



VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS  
VERSLO VADYBOS FAKULTETAS  
FINANSŲ INŽINERIJOS KATEDRA

Ugnė Augustytė

**BENDROSIOS CIVILINĖS ATSAKOMYBĖS DRAUDIMO RAIDOS  
LIETUVOJE KRYPTYS**

**TRENDS IN DEVELOPMENT OF GENERAL LIABILITY INSURANCE IN  
LITHUANIA**

Baigiamasis magistro darbas

Verslo vadybos studijų programa, valstybinis kodas 62403S121

Tarptautinio verslo specializacija

Vadybos ir verslo administravimo mokslo kryptis

Vilnius, 2010

VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS  
VERSLO VADYBOS FAKULTETAS  
FINANSŲ INŽINERIJOS KATEDRA

TVIRTINU  
Katedros vedėjas

\_\_\_\_\_  
(Parašas)  
Rima Tamošiūnienė  
(Vardas, pavardė)

\_\_\_\_\_  
(Data)

Ugnė Augustytė

**BENDROSIOS CIVILINĖS ATSAKOMYBĖS DRAUDIMO RAIDOS  
LIETUVOJE KRYPTYS**

**TRENDS IN DEVELOPMENT OF GENERAL LIABILITY INSURANCE IN  
LITHUANIA**

Baigiamasis magistro darbas

Verslo vadybos studijų programa, valstybinis kodas 62403S121

Tarptautinio verslo specializacija

Vadybos ir verslo administravimo mokslo kryptis

**Vadovas** doc. dr. Daiva Jurevičienė

\_\_\_\_\_  
(Parašas)

\_\_\_\_\_  
(Data)

**Konsultantas**

\_\_\_\_\_  
(Moksl. laipsnis, vardas, pavardė) (Parašas) (Data)

**Konsultantas**

\_\_\_\_\_  
(Moksl. laipsnis, vardas, pavardė) (Parašas) (Data)

Vilnius, 2010

VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETAS  
VERSLO VADYBOS FAKULTETAS  
FINANSŲ INŽINERIJOS KATEDRA

Socialinių mokslų mokslo sritis

Vadybos ir administravimo mokslo kryptis

Vadybos ir verslo administravimo studijų kryptis

Verslo vadybos studijų programa, valstybinis kodas 62403S121

Tarptautinio verslo specializacija

TVIRTINU

Katedros vedėjas

(Parašas)

(Vardas, pavardė)

(Data)

**BAIGIAMOJO MAGISTRO DARBO  
UŽDUOTIS**

.....Nr. ....

Vilnius

Studentui (ei) ..... **Ugnei Augustytei**.....  
(Vardas, pavardė)

Baigiamojo darbo tema: **Bendrosios civilinės atsakomybės draudimo raidos Lietuvoje.....**  
**kryptys**.....

.....  
patvirtinta 200...m. .... d. dekanų potvarkiu Nr. ....

Baigiamojo darbo užbaigimo terminas 2010 m. gegužės 28 d.

**BAIGIAMOJO DARBO UŽDUOTIS:**

Apibūdinti bendrosios civilinės atsakomybės draudimo ypatybes bei parengti draudimo raidos analizės metodiką. Išanalizuoti bendrosios civilinės atsakomybės draudimo situaciją Lietuvos draudimo rinkoje, lyginant su išsivystymu kitose šalyse, nustatyti šio draudimo raidos ypatumus. Remiantis atliktos analizės rezultatais, apžvelgti bendrosios civilinės atsakomybės draudimo plėtros Lietuvoje galimybes.

Baigiamojo darbo rengimo konsultantai: .....

.....  
.....

(Moksl. laipsnis, vardas, pavardė)

Vadovas .....  
(Paraša )

.....doc. dr. Daiva Jurevičienė.....  
(Moksl. laipsnis, vardas, pavardė)

Užduotį gavau

.....  
(Parašas)

.....**Ugnė Augustytė**.....  
(Vardas, pavardė)

.....  
(Data)

Vilniaus Gedimino technikos universitetas

Verslo vadybos fakultetas

Finansų inžinerijos katedra

ISBN ISSN

Egz. sk. 2

Data ....-....-....

**Verslo vadybos** studijų programos baigiamasis magistro darbas

Pavadinimas **Bendrosios civilinės atsakomybės draudimo raidos Lietuvoje kryptys**

Autorius **Ugnė Augustytė**

Vadovas doc. dr. **Daiva Jurevičienė**

Kalba

☒ x

užsienio

☐

lietuvių

### Anotacija

Baigiamajame magistro darbe pateikiama bendrosios civilinės atsakomybės draudimo situacijos ir jos kaitos Lietuvoje analizė, pabrėžiant šios temos naujumą. Darbe atspindima šio draudimo reikšmė, pagrindinės draudžiamosios sritys ir išskirtinumas lyginant su kitomis draudimo rūšimis. Pateikiamos ir analizuojamos pagrindinės su bendrosios civilinės atsakomybės draudimu susijusios problemos Lietuvoje. Glaustai apžvelgiama užsienio šalių patirtis ir bendrosios civilinės atsakomybės draudimo reikšmė jose. Baigiamajame darbe aptariama analizuojamo draudimo aplinka ir svarbiausių veiksnių įtaka bendrosios civilinės atsakomybės draudimo plėtrai. Taikant kokybinius ir kiekybinius analizės metodus, išnagrinėjama šio draudimo raida ir numatomos galimos plėtros kryptys ateityje. Aptarus teorinius ir praktinius temos aspektus, pateikiamos atitinkamos baigiamojo darbo išvados ir siūlymai.

Darbą sudaro 6 dalys: įvadas, trys pagrindinės dalys, išvados ir siūlymai, literatūros sąrašas.

Darbo apimtis – 72 p. teksto be priedų, 14 iliustr., 11 lent., 30 bibliografinių šaltinių. Atskirai pridedami darbo priedai.

**Prasminiai žodžiai:** bendrosios civilinės atsakomybės draudimas, draudimo ciklas, draudimo skvarba, draudimo tankis, rinkos koncentracija.

Vilnius Gediminas Technical University  
Faculty of **Business management**  
Department of **Finance engineering**

ISBN      ISSN  
Copies No. 2  
Date ....-....-....

**Business management** study programme bachelor thesis.

Title: **Trends in Development of General Liability Insurance in Lithuania**

Author **Ugnė Augustytė**

Academic supervisor **doc. Dr. Daiva Jurevičienė**

Thesis language

☐

Lithuanian

☒

Foreign (English)

### **Annotation**

This master thesis analyses the situation of general liability insurance in Lithuania and its alteration, emphasising the novelty of a topic. Essence of particular insurance is reflected as well as main insurable ranges and oneness in comparison with other types of insurance is analysed. Key problems related with general liability insurance in Lithuania are presented and discussed. Brief overview of other countries' experience is provided together with the essence of general liability insurance there. Environment of analysed insurance, as well as key factors influencing it are discussed in this master thesis. Qualitative and quantitative analysis is done on development of general liability insurance. Future possibilities and trends are presented. At the end of the work, essential conclusions of the analyzed issues are presented.

Structure: introduction, three main parts, conclusions and recommendations, references.

Thesis consists of: 72p. text without appendixes, 14 pictures, 11 tables, 30 bibliographical entries.

Appendixes included.

**Keywords:** general liability insurance, insurance cycle, insurance density, insurance penetration, market concentration.

## TABLE OF CONTENTS

|   |    |
|---|----|
| ABBREVIATIONS .....   | 7  |
| LIST OF TABLES AND FIGURES .....  | 8  |
| INTRODUCTION .....  | 9  |
| 1. METHODOLOGY FOR ANALYSIS OF GENERAL LIABILITY INSURANCE .....                                | 11 |
| 1.1. General Liability Insurance: Nature and Functions .....                                    | 11 |
| 1.2. Methods of General Liability Insurance Development Analysis .....                          | 18 |
| 1.2.1. Key Issues of SWOT Analysis .....  | 19 |
| 1.2.2. Quantitative Methods .....   | 20 |
| 1.2.3. Survey Questionnaire .....   | 22 |
| 2. GENERAL LIABILITY INSURANCE MARKET IN LITHUANIA .....  | 25 |
| 2.1. Structure of General Liability Insurance Market in Lithuania and Its Characteristics ..... | 25 |
| 2.2. General liability Insurance in Other Countries .....                                       | 26 |
| 2.3. Problems Related to General Liability Insurance .....                                      | 31 |
| 2.4. General Liability Insurance's Cycle .....  | 36 |
| 2.5. General Liability Insurance Environment in Lithuania .....                                 | 41 |
| 2.5.1. Political and Legal Environment .....  | 42 |
| 2.5.2. Economic Conditions for General Liability .....  | 43 |
| 2.5.3. Social and Cultural Situation .....  | 47 |
| 2.5.4. Technologic and Scientific Context .....   | 48 |
| 2.6. SWOT Analysis of General Liability Insurance Market in Lithuania .....                     | 48 |
| 3. TRENDS IN DEVELOPMENT OF GENERAL LIABILITY INSURANCE MARKET IN LITHUANIA .....               | 52 |
| 3.1. Development of General Liability Insurance in Lithuania .....                              | 52 |
| 3.1.1. Direct Insurance Ratios .....  | 52 |
| 3.1.2. Indirect Insurance Ratios .....  | 57 |
| 3.2. Predictions of General Liability Insurance Development in the Following Periods .....      | 58 |
| 3.2.1. Questionnaire Survey .....   | 58 |
| 3.2.2. Development of Premium Written .....   | 62 |
| 3.2.3. Development of Contracts Signed .....  | 63 |
| 3.2.4. Development of Claims Paid .....   | 65 |
| LIST OF REFERENCES .....  | 71 |

## ABBREVIATIONS

|                |  |
|----------------|--|
| AB             | - Lithuanian “Akcinė bendrovė”, joint-stock company                    |
| ADB            | - Lithuanian “Akcinė draudimo bendrovė”, joint-stock insurance company |
| DK             | - Lithuanian “draudimo kompanija”, insurance company                   |
| EC             | - European Commission  |
| EFTA           | - European Free Trade Association                                      |
| e.g.           | - <i>exempli gratia</i> (Latin: for example)                           |
| etc.           | - <i>et cetera</i> (Latin: and so on)                                  |
| EU             | - European Union   |
| GDP            | - Gross Domestic Product   |
| HHI            | - Herfindahl-Hirschman Index   |
| IBNR           | - Notified Claims and Incurred but not yet Reported C                  |
| i.e.           | - <i>id est</i> (Latin: that is)                                       |
| IT             | - Information Technologies   |
| ISC            | - Insurance Supervisor Commission                                      |
| MTPLI          | - Motor Third Party Liability Insurance                                |
| PI             | - Professional Indemnity   |
| R              | - Correlation Coefficient  |
| R <sup>2</sup> | - Determination Coefficient  |
| SWOT           | - Strengths Weaknesses Opportunities Threats                           |
| UAB            | - Lithuanian “Uždaroji akcinė bendrovė”, close-end company             |
| USD            | - USA dollar   |

## LIST OF TABLES AND FIGURES

### TABLES

|   |    |
|---|----|
| Table 1. General liability premiums – (2000-2008) billion euro at constant exchange rate, by author .....                     | 28 |
| Table 2. Relevance of liability insurance in particular country.....  | 30 |
| Table 3. Gross domestic product in Lithuania (1997 – 2009), by author.....  | 45 |
| Table 4. Companies in Lithuania (2002 – 2010), by author.....   | 46 |
| Table 5. Development of general liability insurance (2003- 2008), by author .....   | 54 |
| Table 6. Share of general liability insurance expenditures/cost in the revenues of Lithuanian business-units, by author ..... | 54 |
| Table 7. Services provided by insurance companies (1 <sup>st</sup> quarter of 2010), by author.....                           | 56 |
| Table 8. Key indirect ratios of general liability insurance market in Lithuania (2003-2008), by author.....                   | 58 |
| Table 9. General liability insurance in terms of premium written in year 2009 – forecast, in thousands Lt, by author .....    | 62 |
| Table 10. General liability insurance in terms of contracts signed in year 2009 – forecast, by author .....                   | 64 |
| Table 11. General liability insurance in terms of claims paid in year 2009 – forecast, by author ....                         | 65 |

### FIGURES

|  |    |
|--|----|
| Figure 1. Differences between types of liability insurance, by author .....  | 13 |
| Figure 2. Characteristics distinguishing general liability insurance from other lines of insurance, by author.....                                   | 15 |
| Figure 3. Problems related to general liability insurance, by author.....  | 31 |
| Figure 4. Changes in technical provisions for general liability insurance in Lithuania (1998-2008), by author .....                                  | 39 |
| Figure 5. Size of technical provisions in comparison with premiums written for general liability insurance in Lithuania (1998-2008), by author ..... | 40 |
| Figure 6. Environment of general liability insurance, by author.....   | 41 |
| Figure 7. Inflation rate (%) in Lithuania (1997 – 2009), by author.....  | 45 |
| Figure 8. Evaluation of general liability insurance using SWOT analysis, by author .....   | 49 |
| Figure 9. Concentration of general liability insurance undertakings in terms of premiums written (2008), by author .....                             | 53 |
| Figure 10. Premiums written and claims paid (2003- 2008), thousand Lt, by author.....  | 53 |
| Figure 11. Annual change in GDP and premium written for general liability insurance, by author.....  | 55 |
| Figure 12. Reported claims and indemnities (2003- 2008) number of cases, by author .....   | 55 |
| Figure 13. How long do you use general liability insurance? .....  | 60 |
| Figure 14. What would motivate you to use general liability insurance? .....   | 60 |



## INTRODUCTION

Continually improving life quality in Lithuania encourages development of new society's needs what stimulates consumption and leads to the growth in a variety of services and products provided in a local market. Growing supply creates more demanding and suspicious consumers who are raising requirements for products or services provided in a market. Meanwhile increasing interest in exercising international business, and growing collaboration of Lithuanian companies with foreign companies is even more stiffening requirements for all market participants. Foreign co-operators are tightening conditions for those willing to cooperate with them. Therefore, most of Lithuanian companies are facing growing need to cover their third-party liability. For those working internationally this is rather a must now.

Requirements increased together with time leading to maximum expectations of the best result for producers and those providing various services. Thus people do not hesitate to pursue a claim if they feel that a sub-standard services or bad quality products were sold, or that professionals were not behaving deliberately. Every service provider or every producer faces risk of being claimed for their mistakes. The softening liability market and growing litigation has given rise to new and unexpected challenges for entrepreneurs. As a result, the demand for general liability insurance increases its importance as a provider of essential financial protection and coverage for companies facing risk based on third-party liability in daily business. Moreover, it is a very important and often strict requirement for those working on international level.

**The actuality of the topic.** Since Lithuania's insurance market is really small and the share of general liability in it is extremely small, there is a lack of information provided on this topic. The topic of general liability insurance is not often found in Lithuanian scientific literature. Actually there are no special studies made on this topic yet, there are no articles announced in scientific publications, only few written in daily newspapers. There is no satisfactory information provided even about already developed countries. Therefore, this paper aims to explore general liability insurance market in Lithuania, to reflect actual situation, to provide a short overview of general liability insurance in some other countries and to try to evaluate and predict possible future changes in this field.

The main problem of this paper: lack of knowledge about general liability insurance, its strengths and weaknesses, and voluntarily usage to cover third-party liability.

The object of a paper – trends in development processes of general liability insurance, its chances in Lithuania's insurance market.

**The aim of a paper** – to identify possible trends in development of general liability insurance market on the grounds of provided analysis.

Following **goals** shall be fulfilled in order to reach the aim:

1. Define the essence of general liability insurance.
2. Examine the environment of general liability insurance.
3. Estimate the size of Lithuania's general liability insurance market with reference to factual data.
4. Evaluate structure of general liability insurance market and competitiveness in it.
5. Develop a survey that would help to evaluate insurers' behaviour and to estimate current situation in application of general liability insurance.
6. Reveal the tendencies in development of general liability insurance market in Lithuania with reference to forecasted data.

**Investigation methods applied** in this paper:

1. Systematic studies and analysis of scientific and statistical material.
2. Questionnaire survey.
3. Graphical presentation of data and its analysis.
4. Comparative analysis of received data.
5. Summarising of analysed data and presentation of appropriate conclusions.

**The work is structured as follows.** This master thesis starts with theoretical part which firstly defines what general liability insurance is and presents the actuality of it, as that determines the scope of the issues. It reviews the importance of general liability insurance and presents its key characteristics distinguishing from other types of liability insurance. This is followed by analysis of methods applied in this paper. In the second part of this work the structure and characteristics of general liability insurance market in Lithuania are presented. Peculiarities of Lithuanian market are reviewed, what is followed by a small sight to some other countries and situation there. Afterwards, main local general liability insurance problems are analysed and systematized, paying exceptional attention to cheating problem. Later on, the cycle of general liability insurance is discussed and presented. This part also includes a short overview of economic, political and legal, social and cultural, and scientific and technologic environment, what is followed by SWOT analysis of general liability insurance market. The third part includes analysis of trends in development of general liability insurance market; direct and indirect ratios are calculated and presented, development of main dimensions is reviewed. Beyond, results of a survey are introduced and future forecasts are provided together with explanations. Finally, summarized conclusions and recommendations identifying some main emerging problems are provided.

# **1. METHODOLOGY FOR ANALYSIS OF GENERAL LIABILITY INSURANCE**

## **1.1. General Liability Insurance: Nature and Functions**

Activities of higher risk level are not prohibited by law. Even more, overtaking higher risk creates possibility to earn more. However, the duty to behave accurately, carefully and not to make harms to others with personal behaviour is a common duty. This obligation is applicable for every member of a society, only the degree of how strong each person has to keep it differs from person to person, as well as, from activity driven by this person. Economical aspects are of the same high importance as legal factors, when the issue of civil liability development is discussed. Any type of civil liability insurance faces high risk of insurable event. This is caused by the size of the detriments caused, which is mostly relatively high, e.g. car accident, accident in a working place, etc. Insurance premiums are mostly held in relatively high level, due to the fact that insurance companies are obliged to accumulate certain amounts of money. From here it follows that only financially and economically strong subjects are able to pay such high premiums, therefore most civil liability insurances are outspread in most developed countries. In the countries with slower economy development, civil liability insurance is much less popular and developed. However, there is also an opinion that the person or subject has to suffer higher expenses than other members of society, when their activities cause higher risks to the people round about.

Activities of higher risk become especially dangerous when the individual is not able to control all the processes related to them. This means that even without violation of the rules for the usage of certain object negative outcomes may appear any way. There is set an absolute liability for companies providing dangerous activities including services or producing products which can also be dangerous to their users. This is so because of unnameable harms, that could be caused by certain activities or products, having in mind the dimensions of possible detriments.

In last decades when the industry, science and technique develop so fast, the capabilities of people have increased significantly what also caused higher level of civil liability. Increasing civil liability gave a start to the growing need of civil liability insurance as a tool helping to protect those subjects implementing activities of higher risk.

The culprit can be found of almost any detriment which is caused not by the nature forces or political events. The size of the liability related to the harms made to people or nature is increasing and stiffening. State institutions, regulating ecology area are assessing the dimensions of harms

made to nature, and courts are evaluating harms made to people. Therefore, the culprit will be found sooner or later. Furthermore, very good liability insurance has to be owned by every business willing to develop business successfully. Nobody is informed about possible mistakes made by employees, or harms made by the product to the consumer.

Today's insurance keeps its key mission; however, it has changed significantly comparing it to predecessor. These changes were mainly caused by technological changes, changes in the needs of assurers and the potential of insurers.

Civil liability and law on it is stiffening permanently and extremely rapidly, shows world's practice. Therefore, it became clear and obvious that even small mishaps can end up in large lawsuits for business units. Lithuania is not exclusion in this case. As a result, rapid changes in the life shall be done in a meaning that equivalent situation may develop in Lithuania in a near future, as our society becomes more and more litigious.

In western countries there is a long-lasting practice of a strict need to have general liability insurance. Person's life and health is evaluated much more than any other assets, therefore Lithuanian companies exporting their production to those countries shall not close their eyes and must work on their safety, protecting their own assets in advance. It is obvious, that the bigger losses may appear from the caused problems to others, than to yourself. This may lead to the loss of all own property in order to offset the losses caused to others. This is especially dangerous to not so well developed and expanded Lithuanian companies. Usage of general liability insurance is essential for most companies not only because of its protecting characteristics, but also as additional guarantee of highest quality of the production or service.

Usually it is so that big and middle-size companies are willing to insure their business especially those implementing construction, manufacturing and trade activities. However service companies do not tend to use general civil liability insurance, despite the fact that their activity is related to direct serving to customers, what increases possibility to cause harms and to be claimed on. However, most of these companies providing certain services in a market are rather using professional indemnity insurance.

On the other hand, big increase in usage of general civil liability insurance is seen in last years. This growth is a result of increasing frequency when people are putting down the claims on companies providing certain services or selling goods. People's activity increases and the number of cases when their claims are met and satisfied is growing as well. For a present moment this is the main reason improving the usage of general liability insurance among the business units. General liability insurance is more frequently seen as a protection tool against huge possible losses.

### ***Characteristics of general liability insurance***

Historically, general liability has been classified into different sub-categories of liability insurance. The broadest scope of specified liability covers exists in the United States market. However, some of the covers are integrated in the general liability policies in other markets. Lithuania's market is an example here. According to the literature sources on general liability insurance, "general liability insurance" as a concept covers professional indemnity insurance, employer's civil liability insurance, commercial activity third party liability insurance, carriers' third party liability insurance, and director's and officer's civil liability insurance. However, in a market it is not exactly the same classification as it is in literature. It also depends on insurance company and the terms it uses. General liability insurance may cover all these types of third party liability insurance, or only few of them. On the other hand, the statistical data provided in annual reports on insurance market includes all these mentioned insurances under the term "general liability insurance".

Looking from another perspective, each of above mentioned liability insurance types differ from each other. In order to have a more visible difference between general liability insurance and other types of liability insurance, the figure 1 is provided.

| <b>Commercial general liability insurance</b>  | <b>Product liability insurance</b>   | <b>Professional Indemnity insurance</b>   | <b>Directors and officers liability insurance</b>   | <b>Employer's liability insurance</b>  |
|--|--|---|---|--|
| Covers losses which originate from bodily injury and/or property damage on the premises of a business, when someone is injured as the result of using the product manufactured or distributed by a business or when someone is injured in the general operation of a business. | Covers losses which originate from defects in conception, design, manufacture or storage of the product, or from improper use by the consumer. Liability is triggered by the defective nature of products, not by their hazardous characteristics. | Provides corresponding protection for companies rendering professional services. Policies are intended to cover claims for damages based on violations of the duty to exercise care and prudence, or failure to follow state-of-the-art or other generally applicable professional standards and practices. | Liability insurance covers the consequences of violations of the duty to exercise care on the part of the members of the board of directors, supervisory boards or management of legal entities (such as stock corporations or companies with limited liability). For public companies this type of policy protects them against certain types of claims from shareholders, who suffer investment losses. | Covers the consequences of occupational accidents that occur due to a lack of adequate safeguards on machines, tanks and vessels, and facilities. Occupational diseases, such as those due to inadequate ergonomic conditions at the workplace are also covered. |

**Figure 1. Differences between types of liability insurance, by author<sup>1</sup>**

<sup>1</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. pp.7-8

As we can see from figure 1, the range of risks covered by general liability insurance is relatively broad. In addition with reference to Jūratė Kondratavičienė the expert for commercial insurance in AB “Lietuvos draudimas”, general liability insurance covers business unit’s civil liability which is specified in Civil Liability Code of Lithuanian Republic. Such commercial general liability covers within one policy are usually provided only to small and medium-sized enterprises, for small businesses that are not exposed to specific risks.

General liability insurance is closely linked to the legal civil liability norms existing in a country. In case, if there would be no civil liability defined by law, this is, if there would be no obligation to offset harms made to other persons or their property, there would either exist no civil liability insurance, or it would be not popular and not significant type of insurance.

