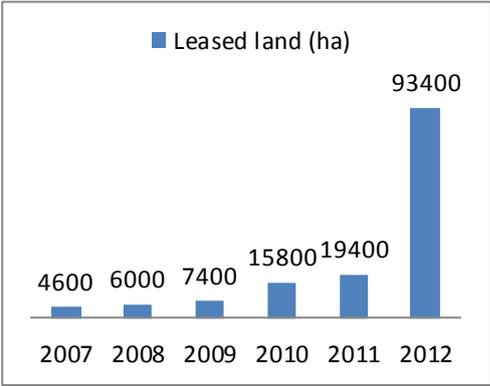


Figure 8. The amount of land leased in Ukraine (www, Alpcot Agro, 1, 2013)



Figure 9. The Map of Ukraine (www, Russia-Ukraine-Travel, 1, 2013). The red circle points to the area company operates in (www, Alpcot Agro, 1, 2013)

On 31 December 2012, the company land bank in Ukraine amounted 93 400 hectares (Figure 8) (www, Alpcot Agro, 1, 2013). According to the Figure 8, there is a significant jump in the amount of land leased between year 2011 and 2012. This is explained by company’s acquisition of Landkom International Public Limited Company in 2012 (www, Alpcot Agro, 2, 2013). Following the acquisition, Alpcot Agro operates in eight regions in Ukraine (Figure 9). Company’s main business activities include: crop production and livestock units. Main crop cultivated are: wheat, barley, corn, sunflower, soya, buckwheat and others (www, Alpcot Agro, 1, 2013). The amount of hectares harvested by Alpcot Agro and gross harvest for years 2009-2012 are summarized in the Table 3.

Table 3. Alpcot Agro AB yields results (www, Alpcot Agro, 1, 2013)

Year	2009	2010	2011	2012
Harvested area, ha	6,150	5,300	13,700	54,600
Gross harvest, tones	11,670	10,900	64,200	210,700
Gross yields, tone/ha	n.m	2,06	4,7	3,8

Presently, the company is focusing on its efficiency rather than expansion, and plans to shorten the land bank in Ukraine to 90 000 hectares (www, Alpcot Agro, 1, 2013). Table 4 represent the Alpcot Agro financial results in years 2007-2012.

Table 4. Alpcot Agro AB financial results (www, Alpcot Agro, 1, 2013)

Year	2007	2008	2009	2010	2011	2012
Revenues	15,374	30,267	183,551	240,813	289,880	718,578
Profit/Loss for the year	-18,776	-96,092	-278,442	-254,904	-148,80	-122,392

### 5.3.3 Agroton Public Limited

Agroton Agro is an agricultural company that operates in eastern part of Ukraine (Figure 10). It was founded in 1992 by Ukrainian entrepreneur Iurii Zhuravlev, and since 2010 company’s stocks are traded on the Warsaw Stock Exchange (www, Agroton, 2, 2013). As for today, the company’s capitalization price is equal to €12 million and share price is €0,75 (www, Agroton, 3, 2013). More detailed information on the company’s financial performance is provided in the next chapter.

The company’s main activities include crop production (specifically, sunflower seeds and wheat) and livestock units. Agroton Agro operates on 151 000 hectares of agricultural land and has invested into four grain elevators with total capacity of 235 000 tonnes (www, Agroton, 2, 2013). By its size, among the publicly traded companies, Agroton Agro has 4<sup>th</sup> place in Ukraine, and 6<sup>th</sup> place in Europe.



Figure 10. The Map of Ukraine (www, Russia-Ukraine-Travel, 1, 2013). The red circle points to the area company operates in (www, Alpcot Agro, 1, 2013)

## 6 The empirical study and results

To evaluate the profitability of the analyzed company and impact of political risks upon the company's value, two following analyses were performed: NPV and ROI. ROI analysis additionally includes political risk costs as it was recommended in the model of Bekefi and Epstein (2006).

### 6.1 Net Present Value analysis

All the necessary data for the NPV analysis were obtained from the Agroton annual reports (www, Agroton, 1, 2013), particularly from the statement of income and the statement of cash flows. The summary of the obtained data is given in Table 5. It provides company's real financial results in years 2007-2011 that enable to perform the most accurate NPV analysis for a 5-year period. Year 2012 was not included in the analysis as the annual results for that year were not available at the time of writing this thesis.

#### 6.1.1 Free cash flows

Table 5 summarizes the financial data provided in the company's statement of income and the statement of cash flows and, by construction, corresponds to the formula (3.1.1). According to it, EBITDA is an indicator of company's income after the subtraction of taxes, interests, depreciation and amortization. It is an initial, base number used in the free cash flow calculation that is found by subtracting from company's total revenues (the statement of income) all total costs. Total costs include costs of sales, administrative and distribution expenses (the statement of income). Following the formula, before starting the subtraction of capital expenditures, the amount of depreciation and amortization (the statement of cash flows) is added to the value of EBIDTA. Further, the first capital expenditure to be subtracted from EBIDTA, according to the formula (3.1.1), is interests expense (the statement of cash flows). Agroton raises its funds mainly through shares depositing on Stock Exchanges and, therefore, has only short-time loans from local banks. Last element to be subtracted is income tax expense given in the statement of cash flows. Favorable conditions of the tax system applied to agricultural producers in Ukraine, more specifically tax exemption in case the company's revenues from sale of its own agricultural products constitute less than 75 % (Law of Ukraine "On the fixed agricultural tax", 2008), explain the fact that the company was not entitled to pay income taxes in various periods (Table 5).

