

# **CORPORATE RISK TRADING**

## **Open risk trading system**

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## Abstract

In my doctoral thesis I will design an internet survey of non-financial companies operating in the Czech Republic, which will consist of five parts: 1) description of the respondent, list of risks 2) perceived, 3) monitored, 4) managed by the respondent, and 5) identification of methods used within the risk management. Based on the survey I will infer the current level of risk perception and management and present evidence of its inefficiency. Finally I will propose a more efficient system of open risk trading, which will be supported by the analysis of its economic efficiency.

**Keywords:** corporate risk management, risk transfer, risk trading, non-financial corporation, economic efficiency.

## 1. Introduction

*Today, the tools we use are complex, and breakdowns can be catastrophic, with far-reaching consequences. We must be constantly aware of the likelihood of malfunctions and errors. Without a command of probability theory and other instruments of risk management, engineers could never have designed the great bridges that span our wildest rivers, homes would still be heated by fireplaces or parlor stoves, electric power utilities would not exist, polio would still be maiming children, no airplanes would fly, and space travel would be just a dream.*

*Peter L. Bernstein<sup>1</sup>*

Mankind has evolved so far that it can no longer evade the responsibility for its actions. In every field of science we already possess tools that are powerful enough to at least distort the natural balance around us. One does not have to go too far to find a proof of such statement. Today Reuters top headline saying “Gulf oil spill hits Day 40 with no end in sight” might serve as an example.

We have just lived through one of the greatest financial crisis in history and might be heading towards even greater trouble. Even though the world largest corporations and banks have advanced very far with the use of the latest risk management tools, they don't seem to be handling them very well. In this case greater power apparently leads to an increased risk

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<sup>1</sup> Bernstein, Peter L. *Against the Gods: The Remarkable Story of Risk*. Wiley, August 1998.

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taking rather than to a greater responsibility. Naturally problems swirled on higher levels settle on the lower ones. For example when the bank finds itself in a liquidity trap, it has no other choice but reducing the availability of its credit. Small and medium businesses are first to notice such development as they usually cooperate with a single bank. The more banks in trouble, the greater influence on the whole economy.

Watching companies struggle through these perilous times reveals an important aspect of nowadays – Non-financial corporations are often too dependent on banks without even realizing the full extent of their reliance. My work begins at this point with the following *basic* research question:

**HOW CAN THE EFFICIENCY OF CORPORATE RISK MANAGEMENT BE INCREASED?**

On my way to an improved state I first need to define a reference point. I have to understand current situation and recognize its both strong and weak points. How do non-financial companies manage their risks? How advanced is their perception of risk? What are the most common risk management tools in a practical use? There are many questions I need to have answered before I can move towards the definition of an improved system.

## **2. Internet Survey**

In order to understand the current state I will design an internet survey. Its target group will be non-financial companies operating in the Czech Republic. Distribution of the survey will be provided by a local media partner interested in by a barter agreement concerning an output analysis of gathered data.

This simple internet form will consist of five parts. First of them will be dedicated to the description of the respondent including its main characteristics like size, industry or domicile. Furthermore it is crucial to understand, who within the company is filling the data in, whether the responding company is part of any holding etc.

Second section will help me understand what risks are perceived by the responding company. This is the most elementary approach to risk – company might not analyze the risk, it might not manage it, but at least there is some level of awareness. Being aware of the risk naturally affects the decision making process. Even though risks listed in this section might be otherwise ignored, it could be only a matter of time until they become monitored.

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Third part of the form will therefore be designed to identify risks that are more closely watched. Respondent perceives the risk and devotes its resources to a systematic monitoring. The frequency of such monitoring might not necessarily be high; it is possible to analyze some risks on annual basis and still not lose control over their development.

Fourth section of the survey should reveal which of previously listed risks are actively managed by the company. At this point it does not matter what tools companies use to manage their risks as long as the action is carried out systematically and is designed to hedge or otherwise mitigate the probability and/or impact of partial risk.

Last component of the survey will represent a crucial input for my research as it should help me recognize the tools companies use to manage their risks identified in the previous section. After asking *what* risks companies systematically manage, I also need to know *how* it is being done. This part of the survey will probably be the most difficult to design since I would like to keep the form as simple as possible, because I do not want to discourage potential respondents with a complex and time consuming questionnaire.

