

**Turība University**  
**Jolanta Derkevica-Pilskunga**

**SUMMARY OF THE DOCTORAL THESIS**

**DOMINO EFFECT THEORY AND  
LEGAL REGULATIONS: THE EFFECTS OF  
RISK AND CRISIS COMMUNICATION  
ON LATVIAN ENTERPRISES**

**DOMINO EFEKTA TEORIJA UN  
TIESISKAIS REGULĒJUMS: KOMUNIKĀCIJA  
RISKA UN KRĪZES SITUĀCIJĀS –  
IETEKME UZ LATVIJAS UZNĒMUMIEM**

**Communication Science Doctoral Study Programme  
in Communication Management**

for award of the doctoral degree (Dr. sc. soc.)  
in Communication Science,  
Communication Theory sub-branch

Riga, 2019

Scientific advisor:

Dr. phil., Prof. emer. Jaakko Lehtonen, Turiba University

Scientific consultant:

Dr.iur. Janis Naciscionis, Turiba University

Official reviewers:

Dr. sc. soc., prof., Andris Petersons (Pētersons), Turiba University (Biznesa augstskola Turība)

Dr. phil., doc., Agnese Davidsons (Dāvidsons), Vidzeme University (Vidzemes Augstskola)

Dr. iur., Raimunds Kalesniks (Raimundas Kalesnykas), the University of Kazimir Semenovich, Lithuania

The defence of the following Promotion paper will take place at the open meeting of Promotion Board of Communication branch of Turiba University on **July 15, 2019, at 11:00** at Turiba University, in Riga, Graudu Street 68 in Senate Hall C204S.

The doctoral thesis and summary can be reviewed at the library of Turiba University, Graudu iela 68, Riga.

Chairperson of the Doctoral Board on Communication Science:

Dr. phil., Prof. Ainars Dimants

Secretary of the Doctoral Board on Communication Science:

Dr. psych. Daina Škuškovnika

ISBN 978-9934-543-21-0

©Jolanta Derkevica-Pilskunga, 2019

© Turiba University, 2019

## CONTENTS

The topicality of the chosen topic.....	4
Goals and tasks of the doctoral research.....	5
The object .....	6
Hypothesis.....	6
The novelty of the research.....	6
The evaluation of the hypothesis.....	6
Research methods and theoretical considerations.....	7
The design of research.....	9
Methodology approach.....	11
The duration and place of the research.....	11
The extent and limitation of the research.....	11
The scope and layout of the chapters.....	12
The description of contents of the chapters of the doctoral thesis.....	12
Conclusions and recommendations .....	35
Theses for defence.....	42
The reliability, reproduction and character of the results.....	42
Scholar work and publications.....	43
Research results approbation and practical use.....	44
The main sources of the scientific literature.....	44

## **The topicality of the chosen topic**

The legal aspects of communication related to risk and crisis management of Latvian private organisations have not been studied much and in depth since 1990 (restoration of independence of the Republic of Latvia). This study covers the period from the restoration of independence to the present day and therefore, studies devoted to the 1990s have not been addressed in depth. There may have been some studies commissioned by the public on the legal aspects of risk and crisis communication, but such information is not publicly available to the author. During the abovementioned period there have been studies on labour risks, natural disaster risks, communication risks among public and various institutions in Latvia but legal aspects of communication related to risk and crisis management have not been studied as yet. In the public sector, there has been an inter-institutional survey on the existence of a communication strategy and a decree on crisis communication action plan for 2011-2013, but the continuity of this plan after 2013 is not visible (Cabinet of Ministers Decree No.147, 2011). In the private sector Lehtonen has mentioned several cases related to legal aspects of crisis, citing some examples in Latvia (Lehtonen, et.al. 2011: 87). Almost any risk is a part of everyday life. These could be safety risks, technology risks, operational risks etc. Some have a minimal impact and can be managed easily, while others may create threats to the organisation's existence in the long term. Both could cause a domino effect and concern stakeholders. An understanding of the principles and processes of effective risk communication management helps business owners to take decisions that are necessary to ensure the best possible outcome for their businesses. Communication is a concept that is difficult to place in a normative framework, although there are such frameworks. The present doctoral thesis introduces frameworks that are directly or indirectly connected to discussions about communication in laws. The concept of "legal aspects" in the field of communication is complicated because there has never been a serious crisis in this regard in Latvia. Serious crisis in the author's interpretation means crises that have caused disasters in any field. The term serious crises has been used hereinafter in the paper with the same meaning. There are, however, gaps in Latvian norms, which means that Latvian organisations at present are still learning to manage risks and crises.

According to Schmitt-Geiger, "litigation public relations are used in all kinds of legal disputes. For companies, it may become relevant in corporate law disputes such as product liability suits, capital market lawsuits, insolvency proceedings and employment law disputes" (Schmitt-Geiger, 2013: 45). The situation in Latvia is similar. Companies managing crisis

communication and Public Relations (further in text PR) are subject to the law, and if the focus is on board members, criminal and civil proceedings play an important role.

The domino effect is a phenomenon that can exacerbate a crisis. One accident can cause another. The domino effect, benchmarking, reputation and ethics are concepts connected to risk and crisis management processes and communication.

Communication is a process that can cause the domino effect and result in a permanent crisis. The domino effect is a process in which one event triggers a chain of similar events (similar to one falling domino that causes the whole row to fall). A hazardous event or negative news about one member of society causes pressure on the reputation of other, similar members of society. A crisis also involves an unpredictable event that threatens the stakeholders' interest and can have a serious impact on the relevant organisation's performance and generate negative outcomes.

Communication is the cooperation between the various stakeholders. Communication management was chosen as the main topic of this research because it can cause a domino effect which could lead to a crisis. Crises are unpredictable, but not always unexpected.

Experienced and well educated management know that crises may occur from time to time, but they cannot always predict such crises. Crises appear suddenly and with an element of surprise and unpredictability. Crisis situations can appear in companies with what is known as the speed of the domino effect. This refers to a situation in which one accident causes another. In most cases, the speed is very fast and hard to control. Bad communication can influence the speed and, accordingly, the reputation of the company. Are company managers aware of this?