*Table 5. Calculated Free Cash Flows (in thousand dollars). Own calculation*

<b>Period</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EBITDA</b>	15,581	4,634	12,857	32,037	34,264
Total Revenues	67,749	93,432	76,095	97,351	104,382
Total Costs	52,168	88,798	63,238	65,314	70,118
<b>DEPRECIATION</b>	3,504	5,710	4,578	5,625	3,300
<b>INTERESTS</b>	4,334	9,356	9,910	9,937	3,655
<b>TAX</b>	2	0	0	112	16
<b>FREE CASH FLOW</b>	14,749	988	7,525	27,613	33,893

### 6.1.2 Discount rate

Specific research questions of this study demand a careful and detailed selection of the discount rate as it is the only element in the NPV analysis that reflects the value investors give to total risks related to the project. Therefore, to stay neutral, three different values are used: 7.5%, 11% and 17%. The lowest rate reflects the value of a coupon attached to the 10-year Eurobond issued by Ukrainian government in 2007 (www, Financial Cbonds Information, 1, 2013) and represents the risk-free rate. 11% is used by the Alpcot Agro for their investment projects undertaken in Ukraine (Pers. Com., Sjöblad, 2013) and 17% corresponds to the discount rate applied by the Ernst and Young audit company to cereal production in Ukraine (Pers. Com., Bruno, 2013). Grain Alliance do not apply the adjusted-discount rate method for its investment project evaluations in emerging markets like Ukrainian as it does not lead to satisfactory results (*Ibid*).

### 6.1.3 Present Value, Net Present Value and Internal Rate of Return

The final NPV analysis includes three different outcomes regarding different discount rates: 7.5%, 11% and 17%.

#### *Present Value*

The PVs were calculated using the formula (3.1.2). Calculation results in regard to different discount rates are summarized in Table 6.

*Table 6. Calculated PV in regard to different discount rates (in thousand dollars). Own calculation*

<b>Period</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>PV (7.5%)</b>	13,720	854,95	6,057.33	20,676.63	23,608.46
<b>PV (11%)</b>	13,287.39	801,88	5,502.22	18,189.54	20,113.85
<b>PV (17%)</b>	12,605.98	721,75	4,698.39	14,735.68	15,458.98

#### *Net Present Value*

NPV analysis requires two values for its calculation: PVs of the FCFs and investment costs related to the project (Table 7). PVs of the FCFs were calculated above and summarized in the Table 6. Investments costs were obtained from the company's annual reports, more specifically from the statement of cash flows. Agroton total amount of investment costs for years 2007-2011 was 62 524 000 dollars.

*Table 7. Calculated NPVs in regard to different discount rates (in thousands dollars). Own calculation*

<b>Discount rate</b>	<b>Sum of the PVs</b>	<b>Investment Costs</b>	<b>NPV</b>
<b>7.5%</b>	64,917.37	62,524	2,393.37
<b>11%</b>	57,894.88	62,524	-4,629.13
<b>17%</b>	48,220.78	62,524	-14,303.23

Table 7 summarizes the results of the NPV analysis in regard to three different discount rates. As expected, the highest profits are reached in the presence of the lowest, risk-free rate, and amounts to 2 393 3700 dollars (Table 7). The situation changes noticeably when two others discount rates are applied: NPV value becomes negative (Table 7). Accordingly, the company suffers economic losses and project should be, therefore, rejected.

### *Internal Rate of Return*

IRR of the analyzed investment project is 8.628185% (Appendix 1). It is a discount rate that equals total projects' NPV to 0 (Brealey *et al.*, 2008). Due to the complexity of the formula (*Ibid*), IRR was found by substituting different values of discount rate into the NPV model in Excel spreadsheet until the required result was obtained.

## 6.2 Return on Investment analysis

The model developed by Bekefi and Epstein (2006) is based on the ROI analysis, additionally including the costs of political risks related to the project. Following steps, listed in chapter 3, are analyzed and calculated: project total benefits (1), project total costs (2), project-related political costs (3), likelihood of step 1-3 (4), EVs of step 1-3 (4), NPVs of step 1-3 (5), and, finally, integration of all found numbers into the ROI calculation.

To be in line with the previous NPV analysis, the same financial data from Agroton is applied. To perform the analysis the statement of income, the statement of cash flows and notes to the financial statements were reviewed.

### 6.2.1 Total benefits

According to Bekefi and Epstein (2006), this part involves the calculation of the benefits the company get by moving its business activities into another country that, in turn, requires the base for comparison, i.e. comparison between home country and host country conditions. To simplify the analysis, no such comparison was done in this study. Instead, total benefits include all total revenues gained by Agroton in years 2007-2011 and are as following:

- *Total revenues* are a sum of total sales revenues and income from changes in fair value less costs to sell of biological assets and agricultural products (the statement of income). Information on biological assets could be found in notes to the financial statements and include following items: crops under cultivation and animal in growing and fattening.
- *Depreciation & Amortization* (the statement of cash flows).
- *Governmental grants* (Other income, net. Notes to the financial statements).
- *VAT refunds* (Other income, net. Notes to the financial statements).

The financial data on company's total revenues is summarized in Table 8.

Table 8. Total revenues (in thousands dollars). Own calculation

Period	1	2	3	4	5
<b>Total Revenues</b>					
1	67,749.000	93,432.000	20,862.288	97,351.000	122,080.000
<b>Depreciation and Amortization</b>					
2	3,504.000	5,710.000	4,578.000	5,625.000	4,410.000
<b>Governmental grants</b>					
3	1,804.000	4,069.000	8,910.000	312.000	0
<b>VAT refunds</b>					
4	1,873.000	402.000	3,650.000	3,267.000	11,485.000

### 6.2.2 Total costs

Total costs of the project consist of three elements: general costs required for company's maintenance and ongoing production process, investment expenses and total political risk costs. Information on general costs and investment expenses were obtained through annual reports of Agroton and summarized in Table 9. They include following expenses: costs of sales, administrative and distribution expenses, income tax and interest expenses.

Table 9. Total project costs excluding political risk costs (in thousands dollars). Own calculation

Period	1	2	3	4	5
<b>Costs of sales</b>					
1	43,963.000	78,492.000	56,223.000	56,507.000	64,829.000
<b>Administration expenses</b>					
2	6,339.000	7,727.000	5,332.000	5,915.000	4,329.000
<b>Distribution expenses</b>					
3	1,866.000	2,579.000	1,683.000	2,892.000	960,000
<b>Tax</b>					
4	2,000	0	0	112,000	16,000
<b>Interest rate</b>					
5	4,334.000	9,356.000	9,910.000	9,937.000	5,595.000
<b>Investments</b>					
6	10,926.000	14,709.000	769,000	10,590.000	25,530.000

Total political risk costs include following (Appendix 4):

#### *Change in legislation (governmental grants)*

Agroton Public Limited is entitled and receives a number of governmental grants (Other income, net. Notes to the financial statements) as, for example, compensation for sowing of winter/spring crops, value of elite seeds; compensations for post –effect of drought/losses in sowing, compensations for insurance premiums, etc. The following risk was included in this

analysis as the process of gaining those funds is not-transparent and complicated (Pers. Com., Bruno, Lugneva, Sjöblad, 2013).