The insurance of liability risks is relatively new line of business compared to marine, fire or life insurance. It has its roots in the industrialization of the early 19<sup>th</sup> century. The introduction of third party liability insurance was heavily disputed among scholars and politicians. While the proponents emphasized the compensation of innocent victims, the opponents perceived the insurance of “negligence” as frivolous. Today the concept of insurance is not contested any more. Moreover, current tort law and compensation levels would not be possible without a well organized liability insurance system<sup>2</sup>.

The often broad coverage provided by liability insurance differs from property insurance, which is mostly designed on a “named perils” basis. Property insurance provides cover only for losses associated with explicitly defined causes and where claims can not exceed the value of the insured goods.

However, there is a gap between what is included into the term ‘general liability insurance’ in books and what is offered in the market under this name. In specialised books this term is used only for private individuals and insurance of their civil liability, however, in real business it includes all types mentioned above.

There can be accentuated two types of general liability insurance depending on the implementation of insurance which may be done either in voluntary agreement between assured party and insurance company, or is obligatory by law. These are voluntary and compulsory general liability insurances.<sup>3</sup>

Compulsory general liability insurance includes employer’s civil liability insurance, and professional indemnity insurance, while voluntary general liability insurance is transporters’ civil

---

<sup>2</sup> Harrington S. E. Tort Liability, Insurance Rates, and the Insurance Cycle. pp. 1-2

<sup>3</sup> Čepinskis J., Raškinis D. *Draudimas*. Kaunas: Pasaulio lietuvių kultūros, mokslo ir švietimo centras, 1999. p. 381

liability insurance, and commercial activity civil liability insurance. This is the case of Lithuania. In other countries additionally there is director's and officer's liability insurance distinguished.

General liability insurance is designed to companies producing, distributing, and selling products, to those providing services, or companies whose employees are working in a territory or premise of a customer, also to those in whose premise or territory there permanently are a lot of customers.

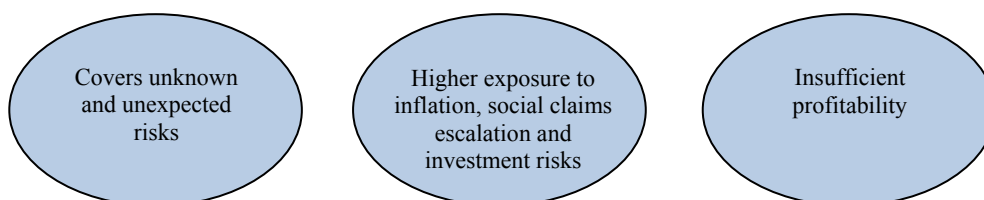
One possible way to divide general liability insurance is:

- activity civil liability insurance - this is insurance that covers the harms made to third party, when the origin of harms is related to the activity of assured, with its used territory, premise, machinery or another equipment. This includes maintenance of buildings and machinery, maintenance of advertising stand, unintended actions of employees which caused harms to the health or property of other persons;

- product civil liability insurance – is insurance that covers the harms made to third party when the origin of harms is related either to the product which was produced, sold, supplied, repaired or installed, or to the service provided by the company.

The key difference is that in general liability insurance the manifestation of a claim can occur over a longer period of time. The probability of a severe claim is low, but when one occurs, the loss can be very high<sup>4</sup>.

However, liability insurance can be easily distinguished from other lines of insurance, due to characteristics shown in figure 2.



**Figure 2. Characteristics distinguishing general liability insurance from other lines of insurance, by author**

- Unknown and unexpected risks may be covered by liability insurance. Interaction of technological innovation and changes in the social and legal environment can result in new emerging risks which can lead to significant losses.

- The long-tail nature of liability risks results in a higher exposure to inflation, social claims escalation and investment risks. Surprise exposures and unexpected changes in the number of claims and claims costs can be created by dynamics in the liability system. Mostly these are not considered at the time of underwriting the policy.

- The profitability of liability insurance has been insufficient over the long run<sup>5</sup>.

---

<sup>4</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. pp. 5-6

The social importance of insurance is very high. Uncertainty related to future can be replaced by certainty and security when using insurance. At the same time, insurance is an effective manner to save. If there would not exist insurance as a product, one part of those facing losses would live in poverty and would become a load of care for the society. From the social point of view, insurance can be described as a source of welfare; furthermore, it reduces the gap between different strata. From the economic and social side, insurance is essential specification for the prosperity of country's home market. Due to the requirements raised by insurance companies, the equipment is put in order, preventive measures are stronger, and technical discipline is improved. Activity of insurance is disciplining of society and creation of order.<sup>6</sup>

Having the right insurance cover to protect against life's uncertainties is generally considered to be sensible financial management. In an actual case general liability insurance shall be used as a protection tool. This is type of insurance no business should be without. General liability insurance appeared as a result of actions made by persons in order to receive at least partly compensation of their expenses appearing due to a must to cover the harms made. In present times general liability insurance can prevent a legal suit from turning into a financial disaster by providing financial protection in case if business is ever sued or held legally responsible for some injury or damage. General liability insurance protects business from liability arising from negligence that may cause injury to others, such as a customer or employee. It also protects company if someone is injured as a result of using the product or service of a company. Consideration that the legal expenses and settlement or judgment expenses of a single lawsuit could drive business into bankruptcy highlights the need of this kind of insurance. Insurance gives the peace of mind and security business needs to operate<sup>7</sup>.

However, general liability insurance does not provide the right for the aggrieved person to require for the coverage of harms made directly in insurance company. This can be explained because aggrieved person and insurance company have no obligations to each other. Though, in practice it is so that insurance payoffs are made directly to aggrieved parties.<sup>8</sup>

### ***Size of possible losses***

In the field of general liability insurance the concept *harm* is a very broad term, which includes losses of a property, injury, expenses appearing due to it, lost income which person would have got, if there would be no illegal actions committed.<sup>9</sup>

---

<sup>5</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. p3

<sup>6</sup> Galginaitis J., Stankevičius R. *Draudimo teisė*. Vilnius: Teisės institutas, 2005. pp. 57-58

<sup>7</sup> Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: 2005. p. 105

<sup>8</sup> Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: 2005. p. 105

<sup>9</sup> Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: 2005. p. 101



Depending on the type of harms made special harm coverage is possible. When the person is injured the coverage must include: lost income, expenses related to recover of health, and moral detriments. It means that a legal person whose actions have caused harms to another person's health has to offset the sum of lost income due to disability to work. Plus it has to cover all expenses related to the treatment of injured person and to offset the moral suffers, which are evaluated by the court, because this amount is not set by law.

In case, if person has died, the legal person has to cover detriments made to the dependants of a dead person or to people who had the right to get sustenance from him on that day. These mostly are children, spouse, parents or other people. In actual case, the liable party has to pay that amount of money which dependants would have got from the victim, including the coverage of funeral costs and moral detriment.

When there are no injuries caused, but the property is destroyed or damaged, the aggrieved person may require to offset the costs of reconstruction of the property, including the reduction of actual value of it, in case, if the values has decreased due to actual damages. When the property is absolutely destroyed, aggrieved person can require receiving either the property of the same type and value, or equivalent remuneration in money. Person has to cover the value of a property which existed in a day of accident. Some additional costs may also be asked to be covered, e.g. such like transportation costs. When caused financial costs shall be offset in cash.

For the manufacturers or service providers there is an obligation to cover the harms related to the usage of not qualitative products or services. The importers of certain goods in a meaning to sell or to rent them have the same responsibility as manufacturer. Legally it is so that if a manufacturer can not be found, any supplier of a product is reputed as a manufacturer.<sup>10</sup>

The coverage of harms made includes both detriment related to the injury of health or property, and compensation of financial and moral detriments. Furthermore, in many countries persons may be punished also for the harms made to the environment.

Hence, there is a number of cases when a legal person may suffer losses due to harms caused to other people. Moreover, the possible risks created by people's actions are permanently increasing due to very fast developing industry, science and technology. People become not able to regulate all of their processes. For every business owner, the chances of getting sued are dramatically increasing in the last decades. Therefore, it is very important to find the way to compensate this growth with possibilities to avoid possible detriments or losses caused by them. The main helping tool in this case is usage of insurance. Insurance is a precaution against a possible unwanted outcome; it is a way of managing risk and is a protection tool against certain potential losses. With the usage of

---

<sup>10</sup> Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: 2005. p. 104

insurance business transfers its risk to insurance company in exchange for a premium. Insurance puts the company back into a position pre-claim in case, if business suffers losses<sup>11</sup>.

The third-party liability insurance is usually “all-perils” insurance. It provides protection for the insured against the legal obligation to pay compensation to third parties for losses or damages for which the insured may be liable.

The topic of general liability insurance is not often found in Lithuanian scientific literature. Actually there are no works done on this topic at all. Since Lithuanian insurance market is really small and the share of general liability insurance in it is extremely small, the key attention is paid to analyse insurance in general, or branches of life and non-life insurance. There is even a lack of attention paid on insurance market in general and its development in Lithuanian scientific literature. Most of works are done on development of insurance business and its perspectives (Narkūnienė J., Lezgovko A., Lastauskas P.), also life insurance and its development as well as assurers’ behaviour in life insurance is more often discussed (Belinskaja L., Kindurys V.). Vytautas Kindurys is the one who is making most of the researches on insurance in Lithuania, however he is mainly focusing on insurance marketing and customer loyalty in insurance business. To make a conclusion, there is no attention paid on general liability insurance in Lithuanian scientific literature. The topic is yet really less explored due to its small share in the overall insurance portfolio. Therefore, this master thesis focuses on general liability insurance, on its environment, development tendencies in Lithuania, and possible trends in the future.

## **1.2. Methods of General Liability Insurance Development Analysis**

The key success factor when doing business is to make rational, future oriented decisions. When making such decisions the most important factor is to forecast possible outcome of actions made and to foresee future events, conditions, and circumstances when performing individual functions at work. A success of work can be destined by it. Rationally based future foresight methods are analysed by prognostication theory. Currently it compounds relatively stable set of forecasting methods, and its kernel is quantitative forecasting methods.

On the other hand, qualitative methods could be used also, in order to analyse main possible trends of general liability insurance in the future. However, this paper is supported only by quantitative methods and a self made survey. The methods used are presented in the following chapters.

---

<sup>11</sup> Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: 2005. p. 105

### 1.2.1. Key Issues of SWOT Analysis

In order to analyse possible trends in development of general liability insurance, SWOT analysis could be used as a tool for taking a deeper look into this insurance. Strengths Weaknesses Opportunities and Threats (SWOT) analysis is one of the most popular and very often applied methods of analysis of certain business.

Opportunities and Threats analysis – this analysis focuses on condition and development of strategic external situation. This tool will be applied in order to estimate external factors which are influencing general liability insurance and impact its attraction. Various criterions are analysed here, but only those influencing general liability insurance, while general liability insurance itself has no impact on them or this impact is very little. After primary and secondary survey is executed, the data of former periods are analysed and their further development is forecasted. There is an opinion that the data of previous ten years is necessary in order to forecast forthcoming three to five years. However, data is usually determined using estimation methods, whereas some part of needed data is not available or big outlay would be needed.

Analysis' parameters are technological, cultural, political, legal, economic and demographic factors. Opportunity characterises environmental situation, which might be beneficial to general liability insurance, while threat defines situation which may be negative to a company. Furthermore, it is significant to evaluate possible consequences in order to define influence of environmental factors to the business of general liability insurance.<sup>12</sup>

Opportunities and Threats analysis supplies information about a situation of strategic external conditions and their further development, while Strengths and Weaknesses analysis focuses on evaluation of internal conditions. The purpose to compose general view of a competitive situation of general liability insurance is gained by analysis of qualitative and quantitative factors which can be influenced by general liability insurance itself. Capabilities to exercise opportunities given by a market and to avoid risk are shown by Strengths, while opposite situation is shown by Weaknesses. Firstly, it is essential to estimate influence done to development of general liability insurance by evaluating various factors or success factors.

If to analyse key advantages of this analysis, so Strengths and Weaknesses analysis has the same main advantage like in a case of Opportunities and Threats analysis – it is presentation of important information, which is significant when creating strategies. However, this analysis is subjective, what is not so positive. Strengths and Weaknesses analysis is effective when it is linked to the results of Opportunities and Threats analysis. Such interconnection is called SWOT analysis.

---

<sup>12</sup> Pranulis V.P. Marketingo tyrimai. Vilnius: 1998. p. 166

### 1.2.2. Quantitative Methods

Qualitative methods are widely applicable and serve best if there is no wide range of information given. However, quantitative methods might be used when a sufficient amount of information is provided about the range which will be forecasted. The latter methods are more formalised and more objective than qualitative. According to S. C. Wheelwright and S. Makridakis quantitative methods is one of the three biggest method groups together with technological and decisive methods<sup>13</sup>.

Quantitative methods are broadly explained in science literature. This type of forecasting method is mainly used in economic field – finance, business, management. Forecast is done by calculations when applying quantitative methods.

To choose a suitable forecasting method – is to choose an entirety of rules, implementing a specific way of forecasting the future. These rules are formalised when choosing quantitative methods of forecasting. With reference to required aim of the forecast a particular obvious, clearly conceivable principle should be applicable each time, with certain specific characteristics, essential for certain analysis. The most commonly used and reputed as simplest method is Moving Average method which is based on easily perceptible principle. According to it the value of a dimension may be estimated for a particular future moment using the average of the last values of selected previous periods. The more previous results will be selected, the more concrete will be forecast for the future. Similar basis is applied also for other frequently used forecasting methods, which is reasoned with analysis of time series. Causal forecasting methods, like regression, are referring to principle that explaining reasons and character of dimension's development determines future values of that dimension.

There are two main quantitative forecasting methods. The first one is a method of time series. Here it is made a premise that future development of selected dimension will follow the same trend as development of analysed data of previous periods was showing. Former data is analysed as a sequence of time moments and correspondent to it series of digital value of a dimension. Another method is causal or explanatory model. Agreeably to it, it is forecasted with an explanation of relation between forecasting dimension and a range of parameters which influence it. Following these to types of models, there were created numbers of other methods.

In this thesis there will be used following forecasting methods, which were chosen with response to available data. These are:

- Regression Analysis,

---

<sup>13</sup> Pabedinskaitė A. *Kiekybiniai sprendimų metodai. I dalis. Koreliacinė regresinė analizė. Prognozavimas*. Vilnius: 2005. 15p.

- Moving Average,
- Exponential Smoothing,
- Time Series Trend.

*Regression Analysis* method is from a group of causal forecasting methods. This method is applicable if connection between variables can be expressed in clear mathematical subordination. It provides quite precise results. Importance of match between theoretical model and data is highlighted when applying method of Regression Analysis. A number of digital measures is used in order to evaluate it, best know are correlation coefficient, determination coefficient, etc.

It is advisable to calculate value of correlation coefficient ( $R$ ), because the trend and degree of linear connection between two variables is reflected by correlation coefficient. In this way we can find out if the causal link used as a base for forecast really exists. While determination coefficient ( $R^2$ ) reflects which part of dependent variable fluctuation can be explained by the fluctuation of independent variable. However, it is not sufficient to apply single correlation coefficient, because there is a must to consider also a sample size<sup>14</sup>.

*Moving Average* method is based on calculation of an average of last  $n$  members of series. An average which was received is a forecast for new future period. The character of changes in analysed dimensions determines the length of past period, which is chosen when applying this method. Fluctuations are better equilibrated by longer period; however, this results in forecast which is less sensitive to the changes of nearest future. Furthermore, all retrospective data has equal influence on a prediction<sup>15</sup>.

Smaller impact of older data on a forecast is better evaluated by *Exponential Smoothing* method. Instead of simple moving average weighted average of all values in a time series is used here. In Exponential Smoothing method for each forecast to estimate there are two values of analysed dimensions needed: last former value and its forecasted value. This method is based on sum of last prognosis and a share of its error (certain percentage). Forecast is obtained from previous ones increasing it or reducing according to a size of error. This method is one of the most applicable ones, because there is not a big need for former data<sup>16</sup>.

*Time Series Trend* is used to reflect main tendency of time series values, clearly said – increase or decrease. Least-squares estimation is mostly used for this approximation. In this thesis linear function trend model is applied.

*Market Concentration.* Market concentration describes the extent to which the top companies in an industry take up large portion of the market share. There are various methods used to measure this. In this thesis, for this purpose, there will be used the Herfindahl-Hirschman Index (HHI). The

<sup>14</sup> Budrevičius A. Prognozavimo metodai vadyboje. Vilnius: 2007. p. 40

<sup>15</sup> Pabedinskaitė A. Kiekybiniai sprendimų metodai. I dalis. Koreliacinė regresinė analizė. Prognozavimas. Vilnius: 2005. p. 67 p.

<sup>16</sup> Budrevičius A. Prognozavimo metodai vadyboje. Vilnius: 2007. p. 31

HHI of a market is calculated by summing the squares of the percentage market shares held by respective firms. For example, HHI in industry consisting of two firms with market shares of 80% and 20% equals to  $80^2+20^2$ , or 6800. As it will be explained later, this means strong concentration in a market.

HHI is calculated using following formula (1):

$$HHI = \sum_1^n d_i^2. \quad (1)$$

Where  $n$  – is a number of companies in a market;

$d_i$  – is a share of realisation of  $i$  company in a total realisation of a product.

A market with HHI below 1.000 is regarded as “unconcentrated”, between 1.000 and 1.800 as “moderately concentrated”, and above 1.800 as “highly concentrated”.

There are two advantaged of HHI if to compare it to concentration index. Firstly, market share data of all companies existing in a market is used when calculating this index. Furthermore, the calculation of the square of a share of realisation of  $i$  company in total realisation of a product in a market gives bigger weight to the shares of bigger companies of a market. To make a conclusion, the more companies differ one from another in their size, the bigger is the value of HHI. This index can vary in a range from 10.000 (case of monopoly) to 0 (when there is a big number of equal small companies in a market). Following example reflects the advantage of HHI. If in a branch there are 4 companies, which have equal shares of 25 percent, HHI will be 2.500. If in a branch there are 4 companies and one of them has 97 percent when other 3 have 1 percent per each, the value of HHI will be 9.412. The differences in a structure of a market are clearly evaluated by HHI index.<sup>17</sup>

Methods observed in this chapter are not providing results of high reliability. However, they can be used in order to take a look at possible future changes, with reference to historical changes of former periods. These methods will be applied further in this thesis. In order to provide more realistic evaluation, results will be supported by comments on noticed tendencies in the market, taking a deeper look at actual situation in the market and its environment.

### 1.2.3. Survey Questionnaire

After getting acquainted with general liability insurance and its situation in Lithuania there was made a decision to check what the actual situation in the state is, whether companies are exercising general liability insurance, which is not compulsory in Lithuania, or do they think that this type of insurance is not needful.

---

<sup>17</sup> Dumčiuvienė D. Rinkos struktūros mikroekonominė analizė. Kaunas: 2000. p. 24-25

According to requirements set for execution of representative researches, the range of populations has to be chosen not simply. When executing statistical researches, key aim is to acquire results about all the population. Therefore, the most important characteristic of selected range is its ability to represent the overall population. However, for practical examination the price of selected range is also very important, as well as simplicity of selection, and time used for the creation of statistical range.

When selecting elements for the range, there exists some fortuity. Sometimes it is very subjective and its impact for the selection of range is not evaluable. Ranges selected in this way are so called non-probability ranges. For other ranges fortuity is strictly specified – every elements chance to be in a range is evaluated by certain probability. Such ranges are called as probability ranges<sup>18</sup>.

There are few ranges covered by an umbrella of non-probability range. These are:

- expert's range;
- quota's range;
- occasional range.

The first one – expert's range – when elements are chosen as a part of range with reference to the opinion of experts. The level of subjectivity is very high here, therefore ranges selected in this way may not be compared. These ranges are not representative and they can not generalize whole population.

With reference to the structure of population, quotas for the shares of population are selected in advance. When elements for each quota are selected accidentally, accidental layered range is a result. Range, where quotas are filled not fully accidentally, is named quota's range. Here appears some difficulties when generalizing whole population as well.

Occasional range is when range includes first occurred elements. Fortuity is very high here, and it is impossible to describe it using mathematical models and to evaluate it. Therefore this range is not representative<sup>19</sup>.

Due to the fact that it is very difficult to access the information about certain range of companies, to contact them and to receive needed information from them directly, the range of companies which were selected to be questioned for this thesis was selected not according to all the requirements set that range would be held as very representative. It was expected that companies will not be active in replying to the questionnaire, therefore, it was intended to send questionnaire to as many different companies, as possible, in order to get the biggest possible

---

<sup>18</sup> Čekanavičius V., Murauskas G. *Statistika ir jos taikymas I*. Vilnius: TEV, 2003. p. 12

<sup>19</sup> Čekanavičius V., Murauskas G. *Statistika ir jos taikymas I*. Vilnius: TEV, 2003. p. 12

number of responds with intension that those answers would reflect behaviour and thinking of different companies which are potential users of general liability insurance.

A questionnaire form was placed in internet. Appeals were sent to nearly 300 different companies from 5 biggest Lithuania's cities (Vilnius, Kaunas, Klaipėda, Šiauliai, Panevėžys), mainly focusing on various services providing business units.

*Return of questionnaires.* Returns from companies remained far below 100 percent, eventually about 17 percent of companies filled in the questionnaire, while about 30 percent of recipients looked at the questions. Answers to questions were mostly complete and detailed. Some of companies showed a high degree of interest in the subject of the survey.

It is important to state that results of a survey do not represent the situation in Lithuania, especially in smaller towns, because it was made questioning companies working in the biggest cities. Furthermore, the return of questionnaires was very low. Therefore the results provided in the third part of this thesis shall be held as only supporting and orientating instrumentality, giving a small hint about behaviour of potential insurers.



## **2. GENERAL LIABILITY INSURANCE MARKET IN LITHUANIA**

### **2.1. Structure of General Liability Insurance Market in Lithuania and Its Characteristics**

The importance of commercial insurance is very high for both citizens and country's economic. This type of insurance is not in so far helping to avoid irreversible ravage as helps to cover the losses caused by certain accident. From economic point of view, insurance is significantly important factor to each country's development and prosperity. Stable system of commercial insurance helps to raise economics, save the capital and national income, increases the employment. It protects from accidents and another risks, activates capital market and supports state budget. Safer environment is assured not only to its citizens, but also to investors. Simply said - insurance market reveals the level of countries' development.

In comparison with other countries Lithuania's insurance market is quite young and still in its development, it is already advanced, but the area of possibilities is still very broad. 20 years ago the first steps were made in Lithuania's insurance business and today there is an client oriented, operative and fast developing insurance market. Though, small population in a country already determines particularly small size of insurance market, however, insurers take all possibilities which appear in a market and react to changes in it. It is significant that Lithuanian insurance market adopts and functions on the basis of modern principles and the insurance supervision system, which completely matches advanced international insurance standards.

Law on Insurance enacted in year 1990 has laid the fundamentals of modern legal insurance nexus. The settlement of insurance activity and competition in insurance market led to the demand of modern regulation of insurance market. Life and non-life insurance did not exist as separate and independent branches in Lithuanian market starting from the introduction of insurance activities. Only after the Law on Insurance was enacted in year 1996, the start of non-life insurance as a separate insurance branch was perfected in Lithuania. This made a very positive impact on insurance industry. 1999-2001 in insurance market could be defined as a period of stagnation with a very low positive development. Starting from year 2002 recovering Lithuania's economy, increased purchasing power created a bigger interest in insurance services and helped for the insurance industry to recover<sup>20</sup>.