A pilot study conducted by the author suggests that the reputation of a company can worsen if bad messages are hidden from employees. This pilot research led the author to explore the topic in greater depth. The important issue is how Latvian legislation influences the risk and crisis processes and the way in which these are managed.

### **Goals and tasks of the doctoral research**

The **aim** of the doctoral thesis is to explore to what extent communication as a business factor influences risks and crises in Latvian businesses, doing so in the context of Latvian legislation and drafting the desired legal guidelines for risk and crisis communication.

### **The tasks of the doctoral thesis:**

1. To explore communication in the context of risk and crisis management and to draft sample plans for risk and crisis management at organisations;

2. To explore the risk and crisis communication aspects of the domino effect in the management context in Latvia by conducting empirical research through the use of a questionnaire, focus groups, statistical analysis and comparative methods;
3. To explore aspects of communication in risk and crisis management in Latvia by selecting and analysing Latvian and European Union norms, as well as scientific research papers and research projects and then drafting desiderata guidelines for risk and crisis communication in Latvia.

**The practical goal** of the doctoral thesis is to identify amendments that are needed in Latvian laws in the context of risk and crisis communication management.

### **The object**

Amendments needed in Latvian laws in the context of risk and crisis communication management processes.

### **Hypothesis**

The stated hypothesis in the doctoral thesis is that risk could be predictable or unpredictable and can cause crisis with the presence of domino effect and it could be resolved on the basis of legal aspects.

### **The novelty of the research**

Scientific novelty is the contribution to communication science and findings about necessary changes in different laws in Latvia. Expert opinions and substantiations of the necessity of communication law as a general law. The author's suggestions, conclusions and substantiations of communication aspect in different laws, connected to companies, its insolvency and knowledge to communicate in risk and crisis situations. Originality and value – the paper addresses basic issues of risk and crisis communication that may open new vistas for research and practice in this field.

### **The evaluation of the hypothesis**

The stated hypothesis at the beginning in the doctoral thesis - risk could be predictable or unpredictable and can cause crisis with the presence of domino effect and it could be resolved on the basis of legal aspects – proved to be correct. The research results showed that companies in Latvia mostly might face risks in the following categories: financial, service delivery, reputation, legal and regulatory compliance and safety. Most of the crises were faced as a result of bad management, incorrect values and economic fluctuations. The source and initial grounds for all the abovementioned risk categories and crises were characterised by deficiencies in legal aspects related to communication field and the presence of the domino effect. The survey and interview data in the paper proved that the communication aspect is not effectively included in the present

laws in Latvia and a number of problematic aspects could be observed. Therefore it is necessary to make amendments in the present legislation. It is important to not only involve lawyers but also communication experts in the development process.

### **Research methods and theoretical considerations**

Combined methods are used in the research. The research is interdisciplinary and the motivation for the use of the chosen methods is to apply quite a broad spectrum of methods because communication science is a part of sociology and social psychology, too. The topic includes legal aspects, too. Hence, the traditional Karl Popper's Basic Scientific falsificationistic principle which defines the inherent testability of any scientific hypothesis as correct or wrong was not applied. Data analysis methods are used in the research for the literature review and qualitative content analysis method was used for interviews. The text analysis method was applied for qualitative social research and provides the description of a general approach to analyse documents qualitatively. Through content analysis the author has studied scholarly literature and has utilised various materials in this process:

- 1) The content analysis of laws of Latvia and the European Union concerning matters such as The Commercial Law, The Insolvency Law, The Law on the Electronic Mass Media, The Civil Law, The Law of Civil procedure, The Law of Civil defence, The Labour Law, The Constitution of the Republic of Latvia, The Mediation Law, The Law of Official Publications and Legal information, The Law of Civil Protection and Disaster Management and different Cabinet of Ministers regulations and publications in juridical field, etc. The author analysed the above mentioned laws and regulations because they are the most connected to communication aspect;
- 2) The content analysis of the codes of ethics of journalists in Latvia and Europe and the concept of mediation in Latvia, as well as codes published by the United Nations Educational, Scientific and Cultural Organisation (UNESCO). The author chose to analyse the mentioned documents because these are qualitative samples of Latvia's legislation in the context of risk and crisis management;
- 3) The analysis of the literature– to describe the Domino effect, research works of the following authors were used – Abdolhamizadeh (2010), Antonioni (2009), Cozzani (2004), Darbra (2010), Reiners (2009), Khan (2001), Abassi (2001) etc. These authors were chosen because the domino effect, a not widely researched topic, has been researched and described by the above authors in the most precise, in depth and qualitative manner.

In risk communication and management the following authors' researches were used – Alhawari (2011), Arnold (2004), Cozzani (2005), Fahrenwald (2010), Funston (2003), Frigo (2011), Palenchar (2005), Weber (2006), Lehtonen et al. (2011) etc. The above mentioned authors were chosen because their research are the closest to the topic of risk management in the context of domino effect and legislation.

In crisis communication and management the following authors' researches were used –Barton (2007), Bernstein (2012), Boin (2000), Buchel (2013), Coombs (2007), Cozzani (2004), Harrison (2011), Hutto (2011), Pollard (2006), Schmitt-Geiger (2013), Lehtonen et al. (2011) etc. The present author chose the mentioned authors because their research are the closest to the topic of risk management in the context of domino effect and legislation.

A pre-study and inquiry through a pilot-study was conducted to understand the problems linked to reputation and crisis that companies have experienced before the content analysis of mentioned literature and normative acts. The pilot study was based on an opinion poll conducted in order to find out the opinions of managers at 70 small companies with fewer than 10 employees. Small companies were chosen because it was suspected that there could be problems connected to reputation and it was interesting to find out, how it influences the process. Questionnaires were sent in through e-mails. This method was necessary to clarify certain issues before the next step in research.