#### *Change in legislation (VAT refunds)*

The risk of not receiving VAT refunds was included due to previous history of governmental non-compliance to this benefit. However, the risk is not ranked high as no complaints were recently reported (Pers. Com., Bruno, Lugneva, Sjöblad, 2013).

#### *Change in legislation (Tax system)*

Agricultural producers in the EU are entitled to pay standard tax on corporate income. Currently, the tax on income of agricultural producers in Ukraine was favorable, but there is a risk that Ukrainian government will impose corporate tax rate on all companies including agricultural producers. The following is counted as potential expenses the company would incur if the corporate tax rate of 21% is imposed on agricultural producers (Table 10).

*Table 10. Costs in regard to change in legislation (tax system) (in thousand dollars)*

<b>Period</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Profit before tax	19,085	10,344	17,435	37,662	37,564
Corporate tax rate (21%)	4,007.85	2,172.24	3,661.35	7,909.02	7,888.44
FAT	2	0	0	16	112
Cost	4,005.85	2,172.24	3,661.35	7,893.02	7,776.84

#### *Quota on grain export*

The risk of export quota was included due to previous implementation history of such quotas in Ukraine. The system works in the following way. Government decides on the country's total quota amount and divides it in the form of certificated amount among agricultural producers. The amount of agricultural commodities for which certificates were not received is sold by domestic governmental-established prices. Accordingly, not-licensed companies suffer significant economic losses. Moreover, the process of obtaining the export license could impose significant corruption payments. Consequently, the risk of the quota was evaluated as 40% of a total revenue decrease (Table 11).

*Table 11. Costs in regard to quota imposed (in thousand dollars)*

<b>Period</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Revenues	19,085	10,344	17,435	37,662	37,564
Reduction in revenues (40%)	7,634	4,137.6	6,974	15,064.8	15,025.6

#### *Legislative formalities*

Delays in getting certification for various stages of agriculture production process are frequent cases in Ukraine (Pers. Com., Bruno, Lugneva, 2013). Due to difficulties with obtaining the exact cost of such risk, the assumption of revenue decrease for 10% was done (Table 12).

Table 12. Costs in regard to legislative formalities (in thousand dollars)

Period	1	2	3	4	5
Revenues	19,085	10,344	17,435	37,662	37,564
Reduction in revenues (10%)	1,908.5	1,034.4	1,743.5	3,766.2	3,756.4

### *Endemic corruption*

Foreign investors are less exposed to this type of risk than local entrepreneurs (Pers. Com., Bruno, Karnaukh, 2013). The only problematic area underlined was concerning company's communications with local authorities and the performance of social work through last. To avoid them, Grain Alliance AB, for example, introduced their own charity fund. They devote to the fund 50 UAH (approximately 6 dollars) from each hectare of land leased (Pers. Cont., Bruno, 2013). Based on that, an assumption is made that a cost of endemic corruption is as following:

$$134\ 000\ \text{ha} \times \$6 = \$80\ 400$$

### 6.2.3 Likelihood and Expected Value

The potential likelihood of the company's benefits, related costs and investment expenses is assumed to be 100% as the real financial data was used in the analysis, and those costs and benefits already took place. EVs are calculated by multiplying company's benefits and costs on its likelihood, 100% in this particular situation. Results are summarized in Table 13, Appendix 2 and Appendix 3.

Table 13. Expected Values of the company's benefits and costs (in thousand dollars)

Period	1	2	3	4	5
<b>Benefit 1. Total Revenues</b>					
<b>EV (1)</b>	67,749.000	93,432.000	20,862.288	97,351.000	122,080.000
<b>Benefit 2. Depreciation and Amortization</b>					
<b>EV (2)</b>	3,504.000	5,710.000	4,578.000	5,625.000	4,410.000
<b>Benefit 3. Governmental grants</b>					
<b>EV (3)</b>	1,804.000	4,069.000	8,910.000	312,000	0
<b>Benefit 4. VAT refunds</b>					
<b>EV (4)</b>	1,873.000	402,000	3,650.000	3,267.000	11,485.000
<b>Cost 1. Costs of sales</b>					
<b>EV (5)</b>	43,963.000	78,492.000	56,223.000	56,507.000	64,829.000
<b>Cost 2. Administration expenses</b>					
<b>EV (6)</b>	6,339.000	7,727.000	5,332.000	5,915.000	4,329.000
<b>Cost 3. Distribution expenses</b>					
<b>EV (7)</b>	1,866.000	2,579.000	1,683.000	2,892.000	960,000
<b>Cost 4. Tax</b>					
<b>EV (8)</b>	2,000	0	0	112,000	16,000
<b>Cost 5. Interest rate</b>					
<b>EV (9)</b>	4,334.000	9,356.000	9,910.000	9,937.000	5,595.000
<b>Investments</b>					
<b>EV (10)</b>	10,926.000	14,709.000	769,000	10,590.000	25,530.000

The likelihood of political risks costs (Appendix 4) were chosen arbitrary based on the gathered information. EVs of political risk are calculated in the same way as EVs of company's benefits and costs. Results are summarized in Table 14.