---

<sup>20</sup> Narkūnienė J. Lietuvos draudimo rinka ir jos perspektyvos. *Tiltai*, 2007, nr. 2 (39). p. 24

Especially big stimulus for changes in Lithuania's insurance market was euro-integration processes during last few years. A new Law on Insurance (2003) was enacted just before joining European Union. This was the third Law on Insurance in a relatively short period of time, which led to a visibly clear improvement tendency in Lithuania's insurance undertakings<sup>21</sup>. Significant changes were introduced into the insurance market after joining EU. The doors were opened for other EU members to establish subsidiaries of their insurance companies in Lithuania with a new way of controlling them. Starting from year 2005 supervision rights belong not to Lithuania's, but to appropriate EU member country's supervision institution.<sup>22</sup> There is a presumption that Lithuania's insurance market will integrate into EU insurance market in the future, however, at the moment the influence of mentioned companies is not significant.

Since general liability insurance is not compulsory insurance in Lithuania, it is chosen only by those business entities who are self willing to reduce their own risk related to harms made to their customers – users of services provided or products produced or sold, as well as people injured due to fault of company and its employees. This type of insurance is relatively low potential having type of insurance due to the fact that Lithuania is a small country, where mainly small companies are functioning in the market, what does not give very exciting expectations for the future development. General liability insurance is driven by companies existing in the market. Since they are mostly small or medium sized (SME), there is quite small possibility that the market of general liability insurance could increase significantly. This type of insurance is not compulsory, therefore it is supported only by free will of business owners. Knowing that entrepreneurs are focusing on increasing their income and not creating additional expenses while reducing the risks, shows low potential of general liability insurance in Lithuania.

## **2.2. General liability Insurance in Other Countries**

Liability insurance, including general liability insurance is fast growing in importance around the world. It is especially high developed in the United States, as well as in West European countries, while emerging countries are also showing positive movements in this area.

One of the world's largest reinsurance company Swiss Re has made a survey and the results are astonishing. In 2008, worldwide it was spent approximately 142 billion US dollar on liability insurance by business. This is about 25 % of the premiums corporations spent on insurance and slightly less than 9 % of the global non-life market premium volume of 1.585 billion US dollars. In the largest market by far – United States – it was USD 77 billion US dollars, more than half of

---

<sup>21</sup> Čepinskis J., Raškinis D. Draudimo veikla. Kaunas: 2005. p. 120

<sup>22</sup> Narkūnienė J. Lietuvos draudimo rinka ir jos perspektyvos. Tiltai, 2007, nr. 2 (39). p. 24

global commercial liability premiums. The world's second largest market was the United Kingdom, where commercial liability generated premiums of 12 billion US dollars in 2008. In the largest markets in the Asia-Pacific – Japan and Australia – commercial liability premiums were 5 billion US dollars and 4 billion US dollars respectively. In most emerging markets, penetration of commercial liability insurance is low; however it is growing at double-digit rates<sup>23</sup>.

Developed economies account for roughly 95 % of commercial liability premiums, while the United States generates 54 % of premiums worldwide. The demand for commercial liability insurance in the United States is driven by the size of the economy and the sheer volume of lawsuits that are filed in the country. The amount spent on liability insurance keeps its continual rapid expansion and is exceeding the overall growth of world GDP, due to increasing litigation in almost all regions, the overall increase in damages awarded to plaintiffs and rising healthcare costs<sup>24</sup>.

The cost of liability risks can vary extremely depending on the size of the business-unit, the industry it functions in, and the jurisdiction. Liability insurance provides efficient protection against the significant low-frequency, high-severity risk. In the United States, the average cost of commercial liability insurance was about 0.2 % of business revenues in year 2008. As it is stated in the sigma study of Swiss Re, the average cost of liability insurance is lower in other countries<sup>25</sup>.

In recent years growth in liability and general liability insurance has picked up in many countries especially in emerging ones, even financial crisis has not made huge impact on its development. However, general liability insurance presently amounts only for a small part of non-life insurance business in emerging markets, yet its importance is rising as sustained economic development calls for more elaborate and sophisticated liability regimes.

As a more vivid explanation further comparison can be provided. The total premium income for the European insurance market declined in nominal terms and at a constant exchange rates by 6 % to just under 1.060 billion euro in year 2008. This shrinkage was mainly driven by the life sector. In the life market, the impact of the financial crisis has been quite significant; however, non-life premiums have generally been little affected by the economic downturn except for a small number of lines of business. In 2008, European non-life premiums totaled 415 billion euro, corresponding to a 2 % nominal growth at constant exchange rates (stability at current exchange rates). While general liability insurance, which accounts to 8 % of non-life insurance premiums, remained more or less stable, amounting to 32 billion euro (see table 1)<sup>26</sup>.

---

<sup>23</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. p. 12

<sup>24</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. p. 13

<sup>25</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. p. 13

<sup>26</sup> European Insurance in Figures. CEA Statistics. No. 37. December 2009.

**Table 1. General Liability premiums – 2000-2008 billion euro at constant exchange rate<sup>27</sup>, by author**

|                  | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          | 2007          | 2008          |
|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Austria          | 448           | 468           | 494           | 536           | 564           | 603           | 628           | 660           | 681           |
| Belgium          | 550           | 572           | 614           | 637           | 649           | 647           | 694           | 726           | 750           |
| Bulgaria         | 3             | 5             | 6             | 8             | 11            | 14            | 16            | 16            | 16            |
| Switzerland      | 942           | 1.061         | 1.100         | 1.229         | 1.213         | 1.229         | 1.265         | 1.154         | 1.354         |
| Cyprus           | 9             | 10            | 11            | 18            | 21            | 24            | 28            | 33            | 35            |
| Czech Republic   | 129           | 149           | 229           | 243           | 258           | 307           | 337           | 372           | n.a.          |
| Germany          | 5.877         | 5.922         | 6.148         | 6.306         | 6.535         | 6.807         | 6.874         | 6.821         | 6.826         |
| Denmark          | 128           | 143           | 176           | 232           | 196           | 202           | 209           | 208           | 215           |
| Estonia          | 1             | 2             | 3             | 3             | 4             | 4             | 5             | 5             | 6             |
| Spain            | 736           | 827           | 1.088         | 1.334         | 1.559         | 1.672         | 1.828         | 1.892         | 1.885         |
| Finland          | 126           | 131           | 145           | 160           | 163           | 160           | 160           | 177           | 176           |
| France           | 3.520         | 3.869         | 4.183         | 4.967         | 5.398         | 5.815         | 6.276         | 6.553         | 6.792         |
| Greece           | 25            | 29            | 33            | 40            | 51            | 51            | 63            | 71            | 72            |
| Croatia          | 12            | 14            | 18            | 20            | 23            | 26            | 31            | 34            | 38            |
| Hungary          | 30            | 41            | 47            | 57            | 62            | 64            | 67            | 72            | 78            |
| Iceland          | 16            | 17            | 18            | 18            | 19            | 25            | 29            | 27            | 14            |
| Ireland          | 433           | 679           | 725           | 860           | 865           | 794           | 822           | 691           | 638           |
| Italy            | 2.033         | 2.229         | 2.472         | 2.798         | 2.999         | 3.116         | 3.184         | 3.256         | 3.314         |
| <b>Lithuania</b> | <b>8</b>      | <b>6</b>      | <b>7</b>      | <b>8</b>      | <b>8</b>      | <b>12</b>     | <b>15</b>     | <b>20</b>     | <b>24</b>     |
| Luxembourg       | 51            | 54            | 54            | 59            | 58            | 87            | 85            | 58            | 62            |
| Latvia           | 20            | 16            | 15            | 18            | 12            | 9             | 8             | 11            | 12            |
| Malta            | 2             | 2             | 5             | 5             | 6             | 6             | 7             | 7             | 7             |
| Netherlands      | 604           | 695           | 814           | 965           | 1.065         | 1.113         | 1.161         | 1.197         | 1.256         |
| Norway           | 97            | 118           | 125           | 126           | 128           | 142           | 143           | 144           | 151           |
| Poland           | 92            | 113           | 117           | 118           | 140           | 176           | 211           | 238           | 277           |
| Portugal         | 57            | 62            | 71            | 80            | 95            | 95            | 97            | 108           | 109           |
| Romania          | n.a.          | n.a.          | 4             | 7             | 11            | 12            | 19            | 34            | 33            |
| Sweden           | 251           | 157           | 179           | 285           | 464           | 350           | 369           | 405           | n.a.          |
| Slovenia         | 21            | 23            | 25            | 28            | 32            | 36            | 39            | 43            | 48            |
| Slovakia         | 35            | 13            | 19            | 23            | 27            | 37            | 41            | 48            | 56            |
| Turkey           | 30            | 28            | 33            | 41            | 46            | 61            | 93            | 260           | 156           |
| United Kingdom   | 4.588         | 5.717         | 7.692         | 8.743         | 8.915         | 9.099         | 8.550         | 8.301         | 7.383         |
| <b>CEA</b>       | <b>20.874</b> | <b>23.172</b> | <b>26.671</b> | <b>29.972</b> | <b>31.597</b> | <b>32.794</b> | <b>33.354</b> | <b>33.621</b> | <b>32.465</b> |

The UK, Germany, France and Italy keep leading positions in general liability premiums' share since year 2000 (data for previous periods is not available). These four countries accounted for 77 percent of all general liability premiums in CEA countries in year 2000 and 75 percent in year 2008. While the share of Lithuania has tripled since year 2000 and accounts to 0,07 percent.

While the trends in general liability insurance are generally similar across Eastern Europe, but the current state of development of the respective markets differs tangibly. The differences in the penetration can be explained by the economic structure, the country's wealth and the familiarity

<sup>27</sup> Source: European Insurance in Figures. CEA Statistics. No. 37. December 2009.

with liability insurance. In countries with a tradition of exporting to Western Europe, liability insurance is in general more highly developed. For instance, Slovenia has played an important role as a component supplier to German car industry for a long time. Slovenian suppliers have thus taken German product liability legislation into account, extending product liability and recall covers for their exported goods. A high proportion of large-scale industries, as for example in the Czech Republic and Poland, has also benefited liability insurance, as large corporations usually have a higher risk awareness and therefore buy more cover against harm to third parties. The sums insured in these countries are high in a regional comparison. Furthermore, liability penetration tends to be higher in wealthier countries and where knowledge about liability insurance is more widespread<sup>28</sup>. In emerging markets, small- and medium-sized commercial risks are often not covered or only at low indemnity limits.

Economic and societal dynamics tangibly impact liability insurance. Improvements in living standards, benchmarking with Western Europe and new corporate governance rules are bound to increase the frequency and severity of claims in the coming years. Recent developments suggest that exposures are on the rise. Firstly, the cost of remedies for potential injuries is rising. In addition, the potential exposure to patent infringement lawsuits is equally, if not more worrisome, as this is the very area where some of the highest damages awards have been reported in a number of countries. These considerations will lead to stronger demand for general liability insurance covers for emerging market corporations<sup>29</sup>.

Social, technological and economic developments will continue to exert their influences, whilst the legal system might eventually hold the key to defining a liability regime. Stricter responsibilities are imposed by new laws and regulations, thus influencing claims growth. As more developing countries open up their domestic markets, they face the need to bring previously protected, or even nationalized, industries to a competitive level on a par with international standards, a process further promoted by the propagation of uniform norms and standards. These developments promote liability awareness by setting up best practice codes of conduct for the business community and lower the legal and political defences that corporations can use to evade responsibility for violations. While the previously mentioned factors will underpin demand for general liability insurance in emerging markets over the coming years, the healthy development of the sector is not a matter of course. Importantly, emerging markets will have to avoid the many pitfalls witnessed in industrialized nations, in particular the United States.

This sector is characterized by its long-tail nature and consequent high levels of technical provisions, since it includes individual liability, professional indemnity, business liability and

---

<sup>28</sup> Insurance in Emerging Countries: Focus on Liability Developments. Swiss Re, Sigma, 2005, no. 5. p. 30

<sup>29</sup> Insurance in Emerging Countries: Focus on Liability Developments. Swiss Re, Sigma, 2005, no. 5. p. 32

directors' & officers' liability. However, the profitability of general liability business is likely to be affected by the economic crisis, since its long-tail nature makes it even more dependent on its investment returns. Also it is forecasted that the number of claims for directors and officers may rise as a result of crisis<sup>30</sup>.

According to the survey made by Swiss Re, the importance of general liability insurance is steady growing in developed as well as in emerging countries, as it is reflected in table 2.

**Table 2. Relevance of liability insurance in particular country<sup>31</sup>**

| Region                | Country              | General liability | Product liability | Professional Indemnity |
|-----------------------|----------------------|-------------------|-------------------|------------------------|
| <b>Asia</b>           | China                | +                 | +                 | +                      |
|                       | South Korea          | ++                | ++                | +                      |
|                       | Hong Kong            | ++                | ++                | ++                     |
|                       | Taiwan               | +                 | +                 | +                      |
|                       | Thailand             | +                 | +                 | +                      |
|                       | Singapore            | ++                | ++                | +                      |
|                       | Malaysia             | ++                | ++                | ++                     |
|                       | India                | +                 | +                 | +                      |
|                       | Indonesia            | +                 | +                 | +                      |
|                       | Vietnam              | +                 | +                 | +                      |
| <b>Latin America</b>  | Mexico               | +++               | +++               | +                      |
|                       | Brazil               | +++               | ++                | +                      |
|                       | Argentina            | +++               | +++               | ++                     |
|                       | Columbia             | +++               | ++                | ++                     |
|                       | Venezuela            | +++               | ++                | ++                     |
|                       | Chile                | +++               | ++                | ++                     |
| <b>Eastern Europe</b> | Poland               | +++               | +++               | ++                     |
|                       | Czech Republic       | +++               | ++                | ++                     |
|                       | Hungary              | +++               | ++                | ++                     |
|                       | Slovenia             | ++                | +++               | +                      |
|                       | Croatia              | +++               | +++               | +                      |
|                       | Slovakia             | +++               | +                 | ++                     |
|                       | Latvia               | ++                | ++                | +                      |
|                       | Romania              | +++               | +                 | ++                     |
|                       | Bulgaria             | +++               | +                 | +                      |
|                       | Lithuania            | ++                | +                 | +                      |
|                       | Estonia              | ++                | ++                | +                      |
| <b>Africa</b>         | South Africa         | +++               | +++               | ++                     |
| <b>Middle East</b>    | Turkey               | +++               | ++                | +                      |
|                       | United Arab Emirates | ++                | ++                | +++                    |

+ Low importance 0-10% ++ Medium importance +10-35% +++ High importance +35 %

According to the survey made in year 2005 the number of developing countries which evaluate general liability insurance being of high importance amounts to 15 out of 30 examined, this is 50 percent. It is high evaluated in all examined Latin American countries as well as in most of European countries. General liability insurance is evaluated as having middle importance in 9

<sup>30</sup> European Insurance in Figures. CEA Statistics. No. 37. December 2009.

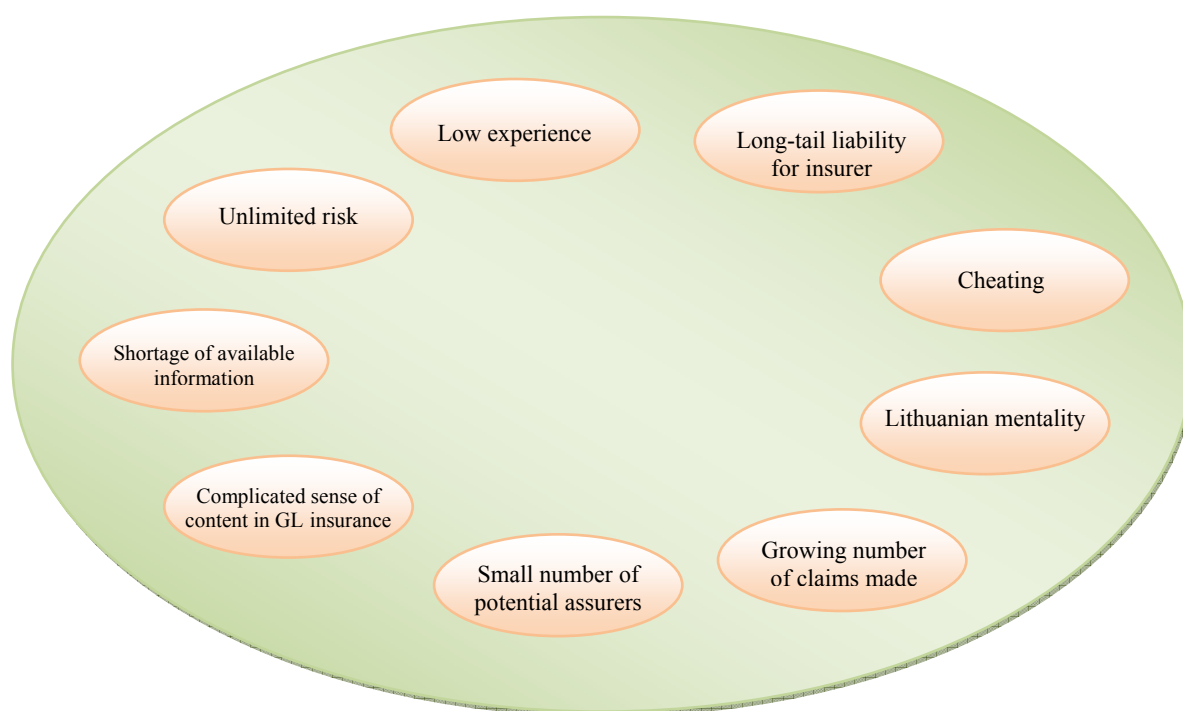
<sup>31</sup> Source: Insurance in Emerging Countries: Focus on Liability Developments. Swiss Re, Sigma, 2005, no. 5. p.41.

analyzed countries, i.e. 30 percent, Lithuania is among them. And 20 percent of countries, all from Asia, evaluate general liability as low importance issue. In comparison, product liability has very similar evaluation, not small differences, while professional indemnity insurance is evaluated as much less important.

Data in table 2 indicate that general liability insurance in Lithuania at least in year 2005 was issue of medium importance<sup>32</sup>. However, the number of contracts signed for general liability insurance grew by 28 percent, premiums written and claims paid increased by 79 percent and 74 percent respectively<sup>33</sup>. This reflects that importance of general liability insurance has increased and continuous growth can be expected.

### 2.3. Problems Related to General Liability Insurance

Since Lithuania's insurance market is still relatively young there are many lessons to be learned especially when speaking about such small lines as general liability insurance. Despite positive development in the sector of general liability insurance, there is a number of failings which should be eliminated or at least improved. Most common problems are reflected in figure 3.



**Figure 3. Problems related to general liability insurance, by author**

Lithuanian insurance market is relatively small, having in mind that only 20 years passed since Lithuania is independent country. As a result, the share of general liability insurance and level

<sup>32</sup> Insurance in Emerging Countries: Focus on Liability Developments. Swiss Re, Sigma, 2005, no. 5.

<sup>33</sup> Insurance in Lithuania. Year 2008 Overview. ISC, p.65

of its development is even lower. Therefore there is a lack of experience, especially when speaking about general liability insurance, which is characterised as long-tail insurance, where an injury or other harm takes time to become known and a claim may be separated from the circumstances that caused it by many years.

Furthermore, there is a lack of information provided to the market on general liability insurance. General liability insurance is a very small share in non-life insurance portfolio. Therefore there appears a problem of relatively small amount of information and comments provided on it. In combination with complicated nature and content of general liability insurance itself, this leads to confused potential customers and not growing demand. Till May, 2010 there were no scientific publications done or researches made on general liability market in Lithuania. No extra information is provided on this topic, except insurance rules in certain insurance companies and definition of insurance in some books.

Long-tail liability, low experience and lack of information on general liability insurance are the characteristics which lead to unlimited risk. There is approach of insurance companies that risks of this kind of insurance are not manageable due to some reasons, like – there is no satisfactory court praxis on how to assess harms made to an individual. Therefore neither insurers, nor aggrieved individuals have argumentations in a court. In Lithuania insurance sum is unlimited, i.e. each insurable event must be insured for particular set sum, but there is no information on how many insurable events there might happen. Risk is not limited, therefore, reinsurance companies are not willing to reinsure.

Furthermore, there is quite small number of potential users for general liability insurance. Large corporations usually have higher risk awareness and therefore buy more cover against harms to third parties. However, in Lithuania there are not many such big companies. The rest of market is formed by small business entities, which do not see the importance of general liability insurance and see it only as additional expenses. Lithuanian mentality, that what is not compulsory – is not necessary, is very well applicable also for general liability insurance. Lithuanians still do not understand the value and meaning of liability insurance and its functions. Entrepreneurs do not see the actual sense of using insurance as a preventive tool or a source to cover their own civil liability in case of harms made in the future.

One more problem related to this type of insurance is the growing number of claims made. Lithuanians become braver and braver in making claims. The number of foul complains is increasing as well. Liability insurance is more often interpreted as social compensation, while original purpose - to adequately protect an injured party from the consequences of an improper action or failure to act on behalf of a third party – is gradually disappearing, especially in worldwide level, where general liability insurance as any other kind of liability insurance is increasingly



assuming the character of a hyper-social compensation system embedded in civil law. However, in Lithuania traditional liability practices are still predominant. But new developments are creating danger for sustainability of traditional general liability insurance. There is still much to go in order to reach the level of developed European countries, however, this trend may intensify in the future.

It is important to highlight that the majority of insurance companies existing in Lithuania are governed by foreign companies, for instance, in year 2006 foreign capital accounted to 80,8 percent of capital and 74,2 percent was from EU countries<sup>34</sup>. The situation is not changing so far, the share of EU insurance undertakings' branches in premiums written is growing every year. This stipulates that a part of insurance products existing in a market are not always meeting Lithuanian peculiarities, especially those of law and demand.

In conclusions, general liability insurance's market is not perfect in Lithuania. There are still many lessons to be learned. However, market is still very young and still in its development. Currently it shows a tendency to grow and there is still a potential to grow together with the mentality of Lithuanian businessmen. Insurers and their clients have to respond to new permanently appearing challenges. Insurance buyers need to include liability risks in an integrated risk management process. Risk assessment and mitigation play an important role in reducing the overall cost of risk and keeping certain risk insurable. Insurers must better understand and monitor the drivers of liability claims costs and then reflect this in the actuarial models. Insurers must also pay closer attention to wording and policy language in order to manage their exposure to liability risks that are rapidly changing<sup>35</sup>.

Since general liability insurance is quite complicated line of insurance and it is difficult to manage for insurers, especially due to its key characteristic – long-tail liability, as well as for assurers due to complicated structure of general liability insurance's content, both sides face risk that another part will cheat. Most of companies are even not exercising this insurance due to reasons related to their mistrust in insurance companies. Considering this, cheating problem is discussed a little bit deeper further in this chapter.

### ***Cheating in general liability insurance***

With reference to Law on Insurance of Republic of Lithuania insurers and assurers relationship is regulated so that assurer is obliged to behave fairly, carefully and to cooperate with the insurer. Insurer must ensure that insurance premiums will be paid in appointed terms. If insured seeks to reduce insurance premium or to refuse to pay it, one has to prove following points: 1)

---

<sup>34</sup> Insurance in Lithuania. Year 2008 Overview, p.13

<sup>35</sup> Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5. p.4

unfair or not careful behaviour of assurer; 2) reasons and conditions to prove an event/accident being not insurable.

When handling detriments, insurers follow written and oral explanations of assurers on the circumstances of event/accident, and other information and documents provided by assurer to insurer. Insurer has to find answers to many questions related to the expertise of certain accident. Very often, insurer faces the problem of subjective, not complete, controversial information provided by assurer. Furthermore, insurer is limited by the terms in which expertise of an accident must be implemented and premiums paid. Quite often met situation is that insurer applies to legal authorities, due to the lack of obvious evidences, cases are judged using the principle of “cribbing”. However, if insurer suspects that assurer’s evidence contravene the reality, and one is late to pay claims, unfair assurer sues insurer. The problem is that the court is more beneficial to assurer, because there is applied a principle of “blame without blame” for an insurer.

Cheating is very often met in insurance activity. From the insurer’s point of view, cheating is assurer’s seek to gain from insurer. From the assurer’s point of view, cheating is explained as avoidance of insurer to cover the losses caused by insurable event or not to meet the responsibilities stated in insurance contract.