A further survey of 100 companies was conducted regarding amendments necessary and problems related to normative enactments in the field of risk and crisis communication management in Latvia so as to carry out in depth research and understand the deeper problems linked to the topic - the main types and categories of risks and crisis that companies have experienced, identify whether companies have risk and crisis communication plans and what elements are included in these plans, identify which laws are important in the case of risks or crises and explore whether the communication aspect in these laws are sufficient or any changes in the system are necessary. The questionnaires were sent in through e-mails. In both cases the survey was a two-stage process.

Case studies and analysis of companies were used during the research to ascertain the necessary changes and problems related to risk and crisis management in Latvia. In addition to carry out in depth research the survey method was used - interviews with board managers, lawyers, psychologists and communication experts of bankrupt and other companies were also carried out.

Consequently the author of the present research concluded that self-regulation in the risk and crisis communication and juridical aspects does not work effectively, the existing regulation is weak and incomplete because there is no forced mechanism to put in order the company's internal management system to prevent the impact of the domino effect on the stakeholders. The interviews conducted with board managers, lawyers, psychologists and communication experts at bankrupt and other companies was aimed at confirming, approving and criticizing the idea of necessity of amendments in the existing laws. Interviews were conducted face-to-face in focus group and individually and the data of these results are described in interaction with theory. As a result of this survey a case study on situations experienced by companies was compiled.

### **The design of research**

In a pilot-study 70 small companies with fewer than 10 employees were involved, and 50 answers were received from them about the main questions:

- 1) Does communication influence the reputation of your company?
- 2) Have you noticed the “domino effect” in the case of a permanent crisis at your company?
- 3) Can your company's reputation worsen if only staff members are aware of a bad message?

These companies were chosen randomly from four districts in Latvia (Kurzeme, Zemgale, Vidzeme, Latgale) and also from Riga. It means altogether there were 14 companies from each district and Riga.

Legal aspects of risk and crisis communication in Latvia are researched in a survey that involved an interview of 100 company directors and their opinions about risks and their legal aspects in Latvia are identified. The interviewed companies have all suffered risks or even crises which is the reason why the author chose them.

These 100 companies were chosen for research randomly, too, from four districts in Latvia (Kurzeme, Zemgale, Vidzeme, Latgale) and also separately from Riga. It means that 20 companies were chosen from each district and Riga to highlight a comprehensive overview of the situation in Latvia.

The author used the survey method to gather the necessary information as it is the most popular research method used to gather information in cases where humans are data carriers. This helps identify information on the reasons, interests, plans, emotions, relationship structures etc. The aim of the survey was to collect information about risks and crises experienced by these companies.

The survey questions were divided into three parts:

1) First there were contact questions to arouse the interest of respondents in the survey. These questions were simple and understandable;

2) Next there were complicated questions but clearly designed questions to ascertain individual opinions. The author used both unstructured and structured questions. Structured questions were mostly with ready answers and answers on a scale;

3) Dichotomous answers were also used to ascertain common and mutually exclusive pairs of traits. 93 out of the 100 questionnaires were completed.

#### Demographics:

1) Out of the 100 companies participating in the survey 64 were five years old or younger, 17 were between 6 and 10 years old, 10 were between 11 and 20 years old, and two were more than 21 years old. The companies all were from the manufacturing and service sectors;

2) 23 respondent companies have 21 or more employees, 43 have 6-10 staffers, 21 have five or fewer, and six have 11-20 workers.

Risk and crisis communication and laws were analysed from the perspective of communication norms – rights, embargos (prohibition to disseminate information for a particular period), bans and duties. The author analysed aspects of communication in the Republic of Latvia (the country's Constitution, the Civil law, The Civil Procedure law, The Insolvency law and The Electronic Mass Media law), as well as EU laws. The author analysed aspects of communication in the codes of ethics in Latvia and the EU for journalists, the concept of mediation in Latvia, and judicial aspects in Latvia that are in practice.

To deepen the research, the author interviewed representatives of 100 companies about necessary amendments and problems in the normative enactments related to risk and crisis communication in Latvia. Representatives included board members, managers, lawyers and advocates, psychologists and communication experts from companies that have experienced crises or have bankrupted. The data gathered was analysed taking into account theoretical concepts and notions through content analysis and statistical and direct observation methods. The main purpose of this research is to develop risk and crisis communication law guidelines for Latvia – ones that could be adopted by Parliament.

Respondents for the survey were chosen from different, connected fields. Respondents were interviewed in focus group:

1) The first respondent in the survey is a board member of a book retailer that went bankrupt (Company X). In 2009, the company became insolvent because of a dishonest supplier and because of activities among partners;

2) The second respondent is Y. He is now a lawyer and the director of a communication company, but previously he was a board member on a dining services company. The company faced insolvency in 2007 because of a dishonest stakeholder and poor management practices;

3) Respondent W is a company that suffered during the financial crisis in 2009, though it did not go bankrupt. The company is more than 20 years old and has more than 20 employees. It has satisfied financial, organisational, security, legal, and regulatory compliance, and it has dealt with reputational, operational, service delivery, commercial, project, safety, strategic technology and other risk categories. W says that an example of other risks is the death of a very good employee;

4) To ascertain opinions and practices about emotions and the possibility of putting them into a juridical framework, the author interviewed Respondent Z, who is a psychologist with 27 years of experience;

5) To ascertain opinions and juridical aspects data gathered through individual interviews with experts from the psychological, communication and legal sphere was interpreted in the context of theoretical postulates and concepts as the research is interdisciplinary involving various fields.

### **Methodology approach**

The author has presented a critical review of recent literature and laws in the relevant area. Interviews with experts from psychological, communication and legal sphere were included because the research is interdisciplinary. The author got the support for legal orientation and direction in the paper from law science experts Janis Naciscionis (Jānis Načisčionis), Aigars Strupiss (Strupišs), Aldis Gobzems, Aivars Endzins (Endziņš), Ingrīda Veikša, Uldis Ķinis, Dainis Pilskungs, Regnārs Jansons etc.

The motivation in applying the various methods mentioned was to explore the literature and conduct an in depth research of the data gathered. The pilot research was conducted to identify the basic data. Interviews with experts from psychological, communication and legal sphere were also included.