For this reason I expect the last section of the survey to focus only on exogenous risks such as market and credit risk. Risks belonging to this group are specific as it is usually impossible to hedge or mitigate them solely within the company itself. Often the only way to manage these risks is to transfer them to one or more counterparties via operations in the financial markets. These are therefore the risks of my interest.

### 3. Evaluation of the Survey

From the data gathered during the internet survey I would like to extract information concerning the level of risk perception and management within non-financial companies. Important information might arise from the break-down by their size. I expect larger corporations to be generally more advanced in risk management than the smaller ones.

However the most significant output will be the list of the most commonly used tools and methods for managing exogenous risks. Based on this information I would like to demonstrate the following assumption:

**RISK MANAGEMENT TOOLS AND METHODS CURRENTLY USED BY NON-FINANCIAL CORPORATIONS ARE INEFFICIENT AND COSTLY.**

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I expect this assumption to become more apparent with the decreasing size of company as larger companies have better credit position and therefore more opportunities together with a lower risk premium when managing their risks. However the key source of inefficiency remains the same for all corporations. It is an increased exposure to the financial sector which is known to be volatile, procyclical, and overall very risky.

This descriptive part of my work will consist of two basic components. First I will identify *significant* tools and methods for managing exogenous risks and quantify direct costs linked to their application. For the largest group of operations I expect to add up fees charged by counterparties for bearing the risk. In case of financial contracts these fees will often be hidden in the difference between the market price and the fair price. In some cases I may need to add costs of an unemployed-capital.

Secondly I would like to identify hidden costs of such operations caused by an increased exposition to the financial sector or a limited number of financial institutions. Quantification might be possible only rarely and for this reason I will focus primarily on identifying and providing a proof of existence of this risk and its threatening consequences.

#### **4. Open risk trading system**

I expect to obtain a solid base for my further research from the internet survey. It should point out that corporations preferably contact a local bank in order to hedge their risks. They transfer their risks along with a proper risk premium to the bank which consolidates them together with risks bought from other companies and wrap them into a larger homogenous packages consisting of locally undiversifiable risks. This package is further sold over the counter to a different counterparty usually within the financial sector, which may also consolidate it into an even greater package and transfer the remaining undiversifiable risks elsewhere.

This process reveals how the whole developed world is financially interconnected. If any bank gets into trouble, the whole chain will tremble. Even though the problems are as far as half way around the globe, local company will soon notice its effects. Often it will be required to pay higher risk premiums when transferring their risks, sometimes it will not be able to sell its risks anymore and sometimes it could not even be able to tell if the previously sold risks are really out of its balance sheet.

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In my doctoral thesis I would like to propose a new system that will in some aspects bypass this weakness. There is rather a little diversity of exogenous risks that the corporations are facing. For this reason corporations should be able to hedge their risks among their peers by combining their opposing positions. While an appreciation of USD might be undesirable for one company, the same case might be plausible for another. Their positions would simply cancel each other out.

In my work I will not be interested in any potential problems of practical use of such system neither will I try to design it. I will only analyze its basic features and implications in order to confirm or disconfirm my hypothesis that:

**OPEN RISK TRADING SYSTEM IS MORE EFFICIENT THAN CURRENT RISK  
MANAGEMENT PRACTICES.**

Trading some risks on a peer to peer basis changes the structure of the remaining risks. This approach will decrease exposition to a financial sector in favor of more diversified exposition to smaller counterparties. The fee for such operation should also be much smaller as it may have to cover only the costs of a non-profit clearing center securing the transaction. Putting together advantages and disadvantages of this system will be the core component of my work.

## **5. Conclusion**

My research includes three main components. Starting with an internet survey will allow me to collect an important set of underlying data revealing the current advancement of non-financial corporations in risk management. Analysis of the data will be the second, descriptive part of my doctoral thesis with the focus on the tools and methods used for management of exogenous risks. In the last section I will lay down essentials of an open risk trading system at the level of non-financial corporations. Finally I will offer the analysis of its economic efficiency in comparison with the current state described in the second part of my thesis.