With reference to research done by Tomas Rudzkis, insurance is taking a leading position considering the speed in criminalisation in comparison with other economic activities. Insurance becomes the object of interest for criminals. It is possible to forecast that the level of insurance crime will continue to grow and criminal interests will gradually move from bank sector and stock market to insurance sector. However, the structure of insurance crimes is changing – fraud is not so popular any more and is slowly changed by more serious forms of crime. What is typical for insurance business, it is large detriments. Additionally, crimes in insurance sector are often repeated. Therefore, such crimes become one of the areas for criminal business<sup>36</sup>.

Most important and complicated is the fact that it is very complicated to identify people who are taking illegal actions in this field. The organizer can be a representative of any professional field, mostly educated people, who are not taking part in insurable events/accidents and are not getting premiums paid. They are linked by single purpose – to earn by cheating. The intermediaries in this process are selected from the middle layer of inhabitants who get paid quite big sums from the money gained in this way. The main share of money gained goes to the secret organizers and supports organised criminal structures<sup>37</sup>.

The research done by Max-Plank institute in Germany, Freiburg, has shown that men are more often cheating insurance companies than women. Furthermore, insurance cheating is mostly

---

<sup>36</sup> Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008. p.12

<sup>37</sup> Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008. p.9

executed by educated people, originated from respected families, well informed about peculiarities of insurance activity and the mechanism, how the premiums are paid. Cheating in insurance is very often done by organized criminal structures. Members of these structures often are lawyers, doctors, even employees of insurance companies.

The variety of people involved in cheating against insurers causes many difficulties to insurance companies when evaluating if insurer was practicing illegal actions. As a result, insurers get recommendations to apply additional tariff or technical-organizational instrumentalities, where insurers can have no influence on them. These instrumentalities help insurers to reduce net insurance risk and to practice the prevention of criminal activities – cheating in insurance<sup>38</sup>.

Insurer is maximum interested in managing insurance risk. The one has to show incentive to implement risk management and prevention instrumentalities. Insurance risk is manageable using tariff and non-tariff risk management instrumentalities. Tariff instrumentalities are like increase in insurance premiums, since non-tariff is implementation of such instrumentalities as prevention or risk management. Division of insurance risk between insurer and insurer, as well as decisions on value added must be financed by sharing decision implementation and/or service expenses proportionally to risk managed and to the created insurer's value added. Insurers as well, as insurers must understand that decision implementation and/or service expenses are investment into management of insurance risk and business' value added<sup>39</sup>.

General liability insurance business, as well as all commercial insurance business has specific characteristics, thus the following factors for criminalisation were distinguished by T. Rudzkis: key insurance principles such as trust and fairness can be applied for criminal purposes; the specifics of insurance services, the problem of data credibility; the impact of competition in insurance sector; low level of insurance culture; the extent of crimes in insurance sector is not realistically evaluated by insurers; not sufficient amount of attention paid by legal entities to crimes in insurance sector; easy accessible means for realisation of crimes in insurance sector; the long-lasting nexus between insurer and insurer in commercial insurance; society's tolerance to crimes in the field of commercial insurance<sup>40</sup>.

Crimes in insurance sector are mostly enacted with purpose to profit by the occasion, sometimes due to complicated financial situation. Often cheating takes part in order to retrieve insurance premiums paid, explaining this as a result of "false" insurance conditions, too big insurance premiums, etc. It is often case when insurers cheat, when they did not succeed to prove their claims to insurance companies or they were not able to prove that the accident can be handled

---

<sup>38</sup> Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008. p.11

<sup>39</sup> Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008. p. 12

<sup>40</sup> Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008. p. 12

as insurable event. These people are not willing to accept the decision of insurance company. They treat it as unfair and seek to get their money back in any possible ways, even criminal.

Furthermore, most of people enacting crime do not think that they are causing losses for insurance companies if they make profit from them, i.e. they have paid premiums and it is fair to take back at least some part of money paid. In case of general liability insurance, it is very often that crimes are made not by people using this insurance as coverage for their liability, but those, who are served by them, or who are using the products manufactured or sold by the company. There appear more and more people seeing possibility to cheat in this field and to generate a profit from that. People are making pageants of accidents in the area of big shopping malls; they pretend being injured by the products bought in one or another shop trying to get covered imaginary injuries or detriments. Furthermore, people feel freer in requiring certain companies to cover their losses. They do not hesitate and claim on companies in variety of situations. The overall situation is accelerating with the time and possibly may lead to the same situation like in the United States, where people are fighting for their rights without doubts, without thinking too much, simply claiming on companies. Therefore the need for general liability insurance is increasing very rapidly, however, the usage of it causes also some risks for business that more and more people will try to use their chance to get some money paid for even small mistakes done by the company<sup>41</sup>.

In addition to financial losses for insurance, crimes in this sector also cause moral harms to whole insurance business, because it destroys the ground of insurance system – the trust between insurers and their clients.

## **2.4. General Liability Insurance's Cycle**

Markets for many types of property/casualty insurance are facing hard market periods, when premium rates and insurers' reported profits significantly increase and less coverage is available, and subsequent soft market periods, when premium rates are stable or falling and coverage is readily available. Fluctuation in insurance premium rates and coverage availability, same like price fluctuations in equity markets, are difficult to explain fully by standard economic models that assume rational agents and few market frictions<sup>42</sup>

Non-life insurance typically goes through price cycles that extend over several years and are particularly pronounced in reinsurance and in the industrial lines<sup>43</sup>. The data provided by Swiss Re

---

<sup>42</sup> Harrington S. E. Tort Liability, Insurance Rates, and the Insurance Cycle. p.1

<sup>43</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 32

indicates, that price cycles in insurance last, on average, from 7 to 10 years<sup>44</sup>. At present, insurers are again experiencing improvement in rates following the deep and long lasting price recess<sup>45</sup>.

The reasons for these price cycles are the subject of wealth of literature. Events that may lead to cycles include:

- major loss events like a major accumulation of liability losses or a series of natural catastrophes;
- changes in the regulatory environment, like a price deregulation wave in Europe;
- financial market shocks with substantial impact on the capitalisation or the profitability of the insurance industry.

It seems that the auto correlated downward and upward movements of prices are favoured by the lack of flexibility to quickly adjust capital, the regulations restricting price adjustments, and the problems in recognising the adequacy of reserves.

As it is explained in a survey carried by Swiss Re, cycles are often synchronised across countries and lines of businesses – due to the behaviour of insurers avoiding unprofitable lines and targeting unaffected lines the cycle spreads to most business lines and countries in the world. The reinsurance costs imposed by global reinsurers have an impact on the spread of cycle as well. The last peak in global insurance price cycle was in 2003-2004, and has been softening ever since<sup>46</sup>.

The most infamous hard market in the United States remains the mid-1980s “liability insurance crisis”. An enormous attention was paid to the dramatic increases in commercial liability insurance premiums and reductions in coverage availability for some sectors. Moreover, this motivated extensive research on those specific problems and on fluctuations in insurance prices and coverage availability more generally. Further interest in and research on the dynamics of reinsurance and primary insurance market pricing were spurred by following extremely large, industry-wide catastrophe losses in the United States during the late 1980s and early 1990s. The newly formed attention on markets for commercial property, general liability, medical liability, and workers’ compensation insurance was focused after the hard market for commercial property/casualty insurance that began in late 2000 and accelerated following the destruction of the World Trade Center in September 2001<sup>47</sup>.

The risk of large errors in forecasting claim costs is increased by the long claims tail for general liability insurance, what hardens adverse selection. As a result, premiums become more sensitive to changes in interest rates. Particularly strong increases in premium rates can be produced by rapid growth in expected claim costs in a combination with increased uncertainty about costs and

---

<sup>44</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 30

<sup>45</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 34

<sup>46</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 29

<sup>47</sup> Harrington S. E. Tort Liability, Insurance Rates, and the Insurance Cycle. pp.1-2

declining interest rates. That may be followed by increased adverse selection and attendant reductions in policy limits and coverage availability. Main question, however, is whether changes in premium rates and coverage availability are largely explained by these factors, as opposed to other short-run influences that could materially increase insurance market volatility<sup>48</sup>.

In the insurance sector, the production cycle is inverted: the premiums precede the pay-outs, i.e. the premiums received by the insurance undertakings are previous to the payments of an eventual claim, which are intently transfered to that entity. A greated need of financial control is necessary, due to the inverted productive cycle<sup>49</sup>.

In order to evaluate cycle of general liability insurance in Lithuania, the development of insurance technical provisions will be used in the following analysis. Claims reserves or technical provisions are formed so that an undertaking could fulfil its obligations to policyholder at any moment. Insurance companies receive premiums for insurance services, but they must pay claims later, upon the occurence of an insured event. Insurance technical provisions are formed due to the discrepancy between the periods of the receipt of premiums and payment of claims. The claims reserves of a non-life insurance company are for: notified claims and incurred but not yet reported claims (IBNR).

Notified claims are claims that have already been reported to the insurance company. Because there will always be some delay between the time a loss occurs and when it is reported to the insurance company, it is standard accounting practice for insurance companies to set aside reserves for claims that have been incurred, but not yet reported (IBNR).

A property claim, such as fire loss, is apparent to the customer and the claim can usually be settled quickly. Therefore, claims reserves in property insurance are small. In contrast, significant claims reserves are necessary for all lines of liability insurance; in some instances, over 400 % of premiums are set aside as reserves. The reason for the high reserves is a long-tail lines of business is the lag between when premiums are collected and when claims are paid<sup>50</sup>.

As it was announced by Swiss Re, the elapsed time until claims are settled in liability insurance has increased over the last 25 years in Europe. This has resulted in higher reserve-to-premium ratios. The settlement time has also increased because policyholders are increasingly going to court to claim compensation from third parties, which is often more than they would get from the insurer's loss adjuster<sup>51</sup>. However in Lithuania, as it is reflected in figure 4 the reserve-to-premium ratio for general liability insurance is very low, reaching just above 100 % of premiums written in certain year. This can be explained by short experience with certain insurance, also its

---

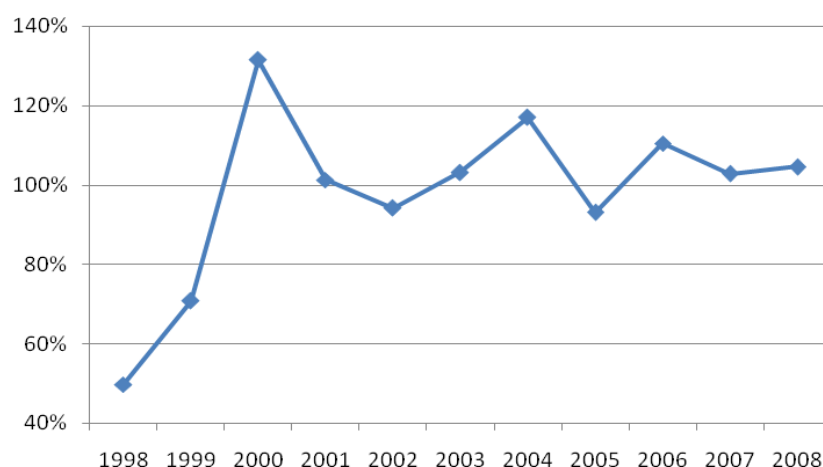
<sup>48</sup> Harrington S. E. Tort Liability, Insurance Rates, and the Insurance Cycle. p. 4

<sup>49</sup>Rodriguez S. Critical Analysis of the European Union Solvency Model for „Non-life“ Insurance Companies: the Portuguese Case. pp. 1-2

<sup>50</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 29

<sup>51</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 31

low popularity among business entities. The indemnities are not required so often in Lithuania, therefore insurance companies do not need to have big technical provisions even for liability insurance, which is characterised by its „long tail“.

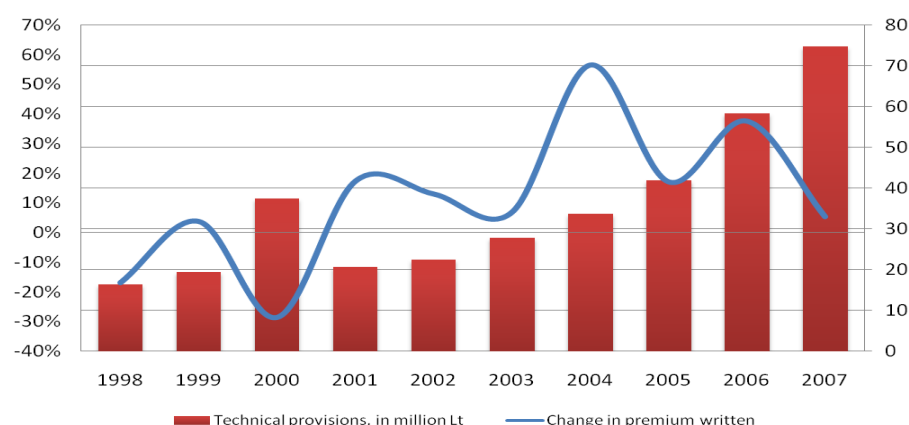


**Figure 4. Changes in technical provisions for general liability insurance in Lithuania (1998-2008)<sup>52</sup>, by author**

High prices, which go hand in hand with increased profits, enable insurers to fund reserve deficiencies; lower prices give insurers an incentive to release reserves. However, reserve adjustments also increase insurance price swings that result from inadequate capital management. The ability to better predict late claims would also reduce claims reserves volatility and diminish the volatility of insurers' profits<sup>53</sup>. Figure 5 reflects changes in technical provisions in general liability insurance in Lithuania, and provides the overall picture of changes in this line of insurance, whether there are any cyclical changes over the time. It is obvious that there is no clear cycle existing in changes of premium written. However, having in mind the rule that higher reserves mean smaller prices of insurance and vice versa, so figure 5 reflects the steady growth of technical provisions what should mean that prices of general liability insurance are declining every year. Unfortunately data on changing prices in this insurance line is not available, so this hypothesis can not be supported. However, according to marketing rules, the prices are going down, when seller is interested in attracting potential customer and when there is a high competition among market members. This is exactly describing present situation in liability insurance's market in Lithuania. Therefore, the statement that growing technical provisions show decline in insurance prices is supported.

<sup>52</sup> Non-life Insurance Quarterly Activity Results, ISC

<sup>53</sup> Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2. p. 32



**Figure 5. Size of technical provisions in comparison with premiums written for general liability insurance in Lithuania (1998-2008)<sup>54</sup>, by author**

With the time, appropriate, fast reacting and adapting to market changes management of insurance business is gaining more and more important role. Traditionally, insurance companies were using not very much of creativity or originality in their product offerings. Even more, insurance companies were relatively slowly responding to appearing new market opportunities. At the moment it appears that insurance industry has stuck in a late 20<sup>th</sup> century mindset that sorely underestimates the full value of both customers and market information. On the other hand, the industry as a whole has made some good progress in terms of managing existing products via segmentation.

Information technology has created a much more interactive and volatile world, though, and insurers are continually learning that managing a product for optimum profitability entails a continuous and quick analysis of large amounts of data, as well as the ability to respond to the messages that data is sending in near real time.

Over time, the most successful insurers will be the ones that can offer innovative and differentiating products that appeal to increasingly savvy and technologically empowered customers. Customised, niche products are the next phase in insurance. Therefore dynamic product life cycle models designed to quickly react and take advantage of fluctuating market and customer demands will be required when capitalising on that trend. Same important will be information systems and data to help identify, predict and manage to those demands.

Today's analysts state that in order to manage innovative insurance product successfully, the right data, i.e. customer, market and even geo-political, must be available and delivered at the right time to make the right management decisions. Till now there has been a visible gap between strategic business intelligence and operations taken. This means that insurers are not realising the full value of linking information to appropriate action.

<sup>54</sup> Source: ISC quarterly data on non-life insurance, 3rd quarter, 2009



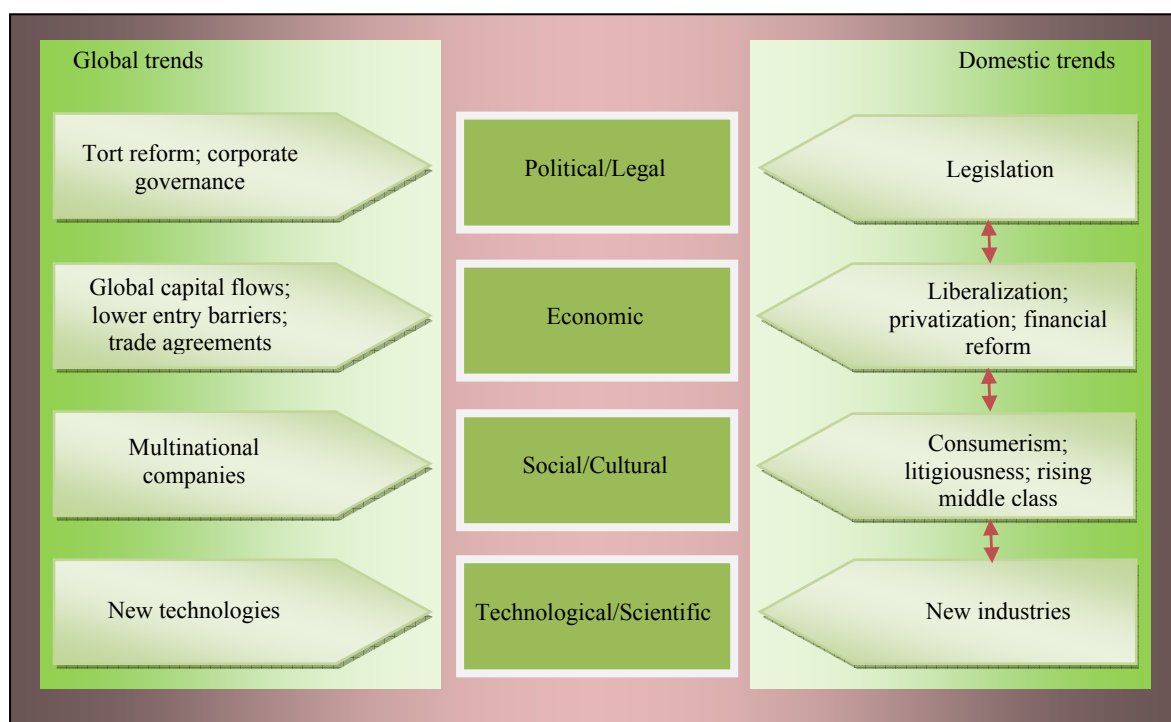
In fact, many insurers are giving leading edge to competitors and targeting more traditional product sets, while product development strategies are laid to the second place. But the changes in the market are inevitable. Following this, over the time, the most successful insurers will be those that are able to react to changes in the market and to offer innovative, differentiating products that appeal to increasingly savvy and technologically empowered customers.

The capacity to enhance and adjust offerings that are already on hand, and then quickly reintroduce them to the market in new forms to serve different needs is a key strength of insurance product life cycle management.

Integrated insurance cycle management models can help provide a more discriminating analysis of actual experience to determine the right price to a particular risk. Analytic tools and processes improve the rating model by evaluating how experience compares to expectation tools and processes. Then that rating model is applied to identify appropriate rates for each specific risk<sup>55</sup>.

## 2.5. General Liability Insurance Environment in Lithuania

Any business activity is influenced by various factors which are directly or indirectly related to it, insurance is not an exception. Global trends as well as domestic trends are creating the general environment which is also affected by various economic, social, political and technological factors. Figure 6 reflects general view of all the system.



**Figure 6. Environment of general liability insurance, by author**

<sup>55</sup> IBM Corporation. Insurance Product Life Cycle Management.

These factors and forces influencing the development of general liability insurance will be presented and discussed more detailed further in this chapter, in order to understand how insurance market is formed in Lithuania and what the possibilities are for it to develop in the future.

### **2.5.1. Political and Legal Environment**

There is no country in the modern world where would exist no legal structures, which form, govern and regulate country's life and influence all activities which are performed in it. Governance and administration structures which are enacting certain legislation (laws, rules, resolutions, decrees, etc.) – parliament, government – are formed from political parties performing in each country. All undertakings performing in that country are obliged to follow these documents when acting.

Thus insurance companies are running their business in a specific political and legal environment as well. Authorities using their legislation have exceptional power to create favourable conditions or to tighten them. For instance, Law on Insurance states that insurance companies can only provide insurance services and it is forbidden to prosecute any other practice than insurance. However, not only insurance companies are controlled by certain legislation, but also certain subjects are obliged to use special types of insurance in Lithuania, e.g. professional indemnity insurance for notaries, auditors, contractors, medics, etc.

If to summarize all the most important legislations related to insurance activity, there would be three generalized groups. These are the following:

1. legislation regulating establishment of a company, its internal practice and liquidation,
2. legislation regulating company's relationship with customers, companions and competitors,
3. legislation regulating single branches<sup>56</sup>.

These legislations define the order of establishment, registration, reorganisation and liquidation of companies, their branches, establishment of representative offices, they also set types of activity which shall be licensed and order of how that has to be done. All this wide range of activities for insurance companies is regulated by the Law on Insurance, which is the key regulation for insurance business in Lithuania, regulating all activities related to insurance. Another very important legislation is the Civil Code, which is very important when speaking about general liability insurance. General liability insurance provides coverage for civil liability of business units. Key document regulating civil liability and obligations related to it is the Civil Code of Lithuanian Republic. General liability insurance is closely linked to the legal civil liability norms existing in a

---

<sup>56</sup> Pranulis V. Marketingo tyrimai. Vilnius: 2007. p.56

country. In case, if there would be no civil liability defined by law, this is, if there would be no obligation to offset harms made to other persons or their property, there would either exist no civil liability insurance, or it would be not popular and not significant type of insurance. Furthermore, there is a wide range of rules regulating different kinds of insurance, which are covered by “general liability insurance” umbrella.

However, Lithuanian legislation power can be characterised and having certain imperfections, such like instability and rush when formulating and enacting main legislation. This problem without any doubt has influenced the development of general liability insurance as well.

On the other hand, political and legal environment has a set of “rules of a game”, and neither the law ignorance, nor disregard of it can finish without negative results or even failure.

Presently major legislation for economics and business is either already effectual, or almost ready to be enacted. Nevertheless, due to very big rush when preparing legislation which is effectual at the moment, there is a need for improvements to be applied on most of them. The rush in legislative actions resulted from the needs of former political and economic situation or sudden needed changes, e.g. for joining to EU. Moreover, legislators at that time did not have sufficient experience, sometimes also satisfactory competence.

New governments, new legislation or regulations and also court decisions can bring about major changes to the litigation environment and transform the context within which liability insurance works. Sometimes even developments in overseas jurisdiction can become a major factor.

Actions of country’s political and governing institutions are closely linked to economic environment. Partly it is even their result. Decisions and actions of politicians and leaders of a country are shaping more or less regulated market. Therefore in order to envisage potential tendencies of changes it is important to study not only state’s politics and control, but also particular level of economic evolution ratios and their movement tendencies.

### **2.5.2. Economic Conditions for General Liability**

Economic environment is an element of macroeconomics, characterised in particular consistent pattern and tendencies of development of economy<sup>57</sup>. Macroeconomic factors like general economic situation of country and state economy’s development are strongly influencing activities of every insurance company performing in a market. Mentioned macro factors form and make impact on society’s purchasing power, its behaviour in a market, demand and supply of insurance products, as well as their sale with varying degree.

---

<sup>57</sup> Pranulis V. Marketingo tyrimai. Vilnius: 2007. p. 57

The impact of economic growth is manifold. Economic growth allows societies to afford more liability insurance protection. The rise of a middle-income class and greater consciousness of property rights and consumerism, while all pertinent to increasing demand for liability insurance, are directly linked to economic growth. Furthermore, the demand for general liability insurance is also stimulated by new trends such as globalization and burgeoning international trade.

In Lithuania, economic environment of general liability insurance can be characterised by significant ratios like gross domestic product of a country, income of purchasers (assurers), and level of service prices. These are particular indicators allowing better basement of forecasting decisions. Particular tendencies and situations in economic development are prompting changes in mentioned ratios. Here should be mentioned ratios like:

- inflation,
- unemployment rate,
- cycles of country's economic development.