### **The duration and place of the research**

2007-2018, Latvia.

### **The extent and limitation of the research**

It is quite a wide topic. The author chose to limit the research and understand whether it is necessary to make amendments in the existing risk and crisis communication law or other existing laws in Latvia, which is why various laws in Latvia were researched and compared to the experience in EU and some other countries and bankrupted company managers, lawyers and

psychologists in Latvia were interviewed as well. The research is interdisciplinary and all the aspects are essential and should be viewed in interaction.

### **The scope and layout of the chapters**

The present doctoral thesis consists of introduction, the concept of methodology, 4 chapters, conclusions and recommendations. The first chapter discusses the essence of risk and crisis communication processes in the context of domino effect. The second chapter describes judicially correct risk communication in the context of risk management. In the third chapter, judicially correct crisis communication in the context of crisis management is described. The fourth chapter analyses the judicial aspects of communication in risk and crisis processes in LV (The Republic of Latvia) and EU laws and works out desideratum legislation in risk and crisis communication in Latvia.

### **The description of contents of the chapters of the doctoral thesis**

#### **1. The domino effect in risk and crisis communication in the context of management**

In the first chapter, the author describes and analyses the domino effect in risk and crisis communication in the context of management. Risks and crises are very closely connected to the domino effect, which means that any crisis situation can spread. Firstly, it is important to clarify the phenomenon, and it is topical for Latvia, too. A crisis in one company can influence other companies. This chapter describes and analyses the domino effect in risk and crisis communication in detail. The purpose herein is to analyse the essence of domino effect theories, review the pilot project, “Domino effect influence,” and discuss the results, as well as the judicial aspects of risks and crises insofar as they influence companies.

Many financial crises in the world have been followed by the domino effect. Post-crisis management and communication is necessary to avoid this strategic post-crisis. According to Faganel (2011), the financial crisis in the United States in 2007 was followed by a domino effect that caused global loss of ethical values when pursuing monetary health. Individual citizens who had heard preachers saying that it is alright to spend money and to be indebted were suddenly faced with disillusionment and the reality. Clear actions are very important to avoid the domino effect’s “alarm management”.

The domino effect is found in many different instances. Major disasters ever increasingly cause substantial harm and threaten human lives and other resources and the domino effect can be observed. This can happen in various ways, though an essential aspect is always the issue of whether it involves a single factory or progresses from one factory, where the accident occurred,

to others. In line with this criterion, Reniers identified two categories of domino effects – internal domino and external domino (Reiners, 2010: 11). Internal (single-company) domino effects mean that the escalation of an accident occurs within the boundaries of a chemical plant. In external (multi-company) domino effects, one or more secondary accidents occur outside the boundaries of the factory where the primary event occurred. External domino effects often have more severe consequences than internal domino effects do, as the affected area is larger, and more equipment is involved. (Darbra & Palacios, Casal, 2010: 531). A number of domino effect definitions have been proposed. Reniers has listed 13, some of which are very concise (e. g., “an event at one unit that causes a further event at another unit”) (Reiners, 2010: 11), while others are more complex. Most of these definitions contain the following three concepts:

1. A “primary event” such as a fire or explosion in a specific unit;
2. The propagation of the accident to one or more units or plants in which “secondary” accidents are triggered as the result of the primary event;
3. An “escalation” effect, which leads to a general increase in consequences, with secondary accidents being more severe than the primary one.

Among the various definitions of the domino effect that have been proposed, the one by Delvosalle covers these three aspects and seems suitable for this research: “A cascade of events in which the consequences of a previous accident are increased, both spatially and temporally, by the following ones, thus leading to a major accident.” (Delvosalle, 1996: 9) This is the definition used by the author of the present thesis as a framework for the selection of accidents.

If an accident or risk involves the domino effect, then it is necessary to calculate the real impact time and distance. These numerical values reflect the relative level of importance and danger and serves as an indicator of the continuity of the domino effect. This measurement of distance is important from decision-making aspect to ensure confident and safe management of further processes. This means that risk and crisis communication plans for companies must include real domino effect data, connecting these data with real decisions. This facilitates decision making because human beings have biologically programmed feelings. According to Wills, feelings act as instincts and explain most of the behaviour of human beings and other species of animals (Wills, 2000: 243). Crisis situations often involve chaos, and decisions are taken in a big hurry and mostly on the basis of instinct. These instinctive decisions usually are not good for the company in question, because they are not based on theory and could have bad effects in future. Therefore planning risk and communication is essential.

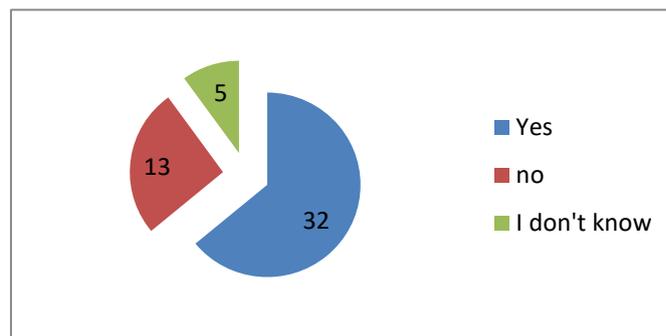
The following case-studies are discussed in this chapter as examples:

In Latvia in autumn 2009, for instance, the Tele2 mobile phone company organised a fake meteor crash in the area of Mazsalaca, as stated by the marketing and commercial director of the company, Jānis Spogis. Many rescue services were involved in the investigation of the “meteor,” and that cost a lot of money. In response to this, the government passed a series of legislative amendments. The company gambled its reputation by deliberately misleading people, and there were no sanctions against it, because the law did not address such processes. The company instead attracted attention and increased its client numbers. It was a deliberate disinformation campaign. Of course there were communication with society, but the domino effect caused such rapid dissemination of the information that the reputation of the company was exposed to risks. The management of reputation risk, moreover, is divided into components such as crisis and situation management, as well as social responsibility. In most cases, a crisis is seen as the biggest threat to the reputation of a company, and many companies are prepared for crisis management. Companies are often prepared for crises, but they are not ready to encounter the reputation hazards or the elements thereof. Corporate reputation expert Andrew Griffin has argued that “crisis situations that are faced by companies are more easily managed than those that are created by the companies themselves.” In this case, Tele2 probably didn’t realise that the fake meteor could cause a long term crisis regarding its reputation due to the domino effect.