Table 14. Expected Values of the company's related political risks (in thousand dollars)

Period	1	2	3	4	5
<b>Risk 1. Change in legislation (governmental grants). Likelihood – 80%</b>					
Costs	1,804.000	4,069.000	891,000	312,000	0
EV	1,443.200	3,255.200	712,800	249,600	0
<b>Risk 2. Change in legislation (VAT-refunds). Likelihood – 10%</b>					
Costs	1,873,000	402,000	3.650.000	530,000	9,366.000
EV	187,300	40,200	365,000	53,000	936,600
<b>Risk 3. Changes in legislation (new tax system). Likelihood – 3%</b>					
Costs	4,005.850	2,172.240	3,661.350	7,893.020	7,776.840
EV	120,176	65,167	109,841	236,791	233,305
<b>Risk 4. Quota on grain export. Likelihood – 50%</b>					
Costs	7,634.000	4,137.600	6,974.000	15,064.800	15,025.600
EV	3,817.000	2,068.800	3,487.000	7,532.400	7,512.800
<b>Risk 5. Legislative formalities. Likelihood – 30%</b>					
Costs	1,908.500	1,034.400	1,743.500	3,766.200	3,756.400
EV	572,550	310,320	523,050	1,129.860	1,126.920
<b>Risk 6. Endemic corruption. Likelihood – 80%</b>					
Costs	80,400	80,400	80,400	80,400	80,400
EV	64,320	64,320	64,320	64,320	64,320

#### 6.2.4 Net Present Value and Return on Investment

Cost and benefits were discounted by the same principle as in the previous NPV analysis and using the same discounts rate: 7.5%, 11% and 17% (Appendix 2, 3 and 4). The final calculation of the ROI was done using the formula (3.2.2).

Results are summarized in Table 15. The sensitivity analysis of the effects of each of political risk costs on the final ROI number is shown in the Table 16 and would be analyzed in the next chapter of this study.

Table 15. Results of the ROI analysis (in thousand dollars)

<b>I CALCULATED BENEFITS OF THE PROJECT</b>				
<b>Benefits</b>		<b>NPV (7,5%)</b>	<b>NPV (11%)</b>	<b>NPV (17%)</b>
<b>1</b>	Total Revenues	318,597.759	288,697.625	246,817.684
<b>2</b>	Depreciation & Amortization	19,169.520	17,460.997	15,037.704
<b>3</b>	Governmental grants	12,605.002	11,648.156	10,243.981
<b>4</b>	VAT refunds	15,474.603	13,650.371	11,155.345
<b>Total Benefits:</b>		<b>365,846.885</b>	<b>331,457.149</b>	<b>283,254.714</b>
<b>II CALCULATED COSTS OF THE PROJECT</b>				
<b>Costs</b>		<b>NPV (7,5%)</b>	<b>NPV (11%)</b>	<b>NPV (17%)</b>
<b>1</b>	Costs of sales	241,544.471	220,117.715	189,742.862
<b>2</b>	Administrative expenses	24,319.777	22,346.374	19,522.816
<b>3</b>	Distribution expenses	8,156.483	7,479.614	6,510.865
<b>4</b>	Income tax expenses	96,871	85,075	68,776
<b>5</b>	Interest rate	31,442.916	28,610.321	24,581.293
<b>6</b>	Investments	49,223.853	44,470.457	37,859.598
<b>Total Costs:</b>		<b>354,784.369</b>	<b>323,109.555</b>	<b>278,286.210</b>
<b>III CALCULATED THE PROJECT ROI (excluding total political risk costs)</b>				
ROI (excluding political risk costs)		22,47389279	18,77109885	13,12349892
<b>II CALCULATED THE TOTAL POLITICAL RISK COSTS</b>				
Total Political Risk Costs		28,845.923	26,111.368	22,276.783
<b>III CALCULATED THE PROJECT ROI (including total political risk costs)</b>				
ROI (including total political risk costs)		-36,12762234	-39,94511227	-45,71701714

## 7 Analysis and discussion

The majority of the previous studies analyzed the relation between total amount of Foreign Direct Investment (FDI) inflows and presence of political risks in certain location by applying macro-level data. Conversely, the ambition of this study was to verify previous findings by using the micro-level data. The aim of this chapter is to describe the study finding and answer the following research question raised in chapter 1:

- How the information on the project-related political costs could be integrated into the investment decision-process?
- How does the change in key variables such as discount rate influence the value of the analyzed company? What effect does the political risk costs has upon the investment rate of return?
- Does the information on political uncertainties influence the final investment decision?

*How the information on the project-related political costs could be integrated into the investment decision-process?*

According to Damodoran (2003), there are two main approaches of political risk incorporation into the financial investment evaluation. It could be done by either adjusting the discount rate used in cash flows calculations, or by directly subtracting the potential political risk cost from the value of cash flows. First approach is performed using the Net Present Value analysis and second approach corresponds to the model developed by Bekefi and Epstein (2006).

Before starting the analysis additional explanations must be given. Crop production industry is a subject to various risks that involve not only country-specific political, economic and social uncertainties, but risks associated with volatile world prices, weather conditions, etc. For the purposes of this study real financial results of Agroton were applied. Consequently, total price of those risks is already incorporated into the free cash-flow values. However, initial business investing plans are more optimistic that lead to higher NPV values. Such information asymmetry could partly explain low results from the conducted NPV analysis. Another explanation lies in the nature of agriculture business. Revenues gained from operating activities are in most cases reinvested directly into business expansion that makes the separation and evaluation of financial performance of each separate investment project problematic. Nevertheless, the implied NPV analysis reflects the changes in the company's value in regard to different discount rates applied, and, accordingly, demonstrates the most simplified method of including all types of project-related uncertainties into the investment evaluation process.

### *Net Present Value analysis*

NPV analysis is one of the widely-used tools of capital budgeting applied for the analysis of the investment project profitability (Brealey *et al.*, 2008). NPV works with the company's cash-flows turning their future values into present. It enables investors to summarize financial results of different future periods and, on this basis, to conclude whether the initial cost of investment is repaid. According to the theory, if the final NPV value is positive, the project is

recommended to be accepted, and if negative – rejected. Following the explanation, the analyzed project should be accepted in regard to the lowest, risk-free rate (7.5%), and rejected in the case of two other discount rates (11% and 17%).