Economic growth of a country, the pace of growth and its tendencies have influence on a potential and interest for purchasing more expensive services. This changes the structure of consumption when giving priorities to one or another good. This leads to broader capabilities to select the price-quality proportion. Insurance, especially general liability insurance is service which should have higher demand when business is not experiencing the best times. Coverage of this type insurance protects companies from additional expenses caused by unexpected insurable events. This is also essential condition for companies doing international business. Most Western European countries are highlighting the must to exercise general liability insurance, if companies wish to cooperate with companies from mentioned region. In times of prosperity clever business owners would normally choose insurance product with higher quality, what would also mean higher price of insurance service provided by the insurer. Price increases may be not so significant comparing to potential benefit which could be met after an insurable event happens. Higher income creates a possibility to choose, to evaluate all factors, and to decide in a more trustful way.

Lithuania's economic environment has specific characteristics. They are related to the re-creation of statehood, also with political, social and economic reforms. Economic relations and connections collapsed after long-lasting co-operation. Therefore it was impossible to create new ones in a short period. The period of shift resulted in big decline of GDP and manufacturing. This led to increased inflation, reduction of citizens' income, as well as unemployment. However, since year 1995 Lithuanian economy started to recover from a former depression, new positive tendencies appeared.

Despite the fact that Lithuania is relatively small country, it has some specifics making it a relatively strong and important player in a common market. The most important role is played by

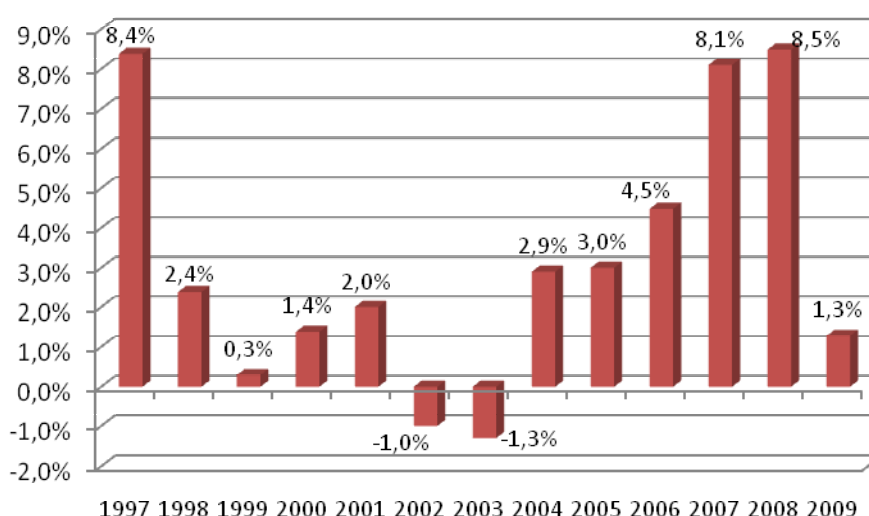
geographic location of a country. It is recognized that Lithuania is located in strategically good geographic position, connecting two very important regions: developing Russia and one of the most advanced regions in the world – European Union.

Analysis of GDP development in Lithuania (see table 3) shows that the ratio was steadily growing during the last 11 years, with a sudden drop-off in year 2009, as a result of economic crisis, while the decrease in year 1999 was a result of a decrease in a value-added in most of branches, diminished part of export and import in GDP. Steady growth is noticeable for the rest of years till year 2009, when the GDP showed the downward direction once again. However, the volume of GDP more than doubled since year 2002 and reached 111,19 million litas in 2008. This beyond question had influence for an upturn of economic environment of insurance companies, including those providing general liability insurance.

**Table 3. Gross domestic product in Lithuania (1997 – 2009)<sup>58</sup>, by author**

| Year                        | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008   | 2009  |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| <b>GDP, million litas</b>   | 45.02 | 43.89 | 45.74 | 48.64 | 52.07 | 56.96 | 62.70 | 72.06 | 82.79 | 98.67 | 111.19 | 92.35 |
| <b>Alteration of GDP, %</b> | 11,1  | -2,5  | 4,2   | 6,3   | 7,1   | 9,4   | 10,1  | 14,9  | 14,9  | 19,2  | 12,7   | -16,9 |

Development of inflation was moving to a similar direction. Inflation rate was fluctuating and in the last year started to grow steadily (see figure 7). From deflation of 1 percent in 2002 grew till 8,5 percent of inflation in 2008. However, the tendency of growing inflation was broken in year 2009, when inflation suddenly dropped down till 1,3 %. The latter changes are very positive for general liability insurance. Most of insurers highlight that there is a hardly computable risk, when speaking about general liability insurance and growing inflation would even more increase the risk.



**Figure 7. Inflation rate (%) in Lithuania (1997 – 2009)<sup>59</sup>, by author**

<sup>58</sup> Source: Department of Statistics

When analysing the economic environment for general liability insurance an important role in evaluation of it plays tendencies in changes of individual companies among all companies. In last 9 years in Lithuania there is a tendency, that people are showing an increasing interest in having their own business. This is confirmed by the increase in business entities established during this period. The rise in number of companies established has increased by 21,59 percent (see table 4).

**Table 4. Companies in Lithuania (2002 – 2010)<sup>60</sup>, by author**

| <b>Year</b>  | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Companies</b>                                   | 68.429      | 68.356      | 69.861      | 72.330      | 73.344      | 76.516      | 81.376      | 84.574      | 83.201      |
| <b>Individual companies</b>                        | 33.484      | 31.850      | 27.896      | 25.060      | 24.161      | 23.106      | 22.704      | 20.499      | 16.742      |
| <b>Percentage of individual companies</b>          | 48,93%      | 46,59%      | 39,93%      | 34,65%      | 32,94%      | 30,20%      | 27,90%      | 24,24%      | 20,12%      |
| <b>Limited joint-stock company</b>                 | 20.075      | 21.136      | 24.833      | 29.199      | 30.963      | 35.413      | 39.413      | 43.561      | 45.541      |
| <b>Percentage of limited joint-stock companies</b> | 29,34%      | 30,92%      | 35,55%      | 40,37%      | 42,22%      | 46,28%      | 48,43%      | 51,51%      | 54,74%      |
| <b>Joint-stock company</b>                         | 865         | 670         | 578         | 510         | 432         | 408         | 376         | 377         | 358         |

If there would be no drop-off during year 2009, this rise would be even bigger. However, global financial crisis has made its impact also to Lithuanian market and its participants. The number of individual companies, when owners have a non-limited civil liability, has shown a downward trend of 50 percent per 9 years. While a share of individual companies among economy subjects has reduced from nearly 50 percent to 20,12 percent. Meanwhile the number of limited joint-stock companies has increased significantly; the number of companies has more than doubled. This shows that the majority of individual companies owning businessmen who were performing in year 2002 have shifted the type of company. This was most likely done in order to reduce the risk taken by the individual as an owner of a company. This shows that people understand the extent of risk, which each individual company's owner faces. There is also a possibility that some part of them might have had to finish their performance due to being not able to offset harms made to their customers. Unfortunately, there is not enough data provided to make a deeper research, on how many companies went bankrupt from those having general liability insurance. However, the number of economy subjects was steadily increasing till year 2010. This may mean that the number of insurable companies is also increasing. So the market of general liability insurance shall emerge having in mind peculiarities related to business' liability, especially after changes in entrepreneurs' minds, which appears to be in a progress now.

<sup>59</sup> Source: Department of Statistics

<sup>60</sup> Source: Department of Statistics

### 2.5.3. Social and Cultural Situation

The role of social and cultural environment is also very important when evaluating insurance and its development trends. Social and cultural environment is extremely high role having component in insurance macro environment. It reflects and characterises society's impact to the performance of insurance company.

Behaviour of potential and existing insurance customer is formed in cultural environment. Therefore it is very important for insurance companies to observe and to notice new tendencies in a culture, as well as to evaluate possible influence to their business. The requirements set by society for professionals and those providing goods to the market are growing. Bigger social liability is expected. Moreover, consumers are strongly fighting for getting the quality which was promised. This increases pressure for business. As a result, insurance companies shall take this into consideration and search for possible new offers, services and to expand range of customers. General liability insurance can be mentioned as an example in this case<sup>61</sup>.

However, there is still a notion among businessmen that insurance companies are not trustful, profit seeking companies that are collecting premiums and avoiding paying benefits. Most of them do not see positive side of insurance, rather the negative one. Lithuanians can be characterised as having negative opinion about insurance services, especially when it is related to civil liability insurance. There is an opinion that there is nothing so big what would cause very big losses, or the chance that this would happen is too small and it is not worth to have extra expenses without clear evidence that this is needed. If insurance is not mandatory, so it is not used. Most of businessmen do not see the value added of insurance. Insurance is not seen as additional value for customers or consumers, or company itself.

Education plays also important role for insurance's demand. In Lithuania yet it is relatively easy to get university or higher education degree. Due to this reason a big number of new professionals are "produced" each year, so there is a consistent growth in a number of private business existing in Lithuania. However, increased number of people having high education doesn't guarantee the same professional capabilities or skills for each of them, some of "fresh manufactured" professionals have not the highest competence, due to this the probability of unsatisfied or aggrieved customer is relatively higher, as well, as the risk to make harms is bigger. Therefore the role and demand of liability insurances is increasing.

---

<sup>61</sup> Kindurys V. Draudimo paslaugu marketingas. Vilnius: 2002. p. 32-34

#### **2.5.4. Technologic and Scientific Context**

Last decades have shown that there is no other force which would penetrate into individual's life like science and technologies. Every latter-day's good or service is a result of a usage of knowledge in particular science. Due to this, development of scientific researches and appliance of their potential in marketing, as well, as in politics is very important.

Information technologies are widely and intensively used in western countries for electronic data transfer, for serving customers and administrating presentation of insurance services. There is a possibility for consumers to fill in a request for general liability insurance via internet, to calculate different possible variants.

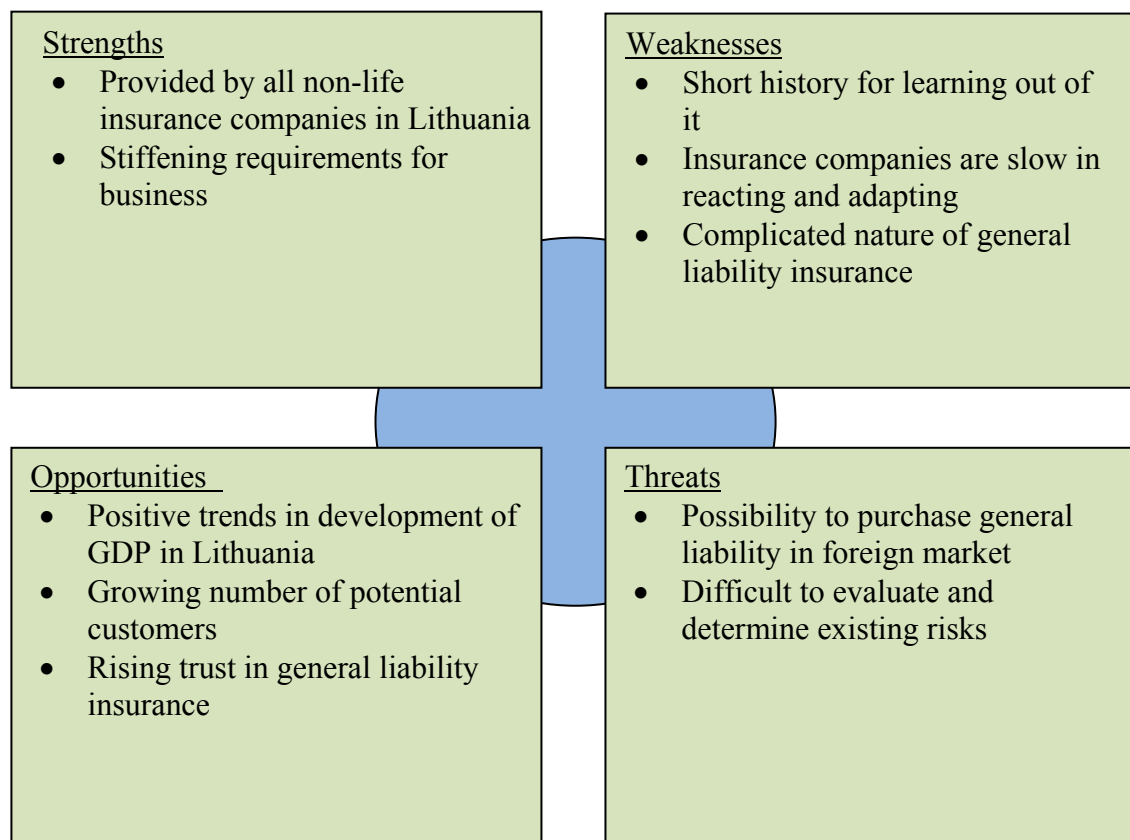
Sale processes of insurance are influenced by this environment. However, direct impact on Lithuania's insurance market is mostly to be found in technical channels of services' sale (sale of insurance products via internet), in a field of communication between insurers and assurers, as well as in their interaction (serving a client). On the other hand, system is not so well developed that general liability insurance would be able to order via internet. At the moment there is only information on general liability insurance provided via internet in Lithuania.

There are no doubts that Lithuanian insurance companies are some steps behind insurance companies functioning in more developed western countries, where powerful servers supply all needed information about certain assurer in hundreds of a second (his personal data, information about services used from other insurance companies). Lithuanians, however, use not so high improved technologies. Nevertheless, the novelty of technologies used in Lithuanian insurance companies is constantly improving. Different kinds of insurance gradually become available to purchase via internet. Following this trend, general liability insurance should not be exception. After few more years Lithuanian insurers will in fast pace reach the level of developed European countries and services will be provided with minimum usage of time, finance and operation.

#### **2.6. SWOT Analysis of General Liability Insurance Market in Lithuania**

General liability insurance, as any other commercial activity has its strong and weak sides, chances and possible difficulties for it to develop in certain market. This chapter will analyse general liability insurance from this perspective. Figure 8 provides short summary of following arguments.





**Figure 8. Evaluation of general liability insurance using SWOT analysis, by author**

#### STRENGTHS:

✓ General liability insurance is provided by all non-life insurance companies existing in the market. This signals about strong competition among insurance companies providing this insurance product. That ensures clear and fair terms for business entities to purchase insurance in best conditions. Furthermore, more and more branches of foreign insurance companies are starting their business in Lithuania, what forms even better conditions.

✓ Requirements for business are becoming stricter. Since more and more companies are focusing on international markets, they are more and more often much higher requirements set by other countries. The share of companies doing international business or having international partners is growing gradually, therefore Lithuanian entrepreneurs are meeting much higher requirements related to third-party liability of a company and are obliged to use general liability insurance. This strengthens position of general liability insurance.

#### WEAKNESSES:

✓ No possibility to learn from former mistakes due to short history. The amount of statistical data on development of general liability insurance as well as experience in this field is not sufficient to make trustful decisions and future predictions. Not sufficient experience in how to

manage this insurance line, how to calculate and evaluate risks does not allow to insurance companies to feel secured about steps made and future.

- ✓ Insurance companies are often slow to respond to changing needs and market situation. Insurance companies need certain period of time to prepare for particular changes related to the product – market researches have to be made, financial capabilities, technical facilities, as well as risks must be evaluated. All these processes are time consuming, therefore now strong changes can be introduced in a short time.

- ✓ Complicated nature of general liability insurance. Since this insurance is universal and suits for many different companies, driving different activities, it is very complicated for potential users to understand the meaning and content of this insurance. Clients do not choose what they do not understand.

#### OPPORTUNITIES:

- ✓ Growth tendency in GDP development in Lithuania. The rise in general domestic product leads to increased incomes, as well as growing consumption, including consumption of general liability insurance. Higher revenues create possibilities to spend some additional money to cover business' liabilities, i.e. to buy general liability insurance.

- ✓ Growing number of companies – potential customers. With reference to data provided by Statistic Department, the number of economy subjects was constantly growing during the last years, only financial crisis has adjusted this trend, but not too strong, therefore a continuous positive development can be expected. This leads to possible growth in the amount of potential consumers. Furthermore, every year there is a big number of new professionals entering the market and starting own business. They will also face risk and possibly will use general liability insurance.

- ✓ Rising trust in general liability insurance. There is still relatively high share of entrepreneurs treating general liability insurance as a profitable tool for insurance companies to make profit, and as only extra expenses for their business. However, Lithuanian mentality is gradually changing. More often insurance is seen as a tool to cover the third part liability. Growing insurance density shows that companies become more active users of insurance, including general liability insurance

#### THREATS:

- ✓ Possibility to buy insurance in EU market, not in Lithuania's territory. Lithuanian insurers lose possible revenue due to the fact that some big companies which are purchased by international companies and are operating in Lithuania tend to be insured in other EU member

countries. In a matter of fact, together with growing internationalization level, the number of companies insured in other countries will only increase in the run of time.

✓ Difficulties with determining and evaluating risks. Due to shortage of statistical and historical data and own experience, it is hard to forecast possible future claims and premiums, as well as to evaluate possible expected risk. Risk is unlimited therefore reinsurance companies are not interested to reinsure. General liability insurance is long-tail having insurance, in combination with lack of own experience, creates the fare of not clear future.

To sum up, general liability insurance has some weak sides. However, these are not so dramatic, that they could stop further development of general liability insurance. The expected positive development of country itself will indeed gradually increase the importance of general liability insurance in Lithuania in the nearest future.

### **3. TRENDS IN DEVELOPMENT OF GENERAL LIABILITY INSURANCE MARKET IN LITHUANIA**

General liability insurance in Lithuania is not very popular insurance product. Furthermore, it is only a small share in big non-life insurance portfolio. Therefore there is not much data provided for public, only basic changes are shown without any satisfactory comments on them. This complicates aims to look at changes related to this insurance deeper. However, this stimulates to make own researches. Due to the fact that not all needed information is available and that it takes more than half year for official information to be updated by Insurance Supervisory Commission, analysis provided in the following chapters will focus on periods, where satisfactory information is provided for satisfactory analysis.

#### **3.1. Development of General Liability Insurance in Lithuania**

In Lithuania at the first quarter of year 2010 there were 6 out of 8 non-life insurance companies, who provided general liability insurance for Lithuania's market. However, UAB "Būsto paskolų draudimas", and UAB insurance company "Lamantinas" provided specialised insurance services. Despite Lithuanian insurance companies general liability insurance service were also offered by four foreign companies' subsidiaries established in Lithuania, these are If P&C Insurance (Estonia), ADB Baltikums (Latvia), AAS Gjensidige Baltic (Latvia), GF Försäkringsaktiebolag (Sweden).

Development of insurance market can be evaluated using direct and indirect insurance ratios:

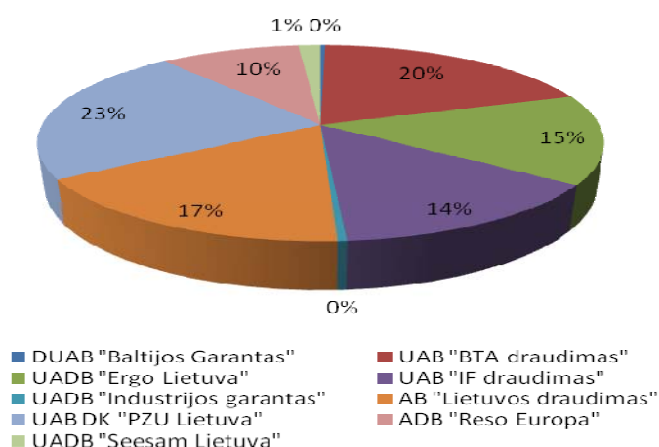
- *Direct insurance ratios* involve the number of insurance companies, amounts of premiums written, claims paid, and contracts signed, as well as, a distribution of insurance branches in a market.
- *Indirect insurance ratios* cover insurance density, insurance penetration, and expansion of insurance market.

##### **3.1.1. Direct Insurance Ratios**

###### **Concentration**

The general liability insurance market was concentrated in year 2008, but the concentration was not too strong; five undertakings (UAB DK "PZU Lietuva", UAB "BTA draudimas", AB

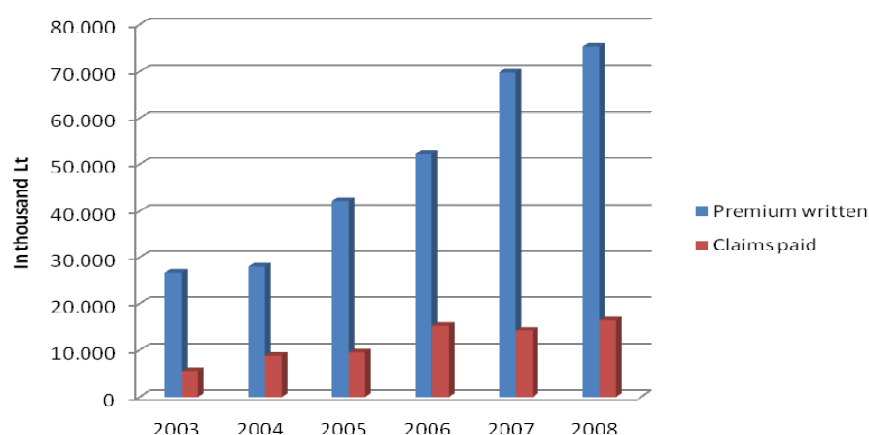
“Lietuvos draudimas”, UADB “Ergo Lietuva”, and UAB “IF draudimas”) out of 9 companies offering general liability insurance held 88 percent of the general liability insurance market (see figure 9). The share of each company was quite similar, however, 3 companies providing general liability insurance held only 2 % of the general liability insurance market in terms of premiums written.



**Figure 9. Concentration of general liability insurance undertakings in terms of premiums written (2008)<sup>62</sup>, by author**

With reference to just analysed market shares, HHI index for general liability insurance in Lithuania amounts to the value of 1.698. Accumulated value is between 1.000 and 1.800, this shows a moderate concentration existing in general liability insurance market.

In terms of premiums written the general liability insurance in year 2008 amounted to almost 75,35 million litas. It has more than doubled since year 2004 and kept steady growth during last 4 years. The amount of claims paid during the year 2008 reached 160.510 litas. The changes in claims paid were developing in the same manner as premiums written. However, since year 2004 the amount of claims paid increased more than 4 times (see figure 10).



**Figure 10. Premiums written and claims paid (2003- 2008)<sup>63</sup>, thousand Lt, by author**

<sup>62</sup> Source: ISC quarterly data on non-life insurance, 3rd quarter, 2009

The share of general liability insurance in non-life insurance's portfolio in terms of premiums written is not changing very much, it remains in a level of almost 5,5 % during the last 4 years (see table 5). The biggest increase in share was noticed in year 2004. Situation with claims paid is also not changing very much, the share in non-life insurance's portfolio is varying from 2,4 % till 3,5 %, reaching it's top in year 2006. The share of claims paid in premiums written was also varying more or less steadily, between 20,4 % and 31,4 %. This shows that premium written fully covers claims to be paid and there is still much capacity to save or to set to technical provisions.