During the 2008 crisis of Parex Bank, which the Latvian government took over, the domino effect involved the mass withdrawal of people’s savings. The government initially spoke of an investment of LVL 200 million, though a few days later it was clear that more money would be needed. People who discussed the “anchor” of stabilisation asserted that this would only be the beginning, and they predicted that the government would have to invest a billion or even two billion lats to rescue the bank. The government was responsible for analysing provisions related to the bank’s takeover. Banks that are based in Scandinavia have announced government guarantees, but the natural avalanche of cash withdrawal would lead to a sad situation. Any bank faces a crisis if depositors band together in withdrawing their savings. In the case of the Parex Bank, it could be concluded that rumours and communication had an effect on indirectly influencing the company’s external relations in the sense of international relations, the country’s economic situation, sociocultural relationships, government policies, science and technologies.

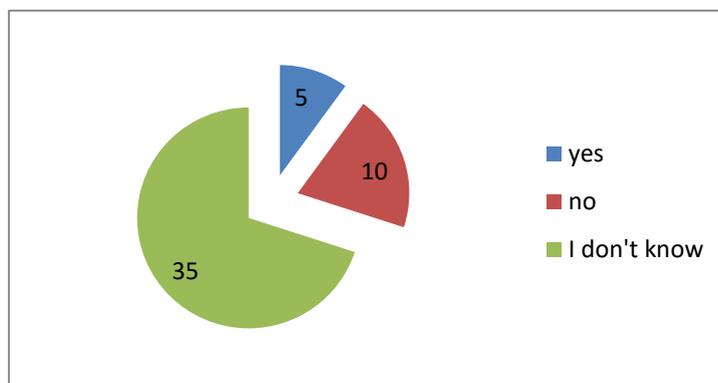
In this work, a pilot research poll was conducted to determine the views of companies in Latvia. 70 small companies with fewer than 10 employees were involved, and 50 answers were received from them.

It is important to show whether communication influences the reputation of the company. As figure 1.1 shows 32 out of 50 respondents said that communication does influence the reputation of their companies, 13 denied this, and five did not have an answer. Thus the research project shows that communication has an influence on reputation. It means that communication is very closely related to the reputation and should safeguard the company's reputation – communication must be clear, theoretically and legally correct and appropriate for that particular company. Knowledge in this field is necessary to ensure that.



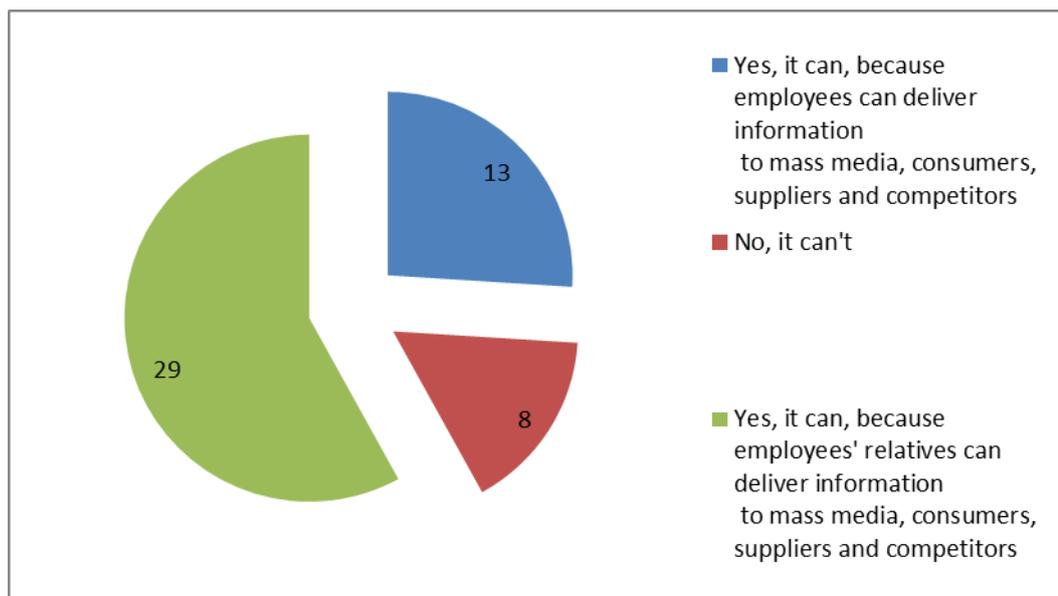
**Fig. 1.1. Communication's influence on the company's reputation**

Figure 1.2, in its turn, shows that 35 entrepreneurs are unaware of whether their enterprise experienced the “domino effect” during a crisis and its impact on their partner companies. Ten respondents said that there was no such effect, while five said that they experienced a domino effect. It means that impact of the domino effect was more or less observed and can affect individuals as well as the surrounding environment even if they did not cause the incident. However this aspect must be researched in depth as it could impact and affect stakeholders even if they are not closely related to the crisis or event. The necessity for legal protection in this aspect can be identified.



**Fig. 1.2. The “domino effect” in the case of a permanent crisis at company**

Figure 1.3 shows that 29 entrepreneurs believe that the reputation of their company can worsen because the relatives of employees can deliver information to the mass media, consumers, suppliers and competitors. Another 13 believe that the reputation can worsen because employees themselves can deliver such information, while eight argue that employees do not do so. This means that the majority of respondents – 42 – agree that reputation can worsen because of the activities of employees and/or their relatives. The figure data show that from the domino effect, reputation and communication aspect in risk and crisis situations it is very important to involve all directly and indirectly related persons and employees and to draft clear communication guidelines in crisis situations to avoid distorted information to mass media, consumers, suppliers and competitors. The “onion method” is important in the theory of communication when speaking about influenced persons or audiences in the risk and crisis communication. The figure shows that employees and their relatives are influenced persons because both can deliver the information to mass media, consumers, suppliers and competitors. It means that in crisis situations it is necessary to work with the employees at first and it is the very beginning of the communication process. Only then should we turn to mass media, consumers and suppliers. Relatives are the second step after employees because they can be relatives of stakeholders, consumers or suppliers. This is an essential aspect in avoiding rumours and dissemination of distorted information.