### *Discount rate*

The only element that reflects the riskiness of the investment project in the NPV analysis is a discount rate (Brealey *et al.*, 2008). Discount rate could be viewed as a sum of a risk-free rate and risk-premium (Bekefi & Epstein, 2006; Brealey *et al.*, 2008; Damodaran, 2012). Risk-free rate is based on the concept of *the time value of money* (Brealey *et al.*, 2008) indicating whether the investors would get enough money back to cover initial investment costs. Risk premium reflects the extra return investors get in compensation for the risks undertaken in specific location. In order to stay neutral and cover different scenarios, three following values of the discount rate were chosen and applied: 7.5% (risk-free rate), 11% and 17%. Based on the definition of the discount rate, risk-premium paid to the investors in presence of the second discount rate (11%) is 3.5% (11%-7.5%), and in presence of the third discount rate – (17%) 9.5%. Taking into an account that the average risk-premium for Ukraine is 8.8%, it can be concluded that Alpcot Agro is underestimating the risks undertaken in Ukraine, while Earns and Young company provides more precise or even overestimated value of the overall risks presented in Ukrainian agricultural sector.

The higher the discount rate used in NPV calculations, the more risks are taken into an account (Brealey *et al.*, 2008). Based on the discount rate characteristics and negative results obtained by applying second and third values of the discount rate (11% and 17%), conclusion could be done that political risks have the effect on the value of the company. Moreover, high level of the discount rate indicates companies' inclusion of political risks into evaluation process. From other side, as it was theoretically expected and could be viewed from performed calculations (Appendix 1), the higher the discount rate is the lower the total NPV result is. By basing its final investment decision on solely results of the adjusted-discount rate, investors could miss potentially very profitable projects. Logical question, therefore, is whether investors are required to incorporate country risk premium into the discount rate value. According to Stulz (1999) and Damodaran (2003), the question of including or excluding country risk depends on the diversity of the investment portfolio and whether the additional risk is possible to spread between uncorrelated projects or not. The risk undertaken in specific location, Ukraine in this particular case, could be reduced by diversifying the investment portfolio between different assets, i.e. between various companies or investment projects involved in different business segments and located in different countries. Important thing is that investment projects should not be positively correlated, i.e. change in one of the markets should not result in changes in other market as well. Agrotion and Agro Alpcot are traded on stock exchange markets. Consequently, both companies are owned by numerous investors. As no further investigation was done in the following area, an assumption is made that those investors hold different investment projects diversified globally. However, in case investors hold stocks of exclusively those companies, their exposure to the Ukrainian country-risk would raise drastically (Damodaran, 2003). Going further to the Grain Alliance, the company is owned by Ukrainian Investment AB. The company is a subsidiary of Claesson and Anderzèn AB, investing company that works with real-estate projects in Sweden, Germany, Russian and Estonia, and provides financial advisory services (www, Claesson & Anderzèn AB, 1, 2013). On this basis, the additional risk undertaken in Ukraine is directly diversified between various markets and could be neglected.

### *Internal Rate of Return*

While performing the NPV analysis, the value of the internal rate of return (IRR) was also calculated. IRR is a discount rate that equal project's costs and revenues, i.e. makes the NPV of the project equal to zero. The main difference between IRR and NPV analyses is that results of the NPV analysis to high extend depends on the arbitrary chosen discount rate, while IRR only consider free cash-flow value and the time duration of the project. In most cases, IRR is used for comparison between 2 or more investment opportunities when the project with a higher ration of IRR is accepted. In case no comparison is done, the project should be undertaken when the IRR value exceed the opportunity costs of capital. According to the previous chapter of this study, IRR of the analyzed project is equal to 8.63%. Cost of capital promoted by independent analysts for agriculture industry is 6.02% (www, Damodaran, 1, 2013). Following the IRR rule, the project should be accepted as it generates profits at a higher rate of return than those proposed by market ( $6.02\% < 8.63\%$ ). Findings of the IRR analysis could also be correlated to the results of the NPV analysis. According to IRR rules, the project is regarded as profitable and, consequently, recommended to be accepted in case IRR exceed the value of the discount rate. In these particular analyses, IRR exceed only the risk-free rate, and is lower than two others discount rates. Accordingly, the project should be accepted only in presence of the risk-free rate and rejected in case of two others discount rates. The same results were obtained by the NPV analysis.

Second analysis performed in this study was based on the model developed and proposed by Bekefi and Epstein (2006). The model instead of only adjusting discount rate, incorporates the value of the political risk into the calculation process. It is based on the return on investment (ROI) analysis, additionally including the price of the political company's related risks. In contrast to the NPV analysis, ROI measures the project efficiency by reflecting the difference between considered revenues in relation to the cost of required investment. As IRR, ROI number is used for comparison of a few projects. When no comparison is done, all ROI ration greater than zero shows that investment returns are higher than its costs, and the project should be accepted. The following results in regard to different discount rates and excluding political risk costs were obtained: 22.47% (discount rate 7.5%), 18.77% (discount rate 11%) and 13.12% (discount rate 17%).

The situation changes, however, when total political risk costs are included. ROI rations become negative (Table 15). However, it is important to avoid fudge factors and not to overestimate the total value of political risks (Brealey *et al.*, 2008). The ROI calculation presented in Table 15 include all total company's related political costs and reflect the worth scenario of all the possible. In practice, investors rarely consider so many risks as it would not lead to any positive results. However, the model itself shows the way in which company could integrate separate political risk that are of the highest concern.

*How does the change in key variables such as discount rate influence the value of the analyzed company? What effect does the political risk costs has upon the investment rate of return?*

According to the calculation results summarized in Appendix 1, the highest NPV result is reached in the presence of the lowest risk-free rate, 7.5%, when the final NPV value is equal to 2 393 370 dollars. However, by applying two other discount rates, NPV becomes negative: -4 629 130 (11%) and -14 303 23 (17%). Such noticeable decrease in company's value in

regard to different discount rates shows the NPV analysis high sensitivity to a discount rate applied.

Table 16 reflects the change in the ROI rate in regard to different political risks and discount rates. As ROI ration shows how many years are required to pay-off the investment, lower rate indicates longer pay-off period.