**Table 5. Development of general liability insurance (2003- 2008)<sup>64</sup>, by author**

|                                       | 2003           | 2004           | 2005           | 2006           | 2007           | 2008           |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Contracts signed (units)</b>       | <b>42330</b>   | <b>50325</b>   | <b>55153</b>   | <b>52420</b>   | <b>64447</b>   | <b>70520</b>   |
| Share in non-life insurance           | 1,2            | 1,3            | 1,6            | 1,3            | 1,4            | 1,7            |
| Change (%)                            |                | 18,9           | 9,6            | -5,0           | 22,9           | 9,4            |
| <b>Premiums written (thousand Lt)</b> | <b>26749,7</b> | <b>28035,1</b> | <b>42150,7</b> | <b>52463,6</b> | <b>69785,7</b> | <b>75345,5</b> |
| Share in non-life insurance (%)       | 4,5            | 4,1            | 5,5            | 5,3            | 5,6            | 5,4            |
| Change (%)                            |                | 4,8            | 50,3           | 24,5           | 33,0           | 8,0            |
| <b>Claims paid (thousand Lt)</b>      | <b>5463,9</b>  | <b>8812,9</b>  | <b>9505,2</b>  | <b>15380,1</b> | <b>14329,4</b> | <b>16510,1</b> |
| Share in non-life insurance           | 1,6            | 3,3            | 2,8            | 3,5            | 2,5            | 2,4            |
| Change (%)                            |                | 61,3           | 7,9            | 61,8           | 6,8            | 15,2           |
| <i>Share in premiums written (%)</i>  | <i>20,4</i>    | <i>31,4</i>    | <i>22,6</i>    | <i>29,3</i>    | <i>20,5</i>    | <i>21,9</i>    |

As it was mentioned in previous chapters, in the United States the average cost of commercial liability insurance was about 0.2 % of business revenues in year 2008. However, it is lower in other countries. Table 6 reflects the situation in Lithuania.

**Table 6. Share of general liability insurance expenditures/cost in the revenues of Lithuanian business-units<sup>65</sup>, by author**

|                                       | 2005        | 2006        | 2007        | 2008        |
|---------------------------------------|-------------|-------------|-------------|-------------|
| <b>Business revenue (thousand Lt)</b> | 122.223.494 | 147.192.074 | 181.449.782 | 211.108.352 |
| <b>Premium written (thousand Lt)</b>  | 42150,7     | 52463,6     | 69785,7     | 75345,5     |
| <b>Share in business revenue (%)</b>  | 0,03%       | 0,04%       | 0,04%       | 0,04%       |

The share of general liability insurance expenditures – premium written – in business revenue is very small comparing to that in the United States and in period of four years increased from 0,03 % to 0,04 % of all business revenue. However, premium written are growing, Lithuanian mentality is changing, what will definitely lead to the growth of money spent on general liability insurance.

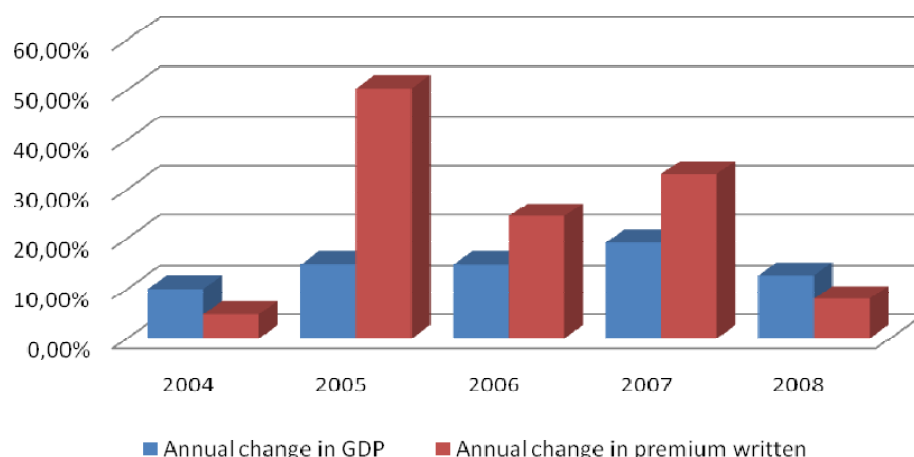
It is also interesting to check what the situation in Lithuania is in comparison to the rest of the world in terms of difference in annual growth of GDP and premium written in general liability

<sup>63</sup> Source: ISC quarterly data on non-life insurance, 3rd quarter, 2009

<sup>64</sup> Source: ISC quarterly data on non-life insurance, 3rd quarter, 2009

<sup>65</sup> Source: Statistic Department and ISC quarterly data on non-life insurance, 3rd quarter, 2009

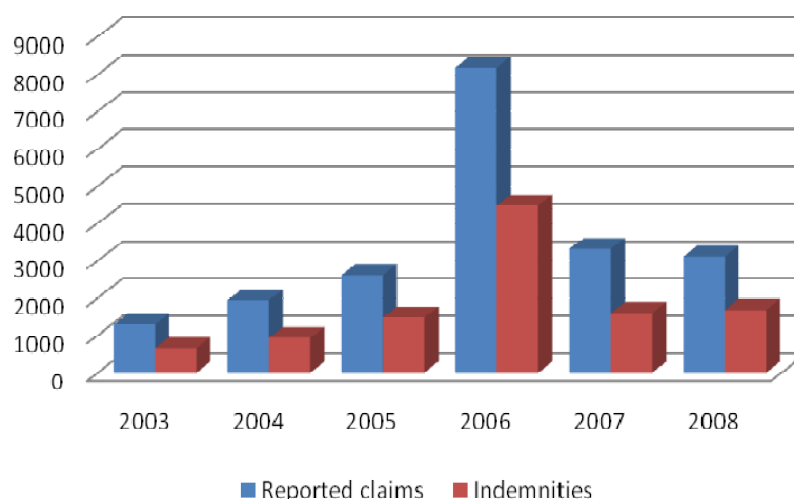
insurance. If to remember previous chapters, the expansion of amounts spent on liability insurance is exceeding the overall growth of world GDP. The situation in Lithuania is shown in figure 11.



**Figure 11. Annual change in GDP and premium written for general liability insurance<sup>66</sup>, by author**

The amount spent on general liability insurance is growing in Lithuania; however, there is no clear trend when comparing growth of GDP and expenditures on general liability insurance. On the other hand, growing GDP causes growth in the consumption of analysed insurance.

However, not only premium written is growing on year-to-year basis, but also the number of claims made, as it is reflected in figure 12.



**Figure 12. Reported claims and indemnities (2003- 2008)<sup>67</sup> number of cases, by author**

The amount of reported claims was fluctuating permanently with a peak of 8181 claims in year 2006. However, the common characteristic of every year is that not more than 56,66 % of reported claims were covered by insurance.

<sup>66</sup> Source: Statistical Department of Lithuania and ISC quarterly data on non-life insurance, 3rd quarter, 2009

<sup>67</sup> Source: ISC quarterly data on non-life insurance, 3rd quarter, 2009

### *Services provided by insurance companies*

All the 6 non-life insurance companies are providing general liability insurance in Lithuania as it was already mentioned. But only some of them are offering other civil liability insurances, except the motor third party liability insurance (MTPLI) which is offered by all these companies as well. Table 7 expresses the more precise distribution of insurance services provided by non-life insurance companies in Lithuania's market.

**Table 7. Services provided by insurance companies (1<sup>st</sup> quarter of 2010)<sup>68</sup>, by author**

|  | <b>UAB “BTA draudimas”</b> | <b>UADB “Ergo Lietuva”</b> | <b>Industrijos garantas</b> | <b>AB “Lietuvos draudimas”</b> | <b>UAB DK “PZU Lietuva”</b> | <b>Seesam Lietuva</b> |
|--|----------------------------|----------------------------|-----------------------------|--------------------------------|-----------------------------|-----------------------|
| <b>General Liability Insurance</b>                                   | x                          | x                          | x                           | x                              | x                           | x                     |
| <b>Lawyers</b>   |                            |                            |                             |                                |                             |                       |
| <b>Bailiffs</b>  | x                          |                            |                             |                                |                             |                       |
| <b>Auditors</b>  | x                          |                            |                             |                                |                             |                       |
| <b>Notaries</b>  |                            |                            |                             |                                |                             |                       |
| <b>Insurance intermediaries</b>                                      | x                          |                            |                             |                                |                             |                       |
| <b>Head investigators and customers of biomedical investigations</b> | x                          | x                          |                             | x                              | x                           |                       |
| <b>Building projectors</b>   | x                          |                            |                             | x                              | x                           |                       |
| <b>Contractors</b>   | x                          | x                          | x                           | x                              | x                           |                       |
| <b>Health care providers</b>   | x                          |                            |                             |                                |                             |                       |
| <b>Travel organizations</b>  |                            | x                          |                             | x                              | x                           | x                     |

According to the official data provided in the website of Insurance Supervisory Commission there is not even one kind of PI insurance which is offered by all insurance companies. Five out of six are offering services for contractors, four out of six are offering protection for head investigators and customers of biomedical investigations, and travel organizations. Though, PI insurance for lawyers and notaries is not offered any longer, as it was offered by only one company in the first quarter of year 2008. Even four types of PI insurance (bailiffs, auditors, insurance intermediaries, and health care providers) are offered by only one of listed companies. This implies, that latter professionals have no alternatives to choose and are not able to search for better offered conditions. They have to accept what is offered by the single insurance company. More precise distribution of insurance services among insurance companies is expressed in table 7.

Dominant company in civil liability insurance is UAB “BTA draudimas” offering insurance for all professionals obliged to have PI insurance, except notaries, lawyers, and travel organizations. The second and the third companies providing 5 different PI insurances are UAB DK “PZU

<sup>68</sup> Source: ISC quarterly data on Compulsory PI Insurance, 4<sup>th</sup> quarter, 2009



Lietuva” and AB “Lietuvos draudimas”. UADB “Ergo Lietuva” offers 4 kinds of PI insurance and other two are providing PI insurance only for 2 professions. However, not even one of foreign companies’ subsidiaries is providing some types of PI insurance.

However, table 7 reflects only information given in official webpage of Insurance Supervisory Commission. According to the information provided by each of insurance companies in March, 2010, the number of PI insurance types offered differs from that given in former reports and from information provided in table 7. From the information provided by insurance companies it appears that PI insurance for lawyers is offered by UADB “ERGO Lietuva”. The latter also offers insurance for assessors and event organizers. However three of the six non-life insurance companies are offering general professional indemnity insurance, which covers civil liability for a variety of professionals, without specialising on certain professions.

The fact that three out of six companies are offering professional indemnity insurance signalises that there are formed better conditions for bailiffs, auditors, health care providers, and insurance intermediaries. Moreover other professionals get the possibility to insure their civil liability, while emerged competition created a freedom to choose at least from two or three service providers, to compare conditions of a contract, and reduced contributions.

### **3.1.2. Indirect Insurance Ratios**

There are three main indirect insurance ratios used for the evaluation of insurance market, these are insurance density, insurance penetration and expansion of insurance market. Mentioned ratios are widely applied in all financial institutions. For the calculation of these ratios there are considered not only premium written or contracts signed, but also the size of GDP in the market, as well as the population in certain country or region. For better understanding explanation of each ratio calculation is provided.

**Insurance density** – the ratio of premiums written per capita.

**Insurance penetration** – the ratio of premiums written to GDP. This ratio reflects the development level of the insurance market and a place together with importance of insurance business in a structure of state’s economy.

**Insurance expansion** – the ratio of contracts signed per capita.

These three ratios were applied in order to evaluate general liability insurance as well. The results of calculations are provided in table 8.

**Table 8. Key indirect ratios of general liability insurance market in Lithuania (2003-2008), by author**

|                               | 2003      | 2004      | 2005      | 2006      | 2007      | 2008      |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| GDP, in million litas         | 56.959    | 62.698    | 72.060    | 82.793    | 98.669    | 111.189   |
| Population                    | 3.454.200 | 3.435.600 | 3.414.300 | 3.394.100 | 3.375.600 | 3.358.100 |
| Insurance density, in litas   | 7,74      | 8,16      | 12,35     | 15,46     | 20,67     | 22,44     |
| Insurance penetration         | 0,00047   | 0,00045   | 0,00058   | 0,00063   | 0,00071   | 0,00068   |
| Expansion of insurance market | 0,012     | 0,015     | 0,016     | 0,015     | 0,019     | 0,021     |

Development of insurance density ratio shows that the amount Lithuanians are spending for general liability insurance has increased significantly in a period of 6 years, i.e. it increased from 7,74 Lt to 22,44 Lt per capita spent for general liability insurance. This is almost triple growth. However, insurance density of non-life insurance has increased from 173,59 Lt to 418,40 Lt. This means that in year 2008 one citizen spent 418,40 Lt for non-life insurance. 22,44 Lt out of them were spent for general liability insurance, this is only a bit more than 5 percent. This share was not significantly changing during analysed 6 years.

Second ratio – insurance penetration showed that premium written in general liability insurance accounted only to 0,07 percent of state's GDP in year 2008, while it was 0,05 percent in year 2003. Such still small insurance penetration shows that there is still relatively big potential for this line of insurance. In comparison, non-life insurance accounted to 1,3 percent of GDP in year 2008.

With reference to insurance market's expansion ratio, one citizen signed 0,021 general liability contracts in year 2008 comparing to 0,012 contracts signed in year 2003. While each citizen signed 1,05 and 1,22 non-life insurance contracts in year 2003 and 2008 respectively.

Analysed indirect insurance ratios have shown that there exist a potential for general liability insurance to expand its share in total portfolio of non-life insurance, as it is gradually moving forward.

### **3.2. Predictions of General Liability Insurance Development in the Following Periods**

#### **3.2.1. Questionnaire Survey**

In order to support official and widely available information and to have an impression on how business entities are thinking a questionnaire survey was made. The aim of this survey was to analyse the behaviour of businesses and to find possible links between different factors influencing usage of general liability insurance in Lithuania. By this it was intended to acquire information on the level of insurability among companies, who are potential users of this kind of insurance. It was also intended to find out key reasons for the usage of general liability insurance, as well as to relate

the results to certain characteristics of companies, to check if there are any tendencies in usage of general liability insurance. Shortly said – author aimed to analyse the behaviour of Lithuanian assurers.

Unfortunately, respondents were not very active, therefore the results of a survey can not be considered as complete, but they are sufficient for orientating purposes. Results do not reflect situation in overall Lithuania, they rather focus on five biggest cities. As a result, information provided further in this chapter does not reflect the situation and opinion of companies functioning in other towns. Furthermore, it is expected that situation in mentioned areas differ from surveyed cities.

The form of questionnaire and detailed summary of relies are added to this thesis as Apendix A, B. However, common trends which were found out and comments on them are provided following.

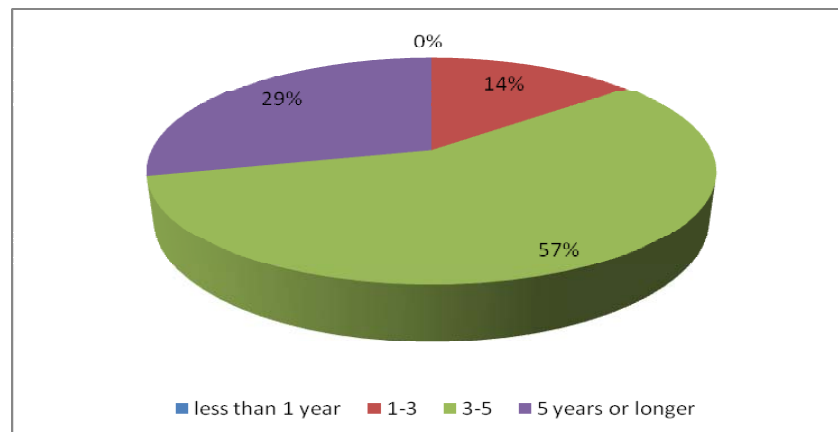
The survey has shown that the vast majority of respondents know what general liability insurance is and only 14 percent of them have no understanding about this line of insurance. That is 7 out of 49 companies could not explain what general liability insurance is used for.

To the question if there has ever been a situation in company's practice that a client suffered due to bad quality product or as a result of services the company has provided, 18 percent gave a positive answer, 4 percent stated that this happened more than once. This means that every fifth company experienced this situation more than once. What is most interesting is that only 2 companies out of 9 who experienced such situations are using general liability insurance. The rest of them are neither using another kind of civil liability covering insurances. This is quite low share knowing 33 percent of those respondents confirmed that client required offsetting losses one has incurred. However, it became clear that clients who suffered are not active in making claims on companies or requiring offsetting ones incurred losses. The situation strongly differs from that in West Europe or United States.

Decision to make this kind of survey was influenced by a prediction that big part of companies meeting certain risk related to their third-party civil liability in their daily business is not using general liability insurance, since it is not compulsory. The survey confirmed this hypothesis and showed that only 14 percent, that is 7 companies out of 49 are exercising general liability insurance. This shows low understanding of companies on risks they are facing every day. Furthermore, some of them are not even learning from former mistakes and do not cover their third-party liability after situations experienced with customers. Moreover, only 9 percent of respondents are using some other kind of third-party liability insurance, i.e. only 3 companies out of 49.

However, analysis of those using general liability insurance has showed that companies are using it for not so minimum period. No company is new in using this insurance, 14 percent of

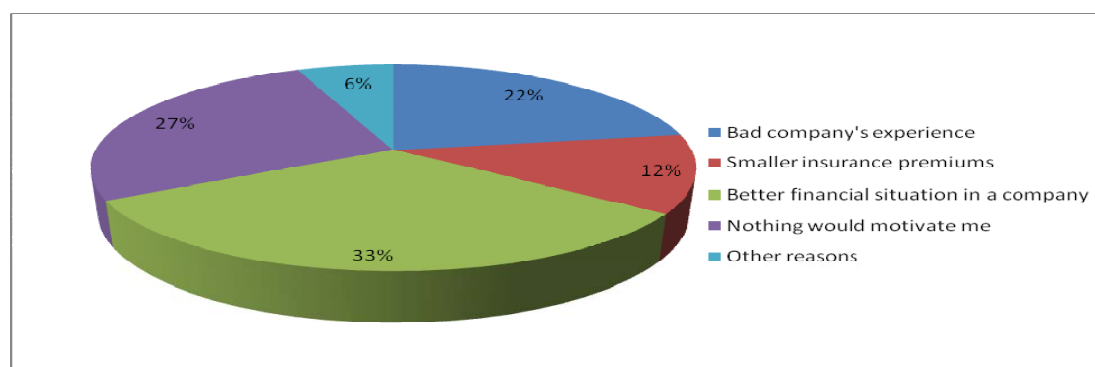
companies are insured between 1 and 3 years, 57 percent between 3 and 5 years and 29 percent are using general liability insurance as coverage for more than 5 years (see figure 13).



**Figure 13. How long do you use general liability insurance?**

Reasons why company has chosen general liability insurance, not some other kind of third-party liability insurance are three: safety (stated by 43 percent of those exercising general liability insurance), wider coverage area (stated by 43 percent of respondents) and sense of responsibility by company owners (14 percent).

Since a very low number of companies exercising general liability insurance has been expected, author intended to find out certain motivators which could motivate companies to start using this kind of insurance. The survey showed that better financial situation in a company would motivate owners to use general liability insurance, while 22 percent would start using this insurance after bad company's experience, 12 percent if insurance premiums would be smaller, 6 percent mentioned other reasons which lead to the conclusion that owners do not characterise their business as facing high risk. 27 percent of respondents were negative minded and stated that nothing would motivate them to start using general liability insurance. Visualisation of this question is provided in figure 14.



**Figure 14. What would motivate you to use general liability insurance?**

Companies were asked to evaluate possible negative impact which could occur due to aggrieved customer. No one of respondents thought that coverage of losses made to customers would be so negative that this would cause bankruptcy of a company. However, 45 percent of respondents think that the impact on company's financial situation would be very big and negative, while 55 percent state that losses would have no significant impact on company and its financial situation. 40 percent out of those evaluating losses being risky for company's financial status are exercising general liability insurance in order to cover this risk and to protect company.

In order to find out who insures and who does not certain questions were included in a survey for better evaluation of companies' common characteristics. Since 43 percent of respondents evaluate their companies as small and not very competitive, a presumption could be made that owners think companies being too small or maybe having not enough extra money for insurance. On the other hand, companies who are not earning high revenues should be worried about their safety and survival in the market. General liability insurance would ensure that companies will not go bankrupt due to harms made to their customers, because such losses could be critical for small companies. There are only 14 percent of mentioned companies who are using general liability insurance. 39 percent of respondents focuses on niche markets and are evaluated having a strong competitive advantage, while 18 percent of respondents evaluate their companies as very competitive and strong. All of latter companies are not insured, while 21 percent of those focusing on niche markets are exercising general liability insurance.

Since number of respondents using general liability insurance is very small, it is complicated to characterise typical company using this kind of insurance. However, out of survey we can state that there is no clear group of companies using or not using general liability insurance, which we could characterise. Therefore it is difficult to make any conclusion related to this question.

Survey has showed that primary presumption was correct – 86 percent of respondents do not use general liability insurance. Survey was made in five biggest cities in Lithuania, therefore it does not reflect situation in small towns. Companies there are mostly smaller with range of customers, who are not as confident as they are in big cities, thus also smaller turnover, therefore there is a bigger possibility that there is a bigger share of those not using general liability insurance. Following this, further growth in usage of general liability insurance can be related to relatively big number of companies which are potential users of this insurance in towns. Moreover, survey has shown that large number of companies would use general liability insurance, if financial situation in a company would be better, insurance premiums lower, or bad company's experience would prompt to do that. Visible rise in number of complaining customers will indeed motivate companies to start using this type of insurance in the near future.

Whereas insurance activity is characterised by slow information management especially when talking about annual results, therefore it is rather complicated to get information needed for making predictions about further development. Since information about the results of previous year will be announced only in August most of the forecasts will be done for year 2009. All the forecasts related to year 2010 will be provided on basis of forecasts for year 2009 with the hypothesis, that these results reflect actual situation in year 2009. Following chapters will reflect possible future trends in general liability insurance.

### 3.2.2. Development of Premium Written

Development of premium written has shown impressive growth during all the analysed period. Premium written nearly tripled in 6 years. Already this allows us to make a statement, that premium written will continue to grow in the following periods as well. Maybe growth will not be such impressive as in previous periods, due to present economic situation in Lithuania and in the world, but it is presumable that general trend will remain upward moving. However, in order to make forecasts more trustful, certain forecast methods presented in the first part of this thesis will be used and former development results will be taken into account. The aim is to forecast the results for year 2009, since they are still not announced. Forecasts for year 2010 will be included if possible (see Appendix C). Broad-brushed results are presented in table 9.

**Table 9. General liability insurance in terms of premium written in year 2009 – forecast, in thousands litas, by author**

| Moving Average |         | Exponential Smoothing |              | Regression Analysis considering:                   |  |         |                      |                  |
|----------------|---------|-----------------------|--------------|--|--|---------|----------------------|------------------|
| n=2            | n=3     | $\alpha=0,8$          | $\alpha=0,6$ | Number of limited liability joints stock companies | Number of companies with over 50 employees | GDP     | Technical provisions | Business revenue |
| 72565,6        | 65864,9 | 67704,1               | 69315,5      | 91312,5  | 82260,6                                    | 60344,7 | 55858,7              | 53291,5          |

The method of moving average has shown negative results for year 2009. However, this can be explained by huge possible error. Exponential smoothing method showed negative expectations as well, but it could be again related to very big possible error. On the other hand, regression analysis was also not so positive. That gives a hint, that the results of general liability insurance might be not so successful, as they were in last periods. All this can be explained by complicated economic situation in Lithuania, as well as in the rest of world. However, not all results of forecasts were showing downward movement. Regression analysis considering number of limited liability joint-stock companies and number of companies with more than 50 employees provided positive expectations for year 2009.

Reliability of methods chosen was checked by calculating correlation and determination coefficients. It was proved that strong linear relation exists between premium written and number of limited liability joint-stock companies – correlation coefficient  $R=0,9817$ . It confirms that the forecast method was used reasonably. While determination coefficient  $R^2=0,9636$  confirmed that forecast matches the data. The significance of correlation coefficient was tested ( $t=10,296 > t_{critical; \alpha=0,05}=1,812$ ) and the result is that there is a stochastic relation between number of limited liability joint-stock companies and premium written for general liability insurance. Forecast done relying on relation between changing number of limited liability joint-stock companies and amount of premium written showed growth of more than 21 percent. That is not so easy to trust on due to economic crisis, which is reducing pace of development of all industries and businesses. Furthermore, the growth was not so big even during last periods with well developing economy, therefore we should deny this prediction.