**Fig. 1.3. The deterioration of the company’s reputation if only staff members are aware of a bad message**

This pilot research helped the author to identify the standpoint and knowledge of companies about communication that can influence their enterprises. Further research was carried out and more respondents were involved in the further stages of the doctoral thesis.

The main conclusion from the pilot research is that reputation can be influenced by risk and crisis processes. Indeed, a company's reputation can be destroyed in a matter of mere seconds. A mishandled response, inappropriate act, labour dispute, product tampering, or poorly timed reorganisation can instantly tarnish a sterling reputation that has been built up thanks to stellar performance and hard work. A well-managed and reputation-conscious company, however, does not have to be defenceless when faced with a damaged reputation.

The main research results based on the content and case study analyses, and the pilot study in this chapter shows that:

- 1) The domino effect is characterised by speed, time distance and force, and as a result communication occurs at a quicker pace, within a shorter time and with more powerful force;
- 2) The domino effect consists of four causes – the root cause, latent causes, human causes and physical causes, with latent causes very often causing crises in that they are based on a spokesperson's lies in a manner that could influence the company's reputation;
- 3) The domino effect can appear in a company's internal and external environment, with external effects often having more severe consequences than internal ones, because the affected area is larger, and more equipment is involved;
- 4) Companies must strive to avoid the domino effect by including this aspect in risk and crisis communication plans.

There is a need for a general legislative system for any company when it comes to risk and crisis situations. The self-regulation system does not work because companies are exposed to the domino effect. It means that one company's crisis can influence the other company. The solution could be a law related to risk and crisis communication. The target of the law must be to avoid the domino effect or chain reaction that influences other companies, audiences and states in crisis situations. On the basis of this conclusion, this author will devote the next chapter of the doctoral thesis to the analysis of laws in Latvia and other countries, also providing sample legal guidelines for communication in risk and crisis situations.

## 2. Risk Communication

The purpose of this chapter is to describe and analyse the essence of the concept of risk communication. The author first compares the concept of risks, risk management and risk communication in the papers of various authors. Based on content analysis of theory, the author of the present thesis has worked out new risk, risk management and risk communication definitions in each of the subchapters. This doctoral thesis only discusses business related risks. Research works in risk communication by Covello (1992), McComas (2006), Palenchar (2005), Coombs (2012) and Fischhoff (1995) were reviewed from the communication theories aspect.

To clarify the complicated topic of risk communication, it is first necessary to explain the definitions of risks. The term comes from the French “risque” and the Italian “risco.” The first known use of the term dates back to around 1661. Webster’s defines risk as “a possibility of loss or injury.” A risk is a situation in which someone or something creates or suggests a hazard. A risk for a company might involve leaking pipes, with the attendant risk that chemicals in those pipes could spread into the environment. The third definition is the possibility of losses or the perils related to the subject matter in an insurance contract. Another issue is the degree of probability of such a loss – a person or thing that is a specified hazard for an insurer, or an insurance hazard related to a specific cause or source. Risk is also the change that an investment (a stock or commodity) will lose value.

The Oxford dictionary, in its turn, says that risk involves a situation that exposes one to danger. Risk is the possibility that something unpleasant or unwelcome might happen. It relates to the possibility of harm or damage to something that is insured, e. g., all-risk insurance for professional photographers. According to Burt (1998), risk is the probability that an event will occur. In epidemiology, the term is most often used to express the likelihood that a particular outcome will be the result of particular exposure. Kaplan argues that a quantitative definition of risk is suggested in the idea of a “set of triplets.” (Kaplan, 2001: 89). The definition is expanded to include uncertainty and completeness, and the use of the Bayes theorem is described in this regard. The definition is used to discuss the notions of “relative risk,” “relativity of risk,” and “acceptability of risk.” According to Kaplan, risk = uncertainty + damage. The author disagrees with Kaplan’s view, because risk is not always an uncertainty. The Webster dictionary defines a hazard as a “source of danger,” while a risk is the “possibility of loss or injury” and the “degree of probability of such a loss.” In other words, hazards are simply a source of danger. Risk includes the likelihood of converting a source into an actual delivery of loss, injury or some form of damage. Kaplan presents a symbolic equation in this regard: Risk = Hazard/safeguards

This equation also suggests that risks can be minimised by increasing safeguards, but at no point can the level of risk be reduced to the zero level. Any risk can be small, but not impossible. The concept of “safeguards” includes the idea of simple awareness in that the awareness of risks reduces them. Knowing about a hole in the road around the corner is less of a risk than driving around without knowing about the hole.

Lehtonen defines risk as “the predicted possibility or likelihood of a negative event.” The Australia-New Zealand Standard for Risk Management, in turn, defines a risk as “the possibility of something happening that impacts on your objectives. It is the chance to either make a gain or a loss. It is measured in terms of likelihood and consequence.” (Lehtonen et al, 2001: 11). Many authors (Rogov, 2011; Balabanov, 1996; Grachev, 2004; Melynikov, 2001 etc.) have defined risk, and most of the definitions have similar features. The foundation for these features is obscurity in terms of what is expressed as uncertainty about the future. All of the definitions include an implication of different levels and degrees, and many definitions claim that one or more reasons may cause the relevant result. In order to summarise and estimate the viewpoints of various authors, the author of the present thesis has determined that the main definition of risk is that it is the possibility that one or more events that are not necessarily linked create positive, negative, advantageous or disadvantageous results for the relevant company.

A business dictionary defines risk as the probability or threat of damage, injury, liability, loss, or any other negative occurrence that is caused by external or internal vulnerabilities and may be avoided through pre-emptive action.