*Table 16. Sensitivity analysis of the project ROI*

	NPV (7,5%)	NPV (11%)	NPV (17%)
<b>Risk 1. Change in legislation (governmental grants)</b>			
Costs (in thousand dollars)	4,920.019	4,627.786	4,189.722
ROI (in percent)	12,47870022	8,364671117	2,057025458
<b>Risk 2. Change in legislation (VAT-refunds)</b>			
Costs (in thousand dollars)	1,194.913	1,058.990	872,825
ROI (in percent)	20,04638515	16,38976495	10,8180742
<b>Risk 3. Change in legislation (new tax system)</b>			
Costs (in thousand dollars)	596,419	535,908	451,677
ROI (in percent)	21,26224562	17,56601029	11,93046665
<b>Risk 4. Quota on grain export</b>			
Costs (in thousand dollars)	19,021.166	17,087.794	14,397.197
ROI (in percent)	-16,1682799	-19,65394774	-24,9043671
<b>Risk 5. Legislative formalities (delays in certifications)</b>			
Costs (in thousand dollars)	2,853.175	2,563.169	2,159.580
ROI (in percent)	16,6775669	13,00734185	7,419319023
<b>Risk 6. Endemic corruption</b>			
Costs (in thousand dollars)	260,231	237,720	205,782
ROI (in percent)	21,94522365	18,23654149	12,57995921

*Does the information on political uncertainties influence the final investment decision?*

Important thing to take under the consideration is price of agricultural commodities. In case with large scale agricultural producers, the largest amount of crop yields is directed for export, and are subject of the world and not local prices. The price could certainly drops for commodities affected by diseases, but that risk is equally possible for any location. Crops are not brand goods whose price depends on some specific inputs or brand name of the company-producer. Therefore, in order to survive on agricultural market, location with minimum constraints and the lowest operating costs should be selected. According to the country description provided in chapter 5 and cost advantages listed in chapter 4, Ukraine could be regarded as one of such locations. However, some of the country's business, social and economic factors require a closer look in order to provide a complete answer on the last research question. Following country's factors are discussed below:

#### *Agricultural land*

According to the information provided in chapter 4 of this study, the price of leasing agricultural land in Ukraine is much lower than in developed countries that represent a

considerable cost advantage. Additionally, larger amounts of agricultural land are available for agricultural purposes. In 2013, land banks of the analyzed companies were as following: Agroton Agro (151 000 hectares), Alpcot Agro (93 400 hectares), Grain Alliance (45 000 hectares) and TAKU (60 000 hectares).

A possibility of building up a farm of 50 or more thousand hectares leads to economy of scales and higher profits due to larger amount of yields collected. From other side, after the Soviet Union dissolution huge areas of agricultural land were uncultivated that led to quality loss and lower average yields per hectare (Pers. Com., Karnaukh, 2013). In order to reach the EU crops yields per hectare, the land require additional investments to improve its quality (Pers. Com., Bruno, Karnaukh, 2013).

### *Moratorium on land*

By most investors the moratorium on agricultural land is regarded as one of the main disadvantages of investing into the agricultural sector of Ukraine. However, the system with leasing contracts is transparent (Pers. Com., Bruno, Karnaukh, Sjöblad, 2013) and agreements under the law could be signed for nearly up to 50 years. It is also important to underline that leasing contracts are signed between local people, owners of the land, and the company. The continuity of the leasing contract, therefore, depends solely on the relationships between the company and local society and is not ruled or depends on the government actions. Additionally, the total sum of the investment in case the land is leased and not purchased is much lower (Pers. Com., Bruno, 2013). Consequently, in the situation of the forced exit from the market, the total losses would be less than in the case company owned belonging land.

### *Labour*

Average workers involved in the production process have lower than EU wages. However, there is lack of well-educated specialists (Pers. Com., Bruno, Karnaukh, 2013). Analysed companies are, therefore, forced to either invest into employees' trainings, or to attract talented employees from abroad by proposing them significantly higher than average EU wages (Pers. Com., Bruno, 2013). Additionally, if to analyse the location of the companies, they prefer to operate around major Ukrainian cities: Agroton Agro (Donetsk and Luhansk), Alpcot Agro (Lviv, Poltava and Simferopol), Grain Alliance (Kyiv) and TAKU (Kyiv). Such location allows managers to only commute to villages, but to live in the cities (Pers. Com., Bruno, Karnaukh, 2013).

Going back to the results of the ROI analysis (excluding political costs), under the best scenario project's rate of return is 22%. In the reality companies in agricultural segment in Ukraine usually get ROI number equal and higher than 20-25% (Pers. Com., Lugneva, Bruno, 2013). Such returns allow investors to recover the investment costs just in a couple of years. Moreover, the effect of such political risk as corruption on companies with foreign capital is reported to be much lower than upon local companies (Pers. Com., Bruno, Sjöblad, 2013). This could be partly explained by the desire of the Ukrainian government to "keep the face" in front of international society and not to be involved in huge public scandals.

According to the gathered information, Alpcot Agro was not assessing the political risk in depth. Moreover, the company has acquired the Landkom International Plc., farm producer that was in debt and ending years with economic losses. What was done instead is that the political risk was generalized and integrated into the total risk associated with leading

business in developing countries. Grain Alliance, unlike Alpcot Agro, has admitted that if initial investment has to be decided now, Ukraine would have not been considered (Pers. Com., Bruno, 2013). The company invested in Ukraine in 2009 after the orange revolution when western society expected positive democratic changes in Ukraine. Nevertheless, the company is continuing its business extension and further investments into Ukrainian agricultural sector.

The results of this study cannot be generalized to previous findings since it applied micro-level data of a limited number of companies. However, an interesting finding that supports previous studies is done in the area of risk diversification. According to Mèon and Sekkat (2012), the influence of the political risks over FDI is becoming lower when the global volume of capital flows is larger. This idea is supported by Stulz (1999) and Damodaran (2003) who accept the possibility of country risk neglecting in case the total risks could be directly diversified. As it was previously discussed, analysed companies are owned either by numerous shareholders or/and investing companies with more than one investment project under run. Their financial funds are distributed between different projects and different locations. In other words, the total result is secured by more than one alternative outcome. This finding could be one of the explanations of why those particular investors were less vulnerable to the political risk.