Regression analysis of relation between premium written and companies with more than 50 members showed positive results as well. If to believe in its results the growth in premium written in year 2009 could be 9 percent (7 percent in year 2008). These results sound reliable and realistic. Furthermore, existing stochastic relation between premium written and number of companies with more than 50 employees ( $t=12,436 > t_{critical; \alpha=0,05}=1,812$ ). Applied forecast method matches given data, result is statistically reliable. If this result for year 2009 is reliable and realistic, so for year 2010 we can expect over 78 million litas premium written, what would mean annual decrease of 5 percent. Since there is a strong slow down in business activities in Lithuania presently, the result is acceptable.

Forecasts related to changes in GDP, technical provisions and business revenue state that there is expected decline in premium written from 20 % to 29 %. Despite the fact, that relation between those three variables and premium written is reasonable. Author would rather reject the result of this forecast. There were no such negative changes in a long period and it is not expected that decline could be so big, even if there is a big drop-off in business revenue. Liability insurance is not a product which could be rejected due to smaller revenue, because it improves the feeling of safety.

So to sum it up, the most expected result is that forecasted by regression analysis considering changes in number of companies having more than 50 employees.

### **3.2.3. Development of Contracts Signed**

The success and development of insurance can be reflected not only by the development of premium written, but by changes in contracts signed. Therefore the same forecasting methods were

used in order to predict possible movements in number of contracts signed in future periods. The results are provided in table 10 (also see Appendix D).

**Table 10. General liability insurance in terms of contracts signed in year 2009 – forecast, by author**

| Moving Average |       | Exponential Smoothing |              | Regression Analysis considering:                   |  |       |                  |
|----------------|-------|-----------------------|--------------|--|--|-------|------------------|
| n=2            | n=3   | $\alpha=0,8$          | $\alpha=0,6$ | Number of limited liability joints stock companies | Number of companies with over 50 employees | GDP   | Business revenue |
| 67484          | 62462 | 63784                 | 66136        | 75279  | 70716                                      | 61214 | 57252            |

The results of mentioned forecast correspond to those on the development of premium written. Most of the prognoses are showing downward movement, which if to believe in prognosis would be quite negative – from 5 % to 19 %. This is possible, however, author would make a presumption that despite economic difficulties in the market, insurance for businesses should not show negative trends. Difficult times are when liability insurance is tool improving the feeling of safety, therefore those who were insuring in previous periods should not stop doing that in year 2009. However, it is logical that the amount of new clients might not increase.

In order not to go too deep into details only those results providing positive changes will be analysed further. Reliability of chosen methods was proved by correlation and determination coefficients. There is a strong linear relation between number of limited liability joint-stock companies and contracts signed ( $R=0,916$ ). This confirms that the method was chosen reasonably. High value of determination coefficient ( $R^2=0,839$ ) proved that forecast matches data. Existence of stochastic relation between number of limited liability joint-stock companies and contracts signed in general liability insurance was also proved ( $t=4,564 > t_{critical;\alpha=0,05}=1,812$ ). So we can state that it can be expected growth in contracts signed by nearly 7 percent, this would mean more than 75 thousand contracts signed.

One more expected result is received considering changes in companies having more than 50 employees. It forecasts increase of only 0,3 %. This is acceptable having in mind present situation in the markets, what also influences habits of potential consumers of general liability insurance. Reliance of this method was proved –  $R=0,897$ ,  $R^2=0,805$ ,  $t=4,057 > t_{critical;\alpha=0,05}=1,812$ .

If to trust in these two methods, in year 2010 we can expect growth by 12 percent (considering number of limited liability joint-stock companies) or decrease by 3 percent (considering changes in number of companies having more than 50 employees). Seeing not so positive changes in other variables like GDP or number of economic subjects, second expectation would be more expected.

Moreover, if there will be a short slow down in the market of general liability insurance, it will not last long. The requirements to have liability insurance are growing, especially when



cooperating with foreign partners. Furthermore, it is expected that after few years the number of companies functioning in the market will continue growing after present slow down. Economy will recover what will push forward the demand of general liability insurance as well.

### 3.2.4. Development of Claims Paid

When evaluating development of insurance it is very important not only to analyse changes in what is collected, but also what is paid to users of the service. Therefore, development of claims paid is the next variable to be analysed.

For the forecast of claims paid in the nearest future there were used methods analogous to those used to predict premium paid and contracts signed. Results are presented in the table 11 (see also appendix E).

**Table 11. General liability insurance in terms of claims paid in year 2009 – forecast, by author**

| Moving Average |         | Exponential Smoothing |              | Regression Analysis considering:                   |  |         |                      |
|----------------|---------|-----------------------|--------------|--|--|---------|----------------------|
| n=2            | n=3     | $\alpha=0,8$          | $\alpha=0,6$ | Number of limited liability joints stock companies | Number of companies with over 50 employees | GDP     | Technical provisions |
| 15419,8        | 15406,5 | 14736,9               | 15377,9      | 20330,9  | 18067,1                                    | 13870,2 | 13018,5              |

It is obvious and natural that if the consumption of a product grows, it becomes more popular and known among people, what also stimulates the growth of usage from another side – usage in order to get compensation for certain losses or harms. Therefore it is important to look at possible changes in claims paid during the next periods.

Looking to changes in former periods there comes an impression that growth should remain similar to that in previous years, at least the tendency has to remain growing. Maybe companies will become a little bit more passive when insuring themselves, but the slow down in claims should not be affected by slow down in economy in general.

Therefore many of received results do not meet general tendency. Calculated values of correlation and determination coefficients characterised all of them as reliable. However, author would reject them as being not realistic if to look at general tendencies in development history. It should not be expected drop-off by 16 % or 22 %, therefore results received applying regression analysis considering changes in GDP and technical provisions are rejected. Moving average and exponential smoothing methods show small negative movements. While regression analysis considering changes in number of limited liability joint-stock companies and companies having more than 50 employees has shown really growing number of claims paid, what would mean increase in 23 % and 9 % respectively. There is a strong linear relation between number of limited

liability joint-stock companies ( $R=0,948$ ) or number of companies with more than 50 employees ( $R=0,897$ ) and claims paid. High values of determination coefficient proved that forecasts match the data. A stochastic relation exists between number of mentioned companies and claims paid in general liability insurance ( $t=5,976 > t_{critical;\alpha=0,05}=1,812$  and  $t=4,054 > t_{critical;\alpha=0,05}=1,812$  respectively).

Due to the fact, that sums of claims paid were gradually growing in former periods and the impact of economy's slow-up does not have strong impact on long-tail insurances, the result received concerning changes in companies having more than 50 employees would be most acceptable. That would mean annual growth of 9 percent in year 2009 (ca. 18 million litas), while in year 2010 we could expect a drop-off by 4 percent in claims paid (17,3 million litas).

If to evaluate general situation in Lithuania, the number of claims made could increase due to cheating. As it was discussed in previous chapters, cheating became a big problem in general liability insurance. People became too brave to claim on different service providers or producers, sellers. This can even more develop in hard financial times, when people are searching for different ways to gain wealth. Therefore negative changes in claims paid are rather not expected.

Summarising results of executed forecasts – changes in number of limited liability joint-stock companies as well as in number of companies having more than 50 employees are expected to be most reflecting changes in premium written, contracts signed and claims paid in general liability insurance in Lithuania. With reference to predictions made the results for year 2009 and accordingly to year 2010 are the following:

premium written – 82,261 million litas in year 2009 and 78,14 million litas in year 2010, that is increase by 9,2 % in year 2009 and decrease by 5 % in year 2010;

contracts signed - 70716 or if more optimistically – 75279 in year 2009, and 68871 or 84814 contracts in year 2010, i.e. increase by 0,28 % or 6,75 % in year 2009 and in year 2010 there can be expected decline up till 8,52 % or growth up to 19,94 %;

claims paid – 18,067 million litas (+9,43 %) in year 2009 and 17,272 million litas (-4,41 %) in year 2010.

With reference to the forecasts done all these three variables should be growing in year 2009, but will possibly show a small drop-off in year 2010.

## CONCLUSION AND RECOMMENDATIONS

Lithuania's insurance market is quite young, small and still developing comparing to other European countries, especially when talking about general liability insurance. However, signs of positive future are apparent. Main users of this insurance are big companies, especially those working internationally. The number of such companies is not big in Lithuania, however, requirements set by foreign co-operators become stricter and stricter, ensuring continuous usage of general liability insurance. Furthermore, the term "general liability insurance" covers few different liability insurances under its umbrella; therefore the growth of it is also related to the lawful obligation for some types of businesses to exercise professional indemnity insurance and employer's liability insurance. So mainly there are two forces stimulating popularity of general liability insurance, i.e. requirements set by international co-operators and requirements set by state.

Lithuanians do not see the value and meaning of insurance and its functions. Usage of this insurance is rather related to certain obligations set by particular institutions or business partners. The actual meaning of general liability insurance is not seen not only by potential users of this kind of insurance, but also by the third party, which is very important in this line of insurance. Third party manipulates this insurance, transforming it rather to social support tool than exercising original functions of general liability insurance as coverage of liability.

This is not the only problem related to this line of insurance. Currently in Lithuania there exists number of various problems: limited information and no researches made on this topic, unlimited risk for both parties, i.e. insurers and assureds, low experience, long-tail liability for insurers, growing number of claims made, cheating, small number of potential assureds, complicated sense of content in general liability insurance, and Lithuanian mentality as such.

At the first quarter of year 2010 in Lithuania there were 6 out of 8 non-life insurance companies providing general liability insurance for Lithuania's market. Additionally there were four foreign companies' subsidiaries established in Lithuania, who were also offering general liability insurance. The market was concentrated in year 2008, but the concentration was moderate. Five undertakings (UAB DK "PZU Lietuva", UAB "BTA draudimas", AB "Lietuvos draudimas", UADB "Ergo Lietuva", and UAB "IF draudimas") out of 9 companies offering general liability insurance held 88 percent of the market share.

In terms of premiums written general liability insurance amounted to almost 75,35 million litas in year 2008. It has more than doubled since year 2004 and kept steady growth during last 4 years. The amount of claims paid during the year 2008 reached 160.510 litas. The changes in claims

paid were developing in the same manner as premiums written. However, since year 2004 the amount of claims paid increased more than 4 times.

The share of general liability insurance in non-life insurance's portfolio in terms of premiums written is not changing very much, it remains in a level of almost 5,5 % during the last 4 years. Situation with claims paid is also not changing very much, its share in non-life insurance's portfolio was varying from 2,4 % till 3,5 %. While the share of claims paid in premiums written was also varying more or less steadily, between 20,4 % and 31,4 %. Thus, premium written fully covers claims to be paid and there is still much capacity to save or to set to technical provisions. The number of indemnities is quite low; it does not exceed 57% of all claims announced.

The share of general liability insurance expenditures – premium written – in business revenue is very small comparing to that in the United States and in period of four years increased from 0,03 % to 0,04 % of all business revenue. However, premium written are growing, Lithuanian mentality is changing, what will definitely lead to the growth of money spent on general liability insurance.

Insurance density ratio has increased from 7,74 Lt to 22,44 Lt per capita spent for general liability insurance in 6 years. This is almost triple growth. However, insurance density of non-life insurance has increased from 173,59 Lt to 418,40 Lt. Insurance penetration showed that premium written in general liability insurance accounted only to 0,07 percent of state's GDP in year 2008, in comparison, non-life insurance accounted to 1,3 percent of GDP in year 2008. One citizen signed 0,021 general liability contracts in year 2008 comparing to 1,22 non-life insurance contracts.

A survey was made with an aim to analyse the behaviour of businesses and to find possible connections between different factors influencing usage of general liability insurance in Lithuania. By this it was intended to acquire information on the level of insurability among companies, who are potential users of this kind of insurance. It was also intended to find out key reasons for the usage of general liability insurance, as well as to relate the results to certain characteristics of companies, to check if there are any tendencies in usage of general liability insurance. Unfortunately, respondents were not very active, therefore the results of a survey can not be considered as complete, but they are sufficient for orientating purposes. Survey has shown that primary presumption about low usage of general liability insurance was correct. However, it has shown that large number of companies would use general liability insurance, if financial situation in a company would be better, insurance premiums lower, or bad company's experience would prompt to do that. Visible rise in number of complaining customers will indeed motivate companies to start using this type of insurance in the near future.

Forecasts have shown that general liability insurance should continue growing; however the growth will not be very dramatic in the nearest periods due to difficult present financial situation in the markets and careful behaviour of companies when planning expenditures. On the other hand, complicated situation in the markets stimulates companies to look for guarantees. Often it is requirement for cooperating companies to have general liability insurance, especially when doing international business.

### **Recommendations**

Information provided on general liability insurance in general is very limited in Lithuania at present time. There is a lack of information provided on this line of insurance, both historically and theoretically. Since it is very important insurance line, there should be more information provided on it, in order to introduce people to it, attract their attention and to stimulate interest in it. Furthermore, people should be taught about civil liability and methods to cover it and to do that not because of duty, but because of sense of responsibility and advanced thinking. General liability insurance is additional value having insurance, moreover, exercising or not exercising this insurance signalises about the reliability of certain company.

General liability insurance is very complicated insurance when understanding its content. Most of companies refuse using it, due to its complexity. Therefore, the content could be explained more detailed and using more public methods, in order to provide this information to as many people as possible.

Number of claims made is fast growing every year; therefore, attention has to be paid on reducing fail claims or identifying them. Furthermore, despite the fact, that people are still quite careful when claiming in Lithuania, preventive actions shall be taken in order to avoid reaching the level of claiming like it is in well developed countries, where general liability insurance became rather social compensation system, not simple insurance.

Moreover, maximum sum for possible demanding coverage of non-material harms should be set. Expectations of aggrieved or ostensibly aggrieved people are increasing very fast. Since there are no restrictions on how much they can demand, sums are simply taken without any clever arguments. Furthermore, insurance companies are not able to evaluate possible risks, therefore, their risk is not easy to reinsure.

To sum up, the market of general liability insurance in Lithuania is not perfect because of lack of experience. Currently there is a tendency to grow and growth potential is still big and giving

positive expectations, having in mind permanently strengthening requirements for Lithuanian companies from international co-operators, especially in the times of economic crisis.

This work has overviewed most essential issues concerning general liability insurance and presented actual situation together with foretime and future trends in development of it in Lithuania. All tasks of this thesis are completed and the aim of the work is obtained – analysis of general liability insurance market was executed and trends in its development were identified on the grounds of analysis made.

## LIST OF REFERENCES

### Books

1. Belinskaja L., Bagdonavičius K., Šernius A. *Draudimas I*. Vilnius: Lietuvos bankininkystės, draudimo ir finansų institutas, 2001. 184 p.
2. Budrevičius A. *Prognozavimo metodai vadyboje*. Vilnius: Vilniaus universiteto leidykla, 2007. 64 p.
3. Čekanavičius V., Murauskas G. *Statistika ir jos taikymas I*. Vilnius: TEV, 2003. 240 p.
4. Čepinskis J., Raškinis D. *Draudimas*. Kaunas: Pasaulio lietuvių kultūros, mokslo ir švietimo centras, 1999. 460 p.
5. Čepinskis J., Raškinis D. *Draudimo veikla*. Kaunas: Vytauto Didžiojo universiteto leidykla, 2005. 290 p.
6. Dumčiuvienė D. *Rinkos struktūros mikroekonominė analizė*. Kaunas: Technologija, 2000. 46 p.
7. Galginaitis J., Stankevičius R. *Draudimo teisė*. Vilnius: Teisės institutas, 2005. 852 p.
8. Kindurys V. *Draudimo paslaugų marketingas*. Vilnius: Vilniaus Universiteto leidykla, 2002. 302p.
9. Mikelėnas V. *Civilinės atsakomybės problemos: lyginamieji aspektai*. Vilnius: Justitia, 1995. 459p.
10. Pabedinskaitė A. *Kiekybiniai sprendimų metodai. I dalis. Koreliacinė regresinė analizė. Prognozavimas*. Vilnius: Technika, 2005. 104p.
11. Pranulis V.P. *Marketingo tyrimai*. Vilnius: Kronta, 1998, 352 p.
12. Vasiliauskas A. *Verslo draudimas*. Šiauliai: ŠU, 2003. 189 p.

### Periodical

1. Grigaliūnas R., Trakšelys K. Draudimo įmonių paslaugų organizavimo tyrimas. *Tiltai*, 2008, nr. 4. p. 47-60
2. Lezgovko A., Lastauskas P. Draudimo verslo plėtra: teoriniai aspektai ir rinkos plėtros prielaidos. *Verslas: teorija ir praktika*, 2008, 9 tomas, nr. 2. p. 125-136
3. Narkūnienė J. Lietuvos draudimo rinka ir jos perspektyvos. *Tiltai*, 2007, nr. 2 (39). p. 24

## Internet

1. Rudzkis T. Nusikaltimai komercinio draudimo srityje (kriminologinė analizė). Vilnius, 2008 (23.03.2010) available from <http://www.nplc.lt/lit/dis/lit-dis-008.pdf>
2. Harrington S. E. Tort Liability, Insurance Rates, and the Insurance Cycle, (10.05.2010) available from:  
[http://docs.google.com/viewer?a=v&q=cache:YKc2eh5frMoJ:fic.wharton.upenn.edu/fic/papers/04/Harrington.pdf+insurance+cycle&hl=no&gl=lt&pid=bl&srcid=ADGEESjXJdIpeQSFSGZ3HmgHo\\_ndIkWko5O1ycogd\\_4TsQVsJ7RDulc4xIoZk6gXiV\\_BV6Pi8D6VEoUzPOkQe7TTnRstDJ-8fOMnoQkGteoZDVyg6tbJAzgYWkN2-uHuK2ti6HgDlsB3&sig=AHIEtbRR2N4BCmm7wmqzs3L3zDQ7gKbGAg](http://docs.google.com/viewer?a=v&q=cache:YKc2eh5frMoJ:fic.wharton.upenn.edu/fic/papers/04/Harrington.pdf+insurance+cycle&hl=no&gl=lt&pid=bl&srcid=ADGEESjXJdIpeQSFSGZ3HmgHo_ndIkWko5O1ycogd_4TsQVsJ7RDulc4xIoZk6gXiV_BV6Pi8D6VEoUzPOkQe7TTnRstDJ-8fOMnoQkGteoZDVyg6tbJAzgYWkN2-uHuK2ti6HgDlsB3&sig=AHIEtbRR2N4BCmm7wmqzs3L3zDQ7gKbGAg)
3. Rodriguez S. Critical Analysis of the European Union Solvency Model for „Non-life“ Insurance Companies: the Portuguese Case. (15.04.2010) available from:  
[http://docs.google.com/viewer?a=v&q=cache:jtO4XDBsjVUJ:www.actuaries.org/AFIR/Colloquia/Boston/Barroso\\_Rodriguez.pdf+technical+provisions+in+non-life+insurance&hl=lt&gl=lt&pid=bl&srcid=ADGEESiwmfhVIgzXu-6XTSu7EFQbuOKcvZTZSHP8dkys-5fEFIIb\\_olqqa3e-HTxS5eDgAKsuyW\\_ickRQ9X29QIN9u4JGfxvzUTITNcFyDdXYdEKQIjPc51u8BrQm2tH8oYz6jLic8xe&sig=AHIEtbR7eRfQWLSMauAJwiG\\_B44McEeRGA](http://docs.google.com/viewer?a=v&q=cache:jtO4XDBsjVUJ:www.actuaries.org/AFIR/Colloquia/Boston/Barroso_Rodriguez.pdf+technical+provisions+in+non-life+insurance&hl=lt&gl=lt&pid=bl&srcid=ADGEESiwmfhVIgzXu-6XTSu7EFQbuOKcvZTZSHP8dkys-5fEFIIb_olqqa3e-HTxS5eDgAKsuyW_ickRQ9X29QIN9u4JGfxvzUTITNcFyDdXYdEKQIjPc51u8BrQm2tH8oYz6jLic8xe&sig=AHIEtbR7eRfQWLSMauAJwiG_B44McEeRGA)
4. Commercial Liability: a Challenge for Business and Their Insurers. Swiss Re, Sigma, 2009, no. 5, (03.27.2010) available at: [http://media.swissre.com/documents/sigma5\\_2009\\_en.pdf](http://media.swissre.com/documents/sigma5_2009_en.pdf)
5. Department of Statistics to the Government of the Republic of Lithuania. (15.05.2010) available from: <http://www.stat.gov.lt/en/>
6. European Insurance in Figures. CEA Statistics. No. 37. December 2009. (23.04.2010) available from: [http://www.cea.eu/uploads/DocumentsLibrary/documents/1256829177\\_eif-final.pdf](http://www.cea.eu/uploads/DocumentsLibrary/documents/1256829177_eif-final.pdf)
7. IBM Corporation. Insurance Product Life Cycle Management. (27.03.2010) available from: <http://www-935.ibm.com/services/us/gbs/bus/pdf/g510-6569-00-insurance-product-lifecycle-management.pdf>
8. Insurance in Emerging Countries: Focus on Liability Developments. Swiss Re, Sigma, 2005, no. 5. (02.05.2010) available from:  
[http://www.swissre.com/resources/a55ce680455c569497a7bf80a45d76a0-Sigma\\_5\\_2005\\_en.pdf](http://www.swissre.com/resources/a55ce680455c569497a7bf80a45d76a0-Sigma_5_2005_en.pdf)
9. Insurance in Lithuania. Year 2006 Overview. Vilnius, 2007 (15.04.2010) available from: <http://www.dpk.lt/files/overview2006.pdf>



10. Insurance in Lithuania. Year 2007 Overview. Vilnius, 2008 (15.04.2010) available from:  
<http://www.dpk.lt/files/overview2007.pdf>
11. Insurance in Lithuania. Year 2008 Overview. Vilnius, 2009 (15.04.2010) available from:  
<http://www.dpk.lt/files/overview2008.pdf>
12. Non-life Claims Reserving: Improving on a Strategic Challenge, Swiss Re, Sigma 2008, no. 2 (12.04.2010) available from:  
[http://www.swissre.com/pws/research%20publications/sigma%20ins.%20research/sigma\\_no\\_2\\_2008.html](http://www.swissre.com/pws/research%20publications/sigma%20ins.%20research/sigma_no_2_2008.html)
13. Non-life Insurance Quarterly Activity Results. (12.05.2010) available from:  
<http://www.dpk.lt/en/rezultatai.statistika.phtml?t=2>
14. Republic of Lithuania Law on Insurance. Available from:  
[http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc\\_l?p\\_id=226194](http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=226194)
15. The Economics of Liability Losses – Insuring a Moving Target. Swiss Re, 6/2004. p. 8. (10.04.2010) available from:  
[http://www.swissre.com/resources/f61a1480455c762ea5c0bf80a45d76a0-sigma6\\_2004\\_e\\_rev.pdf](http://www.swissre.com/resources/f61a1480455c762ea5c0bf80a45d76a0-sigma6_2004_e_rev.pdf)

## **APPENDIXES**

## Appendix A.

### Questionnaire

1. Do you know what general liability insurance is?

Yes            No

2. Has there ever been a situation in company's practice when a client suffered due to bad quality product or as a result of services company has provided?

Yes, one time            Yes, more than one time            No

3. Did client require offsetting losses one has incurred?

Yes            No

4. Is your company using general liability insurance?

Yes            No

5. How long do you use general liability insurance?

less than 1 year            1-3 years            3-5 years            5 years and longer

6. What are the reasons that you have chosen general liability insurance, not other kinds of liability insurance?

7. Is your company using any other kind of liability insurance (e.g. professional indemnity, employer's liability insurance, etc.)?

Yes            No

8. What would motivate you to use general liability insurance?

- Bad company's experience;
- Smaller insurance premiums;
- Better financial situation in a company;
- Nothing would motivate me;
- Other reasons.