The author has summarised the descriptions and determined her own definition of risk at any company:

**Risk is a predictable or unpredictable possibility that could cause negative or positive accidents or crises in any company, with positive or negative consequences in any sector.**

It is important to review risk management frameworks, as well as risk management. This is specifically meant to review risk management policies and plans, as well as risks, risk criteria, risk treatments, controls, residual risks and risk assessment. This author has summarised these descriptions to create a clearer definition of risk management at any company:

**Risk management is divided into two steps (determining the risks and then handling them in the most appropriate way in terms of the company’s investment objectives). Determination of risks includes identification, analysis and assessment, as well as judicially correct communication about the first steps in the management process. Risk handling includes decision-making, control, avoidance, minimisation, elimination of unacceptable**

**risks, as well as judicially correct communication about the second step in the management process.**

The next step in addressing this topic is to describe definitions of risk communication. The author has summarised these descriptions to come up with her own definition of risk communication at any company:

**Risk communication is a two-way process that directs judicially correct information about the risks of any company for all interested parties in both directions. The information is clear, understandable and directed through the closest communication channels.**

Risk categories have been described in the doctoral thesis based on theory and case studies and based on risk categories and types experienced by companies in Latvia identified through the pilot research.

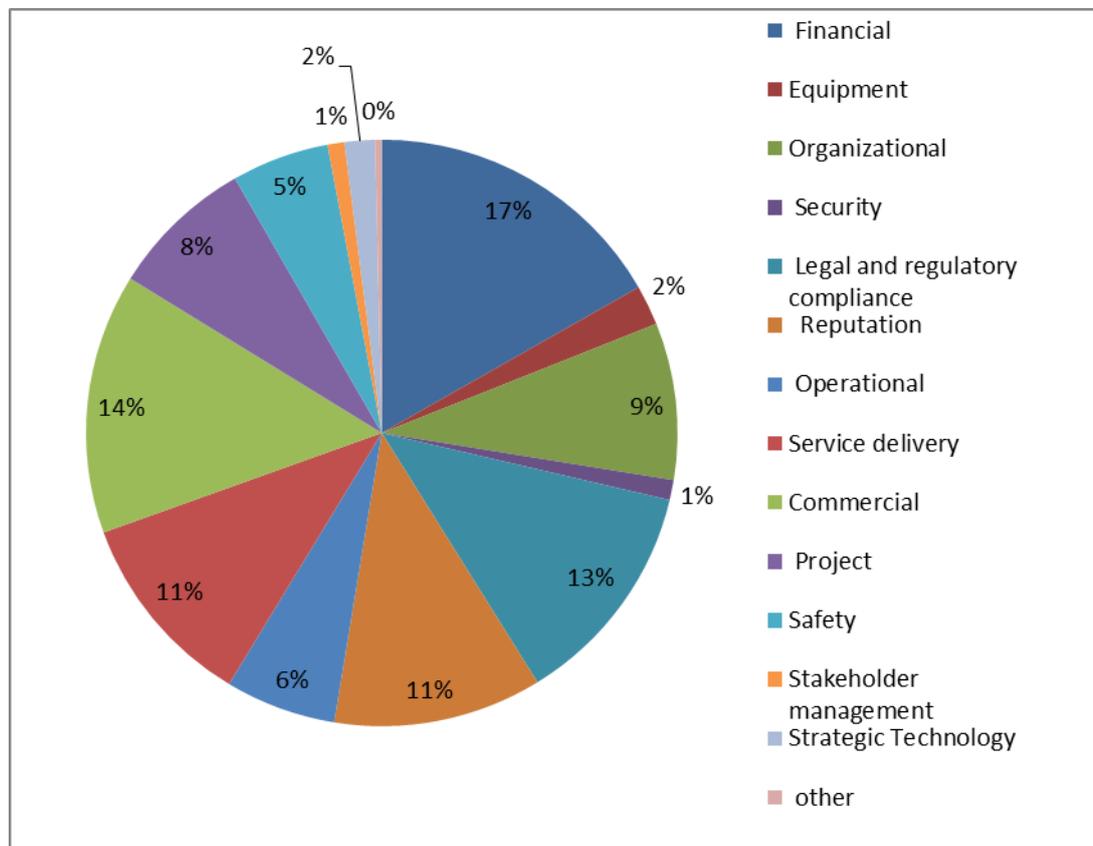
The common risk categories defined in the world of business are as follows– financial, equipment, organisational, security, legal and regulatory compliance, reputation, operational, delivery of services and commercial risks. Further the author describes each of risk categories in a more precise manner.

Financial risks include cash flow, budgetary requirements, tax obligations, creditor and debtor management, remuneration and other account management concerns. Any company can face financial risks, and almost all crises are linked to finances. This author believes that this is the largest, most important and most dangerous risk category. In the banking sector, for instance, a crisis can be caused by a little campaign of rumours. This happened to the bank Swedbank in Latvia in 2011. Somebody spread rumours that the bank was going bankrupt (Sakss, 2012). The domino effect meant that people rushed to withdraw money from ATMs, managers used Internet banking services to pay advance salaries to their employees, and Swedbank lost many of its customers. The bank was steady and didn't go bankrupt, but the risk was enormous nonetheless. In this case, the bank's reputation kept it from going under, and it really was a good and stable financial institution. In this case, however, the bank had to identify rumours as a risk category and be more prepared to communicate with its customers. The first news about the event appeared in the mass media, even though the information was mistaken, and the bank lost many customers and a lot of money.