One more important issue was raised by Vadlamannati (2012) who underlines the disregard in most studies of such important question as company's possibility to address political risks. This fact turned out to be of big importance in this particular study. First of all, all analysed companies without exception are either operated by Ukrainian management team or by managers with sufficient experience from developing countries. There are two following explanations that could explain companies' willingness to employ local managers. First, it is difficult to find experiences enough managers who can run the agricultural company of 100 000 hectares. Secondly, Ukrainian management team has a better understanding of the local business and political environments that, according to Kobrin (1978), could be regarded as substantial advantage. Another way of addressing political risks is companies' attitude to social responsibility in villages. All companies reported to be active with social supporting programmes oriented to local villages were the companies operate in (Pers. Com., Bruno, Kranaukh, 2013).

## 8 Conclusion

The aim of this thesis is to investigate whether the presence of political risks in host country has an influence on final investment decision. Net Present Value and Return on Investment analyses were applied in this study in order to show the way political risks could be integrated into financial evaluation of the business entity, and to reflect the change of company's value in regard to different political risks considered.

The results presented in this study include scenarios of each separate risk being integrated as well as a scenario when total sum of political risks is considered. The amount of political risks regarded depends on the risk-attitude of the investor and could vary accordingly. Nevertheless, applied models successfully describe the way in which the company could integrate political risks that are of the highest concern. As it was expected on the basis of the theory, found results proved political risks significant impact on the company's value. This raises the importance of political risks correct evaluation. The process of political risk assessment and identification could be very sophisticated. Nevertheless, by correctly distinguishing between company's related and unrelated risks, the found information could be of high relevance for management of the company.

The information on attitude towards business environment in Ukraine and effect of political risks upon final investment decision were gathered from two agricultural companies, Alpcot Agro AB and Grain Alliance AB. Following business entities are owned and operated by Swedish investing companies. According to the study findings, the political risks had a little effect on the final investment decision in case of the first analysed company, Alpcot Agro AB. Grain Alliance AB performed the investment in time of political changes in Ukraine, and, therefore, investors expected reduction of political risks effects. The company admitted that no investment would have been considered under current political situation. Nevertheless, Grain Alliance AB continues its business expansion in Ukraine.

The obtained results could be explained by significant costs advantages as well as high returns companies get on their investment projects in Ukraine. It is also important to consider in which way the companies' could address political uncertainties. Companies desire to employ Ukrainian managers and active participation in various social projects reduce the effect of political risks on the companies' business activities. Companies little attention to political issues could be also explained by the total investment portfolio diversification.

### *Possible aspects of future studies*

As it was previously mentioned, this area of research fails to provide more studies based on the micro-level analysis. Therefore, future areas of interest could include the comparison of results gained from different business segments as well as comparison done between countries. Another interesting topic is whether there is a difference in attitude to political risks in regard to different nationalities or country of investor origin. Furthermore, a huge area of research lies in the political risks management and communication. This study has risen only some aspects such as companies desire to employ management from the host country. However, due to time factor and limitations of the study, the topic was not developed further.

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Head of Technological Department, Technological Agricultural Company United

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Chief Accountant, Technological Agricultural Company United

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Sjöblad Hannes

Deputy Managing Director, Alpcot Agro AB

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## Appendix 1. NPV analysis in regard to different discount rates (in thousand dollars)

FREE CASH FLOWS CALCULATION						
Period	0	1	2	3	4	5
<b>EBITDA</b>		15,581	4,634	12,857	32,037	34,264
Total Revenues		67,749	93,432	76,095	97,351	104,382
Costs of sales		43,963	78,492	56,223	56,507	64,829
Administrative expenses		6,339	7,727	5,332	5,915	4,329
Distribution expenses		1,866	2,579	1,683	2,892	960
<b>DEPRECIATION</b>		3,504	5,710	4,578	5,625	3,300
<b>INTERESTS</b>		4,334	9,356	9,910	9,937	3,655
<b>INVESTMENTS</b>	62,524					
Pre-tax cash flow		14,751	988	7,525	27,725	33,909
<b>TAX</b>		2	0	0	112	16
<b>FREE CASH FLOW</b>		14,749	988	7,525	27,613	33,893
		<b>Discount at</b>			<b>7,50%</b>	
<b>PV</b>		13,720	855	6,057	20,677	23,609
<b>NPV</b>		2,393.37				
		<b>Discount at</b>			<b>11,00%</b>	
<b>PV</b>		13,287	802	5,502	18,190	20,114
<b>NPV</b>		-4629,13				
		<b>Discount at</b>			<b>17,00%</b>	
<b>PV</b>		12,606	722	4,698	14,736	15,459
<b>NPV</b>		-14,303				
		<b>IRR</b>			<b>8,63%</b>	
<b>PV</b>		13,578	837	5,871	19,831	22,408
<b>NPV</b>		0				