9. How would you evaluate possible negative impact on company due to aggrieved customer?

- Losses would cause bankruptcy of a company;
- This would have a very negative impact on financial situation of a company;
- Losses would have no significant impact on company's financial situation.

10. Do you think that your company has a strong competitive advantage?

- Company is very competitive and strong;
- Company is very competitive due to niche market it focuses on;
- Company is small and not very competitive.

11. What is the activity of your company?

Merchandising            Trading            Services

12. When was your company established?

13. How many employees are in your company?

14. Type of a company.

И            AB            UAB            Other

## **Appendix A. Finished.**

### Questionnaire

15. Gender of an owner.

Male                  Female

16. Age of an owner.

Up to 25                  26-35                  36-45                  45 and more

17. City where company operates.

Vilnius

Kaunas

Klaipėda

Šiauliai

Panevėžys

Other

## Appendix B.

### Results of a Questionnaire

|   |  | 1    | 2    | 3    | 4    |
|---|--|------|------|------|------|
| 1. Do you know what general liability insurance is?   | Yes  | x    | x    |      | x    |
|   | No   |      |      | x    |      |
| 2. Has there ever been a situation in company's practice when a client suffered due to bad quality product or as a result of services company has provided? | Yes, one time  |      |      |      |      |
|   | Yes, more than one time  |      |      |      |      |
|   | No   | x    | x    | x    | x    |
|   |  |      |      |      |      |
| 3. Did client require offsetting losses one has incurred?   | Yes  |      |      |      |      |
|   | No   |      |      |      |      |
| 4. Is your company using general liability insurance?   | Yes  |      |      |      |      |
|   | No   | x    | x    | x    | x    |
| 5. How long do you use general liability insurance?   | less than 1 year   |      |      |      |      |
|   | 1-3  |      |      |      |      |
|   | 3-5  |      |      |      |      |
|   | 5 years or longer  |      |      |      |      |
| 6. What are the reasons that you have chosen general liability insurance, not other kinds of liability insurance?   |  |      |      |      |      |
| 7. Is your company using any other kind of liability insurance (e.g. professional indemnity, employer's liability insurance, etc.)?                         | Yes  |      | x    |      |      |
|   | No   | x    |      | x    | x    |
| 8. What would motivate you to use general liability insurance?  | Bad company's experience   |      |      | x    |      |
|   | Smaller insurance premiums   |      | x    |      |      |
|   | Better financial situation in a company                                    |      |      |      |      |
|   | Nothing would motivate me  |      |      |      | x    |
|   | Other reasons  | x    |      |      |      |
| 9. How would you evaluate possible negative impact on company due to aggrieved customer?  | Losses would cause bankruptcy of a company                                 |      |      |      |      |
|   | This would have a very negative impact on financial situation of a company | x    |      | x    |      |
|   | Losses would have no significant impact on company's financial situation   |      | x    |      | x    |
| 10. Do you think that your company has a strong competitive advantage?  | Company is very competitive and strong                                     |      |      | x    |      |
|   | Company is very competitive due to niche market it focuses on              | x    | x    |      | x    |
|   | Company is small and not very competitive                                  |      |      |      |      |
| 11. What is the activity of your company?   | Manufacture  |      |      |      |      |
|   | Trading  |      |      |      |      |
|   | Services   | x    | x    | x    | x    |
| 12. When was your company established?  | Year   | 2004 | 2004 | 2005 | 1996 |
| 13. How many employees are in your company?   | number of employees  | 4    | 18   | 20   | 4    |
| 14. Type of a company.  | II   |      |      |      |      |
|   | AB   |      |      |      |      |
|   | UAB  | x    | x    | x    | x    |
|   | Other  |      |      |      |      |
| 15. Gender of an owner.   | Male   | x    | x    | x    | x    |
|   | Female   |      |      |      |      |
| 16. Age of an owner.  | up to 25   |      |      |      |      |
|   | 26-35  |      |      |      | x    |
|   | 36-45  | x    |      |      |      |
|   | more than 45   |      | x    | x    |      |
| 17. City where company operates.  | Vilnius  | x    | x    | x    |      |
|   | Kaunas   |      | x    |      | x    |
|   | Klaipėda   |      | x    |      |      |
|   | Šiauliai   |      | x    |      |      |
|   | Panevėžys  |      | x    |      |      |
|   | Other  |      | x    |      |      |

## Appendix B. Continued.

### Results of a Questionnaire

[illegible]

## Appendix B. Continued.

### Results of a Questionnaire

[illegible]

## Appendix B. Finished.

### Results of a Questionnaire

|    | 35   | 36                      | 37   | 38   | 39   | 40     | 41   | 42   | 43   | 44   | 45   | 46   | 47   | 48   | 49   |
|----|------|-------------------------|------|------|------|--------|------|------|------|------|------|------|------|------|------|
| 1  | x    | x                       | x    | x    | x    | x      |      | x    | x    | x    | x    | x    | x    | x    | x    |
|    |      |                         |      |      |      |        | x    |      |      |      |      |      |      |      |      |
| 2  |      |                         | x    |      |      |        | x    |      |      |      |      |      |      |      |      |
|    |      | x                       |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    | x    |                         |      | x    | x    | x      |      | x    | x    | x    | x    | x    | x    | x    | x    |
| 3  |      | x                       |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    |      |                         | x    |      |      |        | x    |      |      |      |      |      |      |      |      |
| 4  |      | x                       |      |      |      | x      |      |      |      |      |      |      |      |      |      |
|    | x    |                         | x    | x    | x    |        | x    | x    | x    | x    | x    | x    | x    | x    | x    |
| 5  |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    |      |                         |      |      |      | x      |      |      |      |      |      |      |      |      |      |
|    |      | x                       |      |      |      |        |      |      |      |      |      |      |      |      |      |
| 6  |      | covers<br>more<br>areas |      |      |      | safety |      |      |      |      |      |      |      |      |      |
| 7  |      |                         |      |      |      |        |      |      | x    |      |      |      |      |      |      |
|    | x    | x                       | x    | x    | x    | x      | x    | x    |      | x    | x    | x    | x    | x    | x    |
| 8  |      | x                       |      | x    |      | x      |      |      |      |      |      |      |      |      |      |
|    | x    |                         |      |      |      |        |      |      | x    |      |      |      |      |      |      |
|    |      |                         | x    |      | x    |        |      | x    |      |      |      |      | x    |      | x    |
|    |      |                         |      |      |      |        | x    |      |      | x    |      | x    |      | x    |      |
|    |      |                         |      |      |      |        |      |      |      |      | x    |      |      |      |      |
| 9  |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    | x    |                         |      | x    |      | x      |      |      | x    |      | x    |      | x    |      |      |
|    |      | x                       | x    |      | x    |        | x    | x    |      | x    |      | x    |      | x    | x    |
| 10 |      |                         | x    |      | x    |        |      |      |      |      |      | x    |      |      |      |
|    |      | x                       |      | x    |      |        |      | x    |      |      | x    |      |      |      | x    |
|    | x    |                         |      |      |      | x      | x    |      | x    | x    |      |      | x    | x    |      |
| 11 |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    | x    |                         |      |      |      |        |      |      |      |      |      |      |      |      | x    |
|    | x    | x                       | x    | x    | x    | x      | x    | x    | x    | x    | x    | x    | x    | x    | x    |
| 12 | 2004 | 2002                    | 1996 | 1988 | 1997 | 2006   | 2004 | 2001 | 1992 | 2004 | 2004 | 2008 | 2007 | 1999 | 2008 |
| 13 | 4    | 27                      | 33   | 14   | 21   | 3      | 2    | 36   | 5    | 1    | 16   | 4    | 3    | 3    | 11   |
| 14 |      |                         |      |      |      |        | x    |      |      |      |      |      |      |      |      |
|    |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
|    | x    | x                       | x    | x    | x    | x      |      | x    | x    | x    | x    | x    | x    | x    |      |
| 15 |      |                         |      |      |      |        |      |      |      |      |      |      |      |      | x    |
|    | x    | x                       |      |      | x    |        | x    | x    | x    |      | x    |      | x    |      | x    |
| 16 |      |                         | x    | x    |      | x      |      |      |      | x    |      | x    |      | x    |      |
|    | x    |                         |      | x    |      | x      |      |      | x    | x    | x    |      |      | x    |      |
|    |      | x                       |      |      | x    |        |      |      |      |      |      | x    |      |      |      |
|    |      |                         | x    |      |      |        | x    | x    |      |      |      |      | x    |      | x    |
|    |      |                         |      |      |      |        |      |      |      |      |      |      |      |      |      |
| 17 | x    |                         |      | x    | x    |        | x    |      |      | x    |      | x    | x    |      | x    |
|    |      | x                       |      | x    |      |        |      |      |      |      | x    | x    |      | x    |      |
|    |      |                         | x    | x    |      | x      |      | x    | x    |      |      | x    |      |      |      |
|    |      |                         |      | x    |      |        |      |      |      |      |      | x    |      |      |      |
|    |      |                         |      | x    |      |        |      |      |      | x    |      | x    |      |      |      |
|    |      |                         |      | x    |      |        |      |      |      |      |      | x    |      |      |      |



## Appendix C.

Forecast of Premium Written for year 2009 and 2010 (if possible)

Moving Average method:

| Year                | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009    |
|---------------------|---------|---------|---------|---------|---------|---------|---------|
| Premiums written    | 26749,7 | 28035,1 | 42150,7 | 52463,6 | 69785,7 | 75345,5 | -       |
| Moving Average, n=2 | #N/A    | #N/A    | 27392,4 | 35092,9 | 47307,2 | 61124,7 | 72565,6 |
| Moving Average, n=3 | #N/A    | #N/A    | #N/A    | 32311,8 | 40883,1 | 54800,0 | 65864,9 |
|                     |         |         |         |         |         |         |         |
| Error, n=2          | #N/A    | #N/A    | #N/A    | 5011,3  | 6180,7  | 7127,5  | 6432,0  |
| Error, n=3          | #N/A    | #N/A    | #N/A    | #N/A    | #N/A    | 12321,8 | 12227,8 |
| thousand Lt         |         |         |         |         |         |         |         |

Exponential Smoothing method:

| Year              | Premiums Written | Forecast, $\alpha=0.8$ | Error, $\alpha=0.8$ | Squared error | Forecast, $\alpha=0.6$ | Error, $\alpha=0.6$ | Squared error |
|-------------------|------------------|------------------------|---------------------|---------------|------------------------|---------------------|---------------|
| 2003              | 26.749,7         | #N/A                   | #N/A                | #N/A          | #N/A                   | #N/A                | #N/A          |
| 2004              | 28.035,1         | 26.749,7               | 1.285               | 1.652.253     | 26.749,7               | 1.285               | 1.652.253     |
| 2005              | 42.150,7         | 27.778,0               | -14.373             | 206.573.930   | 27.520,9               | -14.630             | 214.029.878   |
| 2006              | 52.463,6         | 39.276,2               | -13.187             | 173.908.468   | 36.298,8               | -16.165             | 261.300.888   |
| 2007              | 69.785,7         | 49.826,1               | -19.960             | 398.385.121   | 45.997,7               | -23.788             | 565.869.972   |
| 2008              | 75.345,5         | 65.793,8               | -9.552              | 91.235.306    | 60.270,5               | -15.075             | 227.255.885   |
| 2009              | -                | 67.704,1               |                     | 174.351.016   | 69.315,5               |                     | 254.021.775   |
| in thousand litas |                  |                        |                     |               |                        |                     |               |

Regression analysis:

| Year                           | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009   | 2010   | R=0,9817  | $\alpha = 0,05$      |
|--------------------------------|---------|---------|---------|---------|---------|---------|--------|--------|-----------|----------------------|
| UAB                            | 20.075  | 21.136  | 24.833  | 29.199  | 30.963  | 35.413  | 39.413 | 45.541 | R2=0,9636 | $t_{critical}=1,812$ |
| Premiums written (thousand Lt) | 26749,7 | 28035,1 | 42150,7 | 52463,6 | 69785,7 | 75345,5 | 91313  | 112051 | t=10,296  | $t > t_{critical}$   |

| Year                           | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009  | R=0,99077 | $\alpha = 0,05$      |
|--------------------------------|---------|---------|---------|---------|---------|---------|-------|-----------|----------------------|
| GDP                            | 56959   | 62698   | 72060   | 82793   | 98669   | 111189  | 92353 | R2=0,9816 | $t_{critical}=1,812$ |
| Premiums written (thousand Lt) | 26749,7 | 28035,1 | 42150,7 | 52463,6 | 69785,7 | 75345,5 | 60345 | t=14,621  | $t > t_{critical}$   |

## Appendix C. Finished.

Forecast of Premium Written for year 2009 and 2010 (if possible)

Regression analysis:

| Year                           | 2003     | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | R=0,99398 | $\alpha = 0,05$               |
|--------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------|-------------------------------|
| Technical provisions           | 27807422 | 33692936 | 41940145 | 58395936 | 74795351 | 80183500 | 60008933 | R2=0,9880 | $t_{\text{critical}} = 1,812$ |
| Premiums written (thousand Lt) | 26749,7  | 28035,1  | 42150,7  | 52463,6  | 69785,7  | 75345,5  | 55858,7  | t=18,155  | $t > t_{\text{critical}}$     |

|                                       | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009    | 2010    | R=0,9873  | $\alpha = 0,05$               |
|---------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-------------------------------|
| Companies with more than 50 employees | 4350    | 4280    | 4683    | 4832    | 5054    | 5159    | 5314    | 5241    | R2=0,9748 | $t_{\text{critical}} = 1,812$ |
| Premiums written (thousand Lt)        | 26749,7 | 28035,1 | 42150,7 | 52463,6 | 69785,7 | 75345,5 | 82260,6 | 78140,0 | t=12,436  | $t > t_{\text{critical}}$     |

|                               | 2005      | 2006      | 2007      | 2008      | 2009      | R=0,9859  | $\alpha = 0,05$               |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------------------------|
| Business revenue (million Lt) | 122.223,5 | 147.192,1 | 181.449,8 | 211.108,4 | 148.405,0 | R2=0,9721 | $t_{\text{critical}} = 1,943$ |
| Premium written (thousand Lt) | 42150,7   | 52463,6   | 69785,7   | 75345,5   | 53291,457 | t=8,339   | $t > t_{\text{critical}}$     |

## Appendix D.

### Forecast of Contracts Signed for year 2009 and 2010 (if possible)

Moving Average method:

| Year                | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| Contracts signed    | 42330 | 50325 | 55153 | 52420 | 64447 | 70520 | -     |
| Moving Average, n=2 | #N/A  | #N/A  | 46328 | 52739 | 53787 | 58434 | 67484 |
| Moving Average, n=3 | #N/A  | #N/A  | #N/A  | 49269 | 52633 | 57340 | 62462 |
|                     |       |       |       |       |       |       |       |
| Error, n=2          | #N/A  | #N/A  | #N/A  | 3302  | 1961  | 4361  | 4764  |
| Error, n=3          | #N/A  | #N/A  | #N/A  | #N/A  | #N/A  | 5328  | 6204  |
| units               |       |       |       |       |       |       |       |

Exponential Smoothing method:

| Year  | Contracts signed | Forecast, $\alpha=0.8$ | Error, $\alpha=0.8$ | Squared error | Forecast, $\alpha=0.6$ | Error, $\alpha=0.6$ | Squared error |
|-------|------------------|------------------------|---------------------|---------------|------------------------|---------------------|---------------|
| 2003  | 42.330           | #N/A                   | #N/A                | #N/A          | #N/A                   | #N/A                | #N/A          |
| 2004  | 50.325           | 42.330                 | 7.995               | 63.920.025    | 42.330                 | 7.995               | 63.920.025    |
| 2005  | 55.153           | 48.726                 | -6.427              | 41.306.329    | 47.127                 | -8.026              | 64.416.676    |
| 2006  | 52.420           | 53.868                 | 1.448               | 2.095.546     | 51.943                 | -477                | 227.911       |
| 2007  | 64.447           | 52.710                 | -11.737             | 137.768.437   | 52.229                 | -12.218             | 149.278.547   |
| 2008  | 70.520           | 62.100                 | -8.420              | 70.904.753    | 59.560                 | -10.960             | 120.125.633   |
| 2009  | -                | 63.784                 |                     | 63.199.018    | 66.136                 |                     | 79.593.758    |
| units |                  |                        |                     |               |                        |                     |               |

Regression analysis:

| Year             | 2003   | 2004   | 2005   | 2006   | 2007   | 2008   | 2009   | 2010   |           |                      |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|----------------------|
| UAB              | 20.075 | 21.136 | 24.833 | 29.199 | 30.963 | 35.413 | 39.413 | 45.541 | R=0,9159  | $\alpha=0,05$        |
| Contracts signed | 42330  | 50325  | 55153  | 52420  | 64447  | 70520  | 75279  | 84814  | R2=0,8389 | $t_{critical}=1,812$ |
|                  |        |        |        |        |        |        |        |        | $t=4,569$ | $t > t_{critical}$   |

| Year             | 2003  | 2004  | 2005  | 2006  | 2007  | 2008   | 2009  |           |                      |
|------------------|-------|-------|-------|-------|-------|--------|-------|-----------|----------------------|
| GDP              | 56959 | 62698 | 72060 | 82793 | 98669 | 111189 | 92353 | R=0,95537 | $\alpha=0,05$        |
| Contracts signed | 42330 | 50325 | 55153 | 52420 | 64447 | 70520  | 61214 | R2=0,9127 | $t_{critical}=1,812$ |
|                  |       |       |       |       |       |        |       | $t=6,468$ | $t > t_{critical}$   |

## Appendix D. Finished

Forecast of Contracts Signed for year 2009 and 2010 (if possible)

Regression analysis:

|  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  | R=0,8969               | $\alpha = 0,05$              |
|--|-------|-------|-------|-------|-------|-------|-------|-------|------------------------|------------------------------|
| <b>Companies with more than 50 employees</b> | 4350  | 4280  | 4683  | 4832  | 5054  | 5159  | 5314  | 5241  | R <sup>2</sup> =0,8045 | t <sub>critical</sub> =1,812 |
| <b>Contracts signed</b>                      | 42330 | 50325 | 55153 | 52420 | 64447 | 70520 | 70716 | 68871 | t=4,057                | t > t <sub>critical</sub>    |

|                                      | 2005      | 2006      | 2007      | 2008      | 2009      | R=0,9212               | $\alpha = 0,05$              |
|--------------------------------------|-----------|-----------|-----------|-----------|-----------|------------------------|------------------------------|
| <b>Business revenue (million Lt)</b> | 122.223,5 | 147.192,1 | 181.449,8 | 211.108,4 | 148.405,0 | R <sup>2</sup> =0,8486 | t <sub>critical</sub> =1,943 |
| <b>Contracts signed</b>              | 55153     | 52420     | 64447     | 70520     | 57252     | t=3,349                | t > t <sub>critical</sub>    |

## Appendix E.

Forecast of Claims paid for year 2009 and 2010 (if possible)

Moving Average method:

| Year                      | 2003    | 2004    | 2005    | 2006     | 2007    | 2008    | 2009    |
|---------------------------|---------|---------|---------|----------|---------|---------|---------|
| Claims paid (thousand Lt) | 5463,85 | 8812,89 | 9505,24 | 15380,07 | 14329,4 | 16510,1 | -       |
| Moving Average, n=2       | #N/A    | #N/A    | 7138,4  | 9159,1   | 12442,7 | 14854,7 | 15419,8 |
| Moving Average, n=3       | #N/A    | #N/A    | #N/A    | 7927,3   | 11232,7 | 13071,6 | 15406,5 |
|                           |         |         |         |          |         |         |         |
| Error, n=2                | #N/A    | #N/A    | #N/A    | 1209,1   | 2091,4  | 2110,0  | 855,8   |
| Error, n=3                | #N/A    | #N/A    | #N/A    | #N/A     | #N/A    | 2662,9  | 2582,0  |
| thousand Lt               |         |         |         |          |         |         |         |

Exponential Smoothing method:

| Year              | Claims paid | Forecast, $\alpha=0.8$ | Error, $\alpha=0.8$ | Squared error | Forecast, $\alpha=0.6$ | Error, $\alpha=0.6$ | Squared error |
|-------------------|-------------|------------------------|---------------------|---------------|------------------------|---------------------|---------------|
| 2003              | 5.463,9     | #N/A                   | #N/A                | #N/A          | #N/A                   | #N/A                | #N/A          |
| 2004              | 8.812,9     | 5.463,9                | 3.349               | 11.216.069    | 5.463,9                | 3.349               | 11.216.069    |
| 2005              | 9.505,2     | 8.143,1                | -1.362              | 1.855.474     | 7.473,3                | -2.032              | 4.128.886     |
| 2006              | 15.380,1    | 9.232,8                | -6.147              | 37.788.825    | 8.692,5                | -6.688              | 44.724.213    |
| 2007              | 14.329,4    | 14.150,6               | -179                | 31.963        | 12.705,0               | -1.624              | 2.638.599     |
| 2008              | 16.510,1    | 14.293,6               | -2.216              | 4.912.679     | 13.679,6               | -2.830              | 8.011.451     |
| 2009              | -           | 14.736,9               |                     | 11.161.002    | 15.377,9               |                     | 14.143.844    |
| in thousand litas |             |                        |                     |               |                        |                     |               |

Regression analysis:

| Year                      | 2003    | 2004    | 2005    | 2006     | 2007    | 2008    | 2009    | 2010    | R=0,9483  | $\alpha=0,05$        |
|---------------------------|---------|---------|---------|----------|---------|---------|---------|---------|-----------|----------------------|
| UAB                       | 20.075  | 21.136  | 24.833  | 29.199   | 30.963  | 35.413  | 39.413  | 45.541  | R2=0,8993 | $t_{critical}=1,812$ |
| Claims paid (thousand Lt) | 5463,85 | 8812,89 | 9505,24 | 15380,07 | 14329,4 | 16510,1 | 20331,2 | 24585,9 | $t=5,976$ | $t > t_{critical}$   |

| Year                      | 2003    | 2004    | 2005    | 2006     | 2007    | 2008    | 2009  | R=0,91301  | $\alpha=0,05$        |
|---------------------------|---------|---------|---------|----------|---------|---------|-------|------------|----------------------|
| GDP                       | 56959   | 62698   | 72060   | 82793    | 98669   | 111189  | 92353 | R2=0,83359 | $t_{critical}=1,812$ |
| Claims paid (thousand Lt) | 5463,85 | 8812,89 | 9505,24 | 15380,07 | 14329,4 | 16510,1 | 13870 | $t=4,476$  | $t > t_{critical}$   |

## Appendix E. Finished.

Forecast of Claims paid for year 2009 and 2010 (if possible)

Regression analysis:

| Year                      | 2003     | 2004     | 2005     | 2006     | 2007     | 2008     | 2009     | R=0,9342               | $\alpha = 0,05$              |
|---------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------|------------------------------|
| Technical provisions      | 27807422 | 33692936 | 41940145 | 58395936 | 74795351 | 80183500 | 60008933 | R <sup>2</sup> =0,8729 | t <sub>critical</sub> =1,812 |
| Claims paid (thousand Lt) | 5463,85  | 8812,89  | 9505,24  | 15380,07 | 14329,4  | 16510,1  | 13018,5  | t=5,239                | t > t <sub>critical</sub>    |

|                                       | 2003    | 2004    | 2005    | 2006     | 2007    | 2008    | 2009    | 2010    | R=0,8968                | $\alpha = 0,05$              |
|---------------------------------------|---------|---------|---------|----------|---------|---------|---------|---------|-------------------------|------------------------------|
| Companies with more than 50 employees | 4350    | 4280    | 4683    | 4832     | 5054    | 5159    | 5314    | 5241    | R <sup>2</sup> =0,80429 | t <sub>critical</sub> =1,812 |
| Claims paid (thousand Lt)             | 5463,85 | 8812,89 | 9505,24 | 15380,07 | 14329,4 | 16510,1 | 18067,1 | 17272,1 | t=4,054                 | t > t <sub>critical</sub>    |