## Appendix 2. Total benefits of the project (in thousand dollars)

Period	1	2	3	4	5		
<b>Benefit 1. Total Revenues</b>						<b>TOTAL</b>	
Revenues	67,749.000	93,432.000	20,862.288	97,351.000	122,080.000		
EV	67,749.000	93,432.000	20,862.288	97,351.000	122,080.000		
NPV	7,50%	63,022.326	80,849.757	16,793.319	72,896.480	85,035.878	<b>318,597.760</b>
NPV	11%	61,035.135	75,831.507	15,254.325	64,128.119	72,448.538	<b>288,697.625</b>
NPV	17%	57,905.128	68,253.342	13,025.798	51,951.366	55,682.049	<b>246,817.684</b>
<b>Benefit 2. Depreciation and Amortization</b>							
Revenues	3,504.000	5,710.000	4,578.000	5,625.000	4,410.000		
EV	3,504.000	5,710.000	4,578.000	5,625.000	4,410.000		
NPV	7,50%	3,259.535	4,941.049	3,685.110	4,212.003	3,071.824	<b>19,169.520</b>
NPV	11%	3,156.757	4,634.364	3,347.394	3,705.362	2,617.120	<b>17,460.997</b>
NPV	17%	2,994.872	4,171.232	2,858.368	3,001.782	2,011.450	<b>15,037.704</b>
<b>Benefit 3. Governmental grants</b>							
Revenues	1,804.000	4,069.000	8,910.000	312,000	0		
EV	1,804.000	4,069.000	8,910.000	312,000	0		
NPV	7,50%	1,678.140	3,521.038	7,172.199	233,626	0	<b>12,605.002</b>
NPV	11%	1,625.225	3,302.492	6,514.915	205,524	0	<b>11,648.156</b>
NPV	17%	1,541.880	2,972.460	5,563.142	166,499	0	<b>10,243.981</b>
<b>Benefit 4. VAT refunds</b>							
Revenues	1,873.000	402,000	3,650.000	3,267.000	11,485.000		
EV	1,873.000	402,000	3,650.000	3,267.000	11,485.000		
NPV	7,50%	1,742.326	347,864	2,938.106	2,446.331	7,999.976	<b>15,474.603</b>
NPV	11%	1,687.387	326,272	2,668.849	2,152.074	6,815.789	<b>13,650.371</b>
NPV	17%	1,600.855	293,667	2,278.953	1,743.435	5,238.437	<b>11,155.345</b>
<b>Total (7,5%)</b>	<b>365,846.885</b>	<b>Total (11%)</b>	<b>331,457.149</b>	<b>Total (17%)</b>	<b>283,254.714</b>		

## Appendix 3. Total costs of the project (in thousand dollars)

Period		1	2	3	4	5	
<b>Costs of sales</b>							<b>TOTAL</b>
Costs		43,963.000	78,492.000	56,223.000	56,507.000	64,829.000	
EV		43,963.000	78,492.000	56,223.000	56,507.000	64,829.000	
NPV	7,50%	40,895.814	67,921.687	45,257.298	42,312.472	45,157.200	<b>241,544.471</b>
NPV	11%	39606306	63705868	41109773	37222911	38472856	<b>220,117.715</b>
NPV	17%	37575214	57339470	35103986	30154963	29569230	<b>189,742.862</b>
<b>Administration expenses</b>							
Costs		6,339.000	7,727.000	5,332.000	5,915.000	4,329.000	
EV		6,339.000	7,727.000	5,332.000	5,915.000	4,329.000	
NPV	7,50%	5,896.744	6,686.425	4,292.050	4,429.155	3,015.402	<b>24,319.777</b>
NPV	11%	5,710.811	6,271.407	3,898.712	3,896.394	2,569.051	<b>22,346.374</b>
NPV	17%	5,417.949	5,644.678	3,329.144	3,156.540	1,974.505	<b>1,9522.816</b>
<b>Distribution expenses</b>							
Costs		1,866.000	2,579.000	1,683.000	2,892.000	960,000	
EV		1,866.000	2,579.000	1,683.000	2,892.000	960,000	
NPV	7,50%	1,735.814	2,231.693	1,354.749	2,165.531	668,696	<b>8,156.483</b>
NPV	11%	1,681.081	2,093.174	1,230.595	1,905.050	569,713	<b>7,479.614</b>
NPV	17%	1,594.872	1,883.994	1,050.816	1,543.316	437,867	<b>6,510.865</b>
<b>Tax</b>							
Costs		2,000	0	0	112,000	16,000	
EV		2,000	0	0	112,000	16,000	
NPV	7,50%	1,860	0	0	83,866	11,145	<b>96871,06</b>
NPV	11%	1,802	0	0	73,778	9,495	<b>85074,89</b>
NPV	17%	1,709	0	0	59,769	7,298	<b>68775,99</b>
<b>Interest rate</b>							
Costs		4,334.000	9,356.000	9,910.000	9,937.000	5,595.000	
EV		4,334.000	9,356.000	9,910.000	9,937.000	5,595.000	
NPV	7,50%	4,031.628	8,096.052	7,977.159	7,440.831	3,897.246	<b>31,442.916</b>
NPV	11%	3,904.505	7,593.539	7,246.107	6,545.810	3,320.360	<b>28,610.321</b>
NPV	17%	3,704.274	6,834.685	6,187.512	5,302.881	2,551.942	<b>24,581.293</b>
<b>Investments</b>							
Costs		10,926.000	14,709.000	769,000	10,590.000	25,530.000	
EV		10,926.000	14,709.000	769,000	10,590.000	25,530.000	
NPV	7,50%	10,163.721	12,728.177	619,015	7,929.798	17,783.142	<b>49,223.853</b>
NPV	11%	9,843.243	11,938.154	562,286	6,975.961	15,150.812	<b>44,470.457</b>
NPV	17%	9,338.462	10,745.124	480,141	5,651.354	11,644.518	<b>37,859.598</b>
<b>Total (7,9%)</b>		<b>354,784.369</b>	<b>Total (11 %)</b>	<b>323,024.480</b>	<b>Total (17%)</b>	<b>278,286.210</b>	

## Appendix 4. Interview guide

Before the interviews, a general knowledge on the companies' business activities were obtained through official web-sites and question were accordingly modified. Nevertheless, they followed the structure presented below:

### **System of land leasing in Ukraine:**

1. What is an average term of the land lease contract?
2. What is an average price of leasing one hectare of agricultural land?
3. In what way the total amount of agricultural land was collected? Through the lease of big agricultural farms or by signing thousands of individual contracts?
4. Do you expect the moratorium on agricultural land to be lifted or not? Why?

### **Agricultural policy of Ukraine:**

1. Does the company apply for any governmental grants provided for agricultural producers in Ukraine? If not, why?
2. Does the system with VAT-refunds works?

### **Whether the following factors are real advantages for running agricultural company in Ukraine:**

1. Quality of agricultural land
2. Infrastructure and transportation costs
3. Labor costs

### **Risk assessment:**

1. Does the company has internal risk-assessment team/specialists or uses the external service of the specialized agencies?
2. What is the value of the discount rate applied for the investment projects in Ukraine?
3. Did the political risk have an impact when investment was considered?