Equipment risks, which relates to equipment that is used by businesses, including the general use of the equipment, as well as its maintenance, appropriateness, depreciation, safety and upgrading. The company Liepājas Metalurģs in Latvia is a major enterprise which manufactures a wide variety of metals products via the use of very dangerous equipment. Early in 2013, Liepājas Metalurģs faced the risk of bankruptcy (nra.lv, 2010). Employees generally know

what kind of equipment they should use, but there were annual deaths at Liepājas Metalurgs as the result of the dangerous equipment. The owner of the company promised to the country's prime minister that safety would be improved, but the efforts proved insufficient, and the situation led to a crisis. One problem was that Liepājas Metalurgs did very poorly in the field of communication, especially in terms of relationships with the mass media after the accidents occurred. Media representatives found it impossible to contact the company's PR specialists and owners. When a representative of a television news operation finally reached the PR specialist, she announced that she could not speak because she was busy, and then she hung up on the journalist. Such communication problems in a crisis situation cause distrust, and this once again leads to rumours that multiply the domino effect. From the legal point of view, employees and the public at large must know what is going on at a company, not least in terms of the risks that equipment can cause in creating crises.

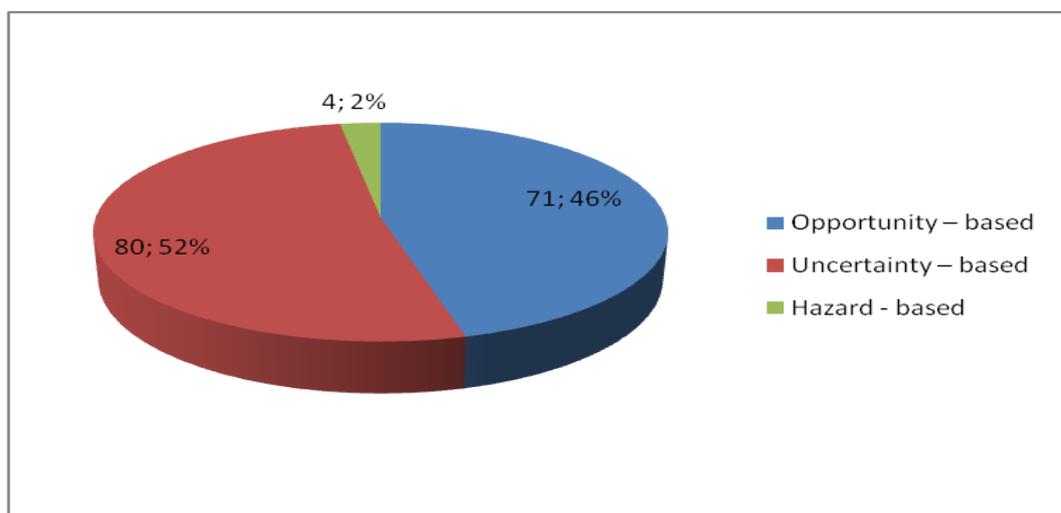
In the doctoral thesis many case studies related to various risk categories are discussed. These are only some examples. Further, according to the theory, the author has explored the types of risk that companies in Latvia face.



**Fig. 2.1. Types of risks experienced by companies (%)**

These data are expressed in percentages, as in Figure 2.1., and we see that the largest proportion of companies (17%) have faced financial risks, 14% have experienced commercial risks, 13% have dealt with legal and regulatory risks, and 11% have faced reputational risks. 11% of companies have had problems with the delivery of services, 9% have had organisational troubles, 8% speak of project-related difficulties, and 6% have faced risks in the category of operations. 5% of companies have experienced safety-related risks, 2% have dealt with equipment and strategic/technological risks, and 1% has faced stakeholder management and other categories of risk. Of course the main part is financial risks because all crisis situations are connected to finances. It is the theory and we can see it in practice, too. Finances are very close to commercial risks which are also connected to finances and the third main part is legal and regulatory compliance. The data cannot be separated from the communication in risk and crisis situations. It means that the main focus in communication is on finances, commercial aspects and legal and regulatory compliance.

Figure 2.2 shows that 52% of company directors had encountered uncertainty-based risks, 46% had faced opportunity-based risks, and 2% had dealt with hazard-related risks. Viewing these data in percentages the present author concludes that opportunity – based risks are in the next place. It means that companies have experienced the probability of loss arising when resources are irreversibly committed for one opportunity and a better opportunity presents itself. Opportunity-based risks mean choosing one option over the other. It is possible that in these situations the companies missed a better opportunity and got unexpected results. It is possible that opportunity-based risks included moving a business to a different location, maybe buying a new property, or selling a new product or service.



**Fig. 2.2. Types of risks encountered by companies (%)**

Further in depth research data show that 91 companies encountered crises related to business and economics, followed by crises caused by management (89), deceitful offences (41), and improper management values (88). Eight companies faced crises caused by malicious offences, followed by confrontations (13), technological issues (7), and natural disasters (2).

Several banks in Latvia have gone bankrupt and have been restructured –Banka Baltija, Parex Bank, as well as Latvijas Krājbanka. In the wake of this unstable situation, Swedbank faced the risk of rumours in 2011, and other banks faced a situation in which new clients or customers did not believe in banking services. Rumours about Swedbank’s impending bankruptcy spread after problems with Parex Bank and Latvijas Krājbanka, with people being afraid that they would lose their money. The time distance in relation to this domino effect is described in the next table 2.1.

**Table 2.1 The factor of the domino effect distance during bank crises in Latvia**

<b>Bank</b>	<b>Time of bankruptcy (B) or rumours ®</b>	<b>Domino effect distance</b>	<b>Result</b>	<b>Author’s estimation of decisions (3-point scale, 3 being maximum)</b>
Banka Baltija	June 1995 (B)	0	Bankruptcy	1
Parex Bank	November 2008 (B+R)	13 years	Restructuring and creation of the new Citadele Bank	2
Latvijas Krājbanka	November 21, 2011 (B)	3 years	Bankruptcy	1
Swedbank	December 11, 2011 (R)	21 days	Preservation of a stable reputation	3
ABLV bank	February 13, 2018 (Following the US Statement on Possible Engagement in the Money Laundering Scheme)	6 years 70 days	The self-liquidation process has been initiated (as of February 26, 2018, the bank has made the following decision	2

A similarly unstable situation is seen in local airlines. Air Baltic, the flagship airline in Latvia, has been involved in “dark” agreements, selling procedures, etc. The company is

expensive and has been losing customer numbers. In terms of projects, there is management of equipment, finances, resources, technologies, timeframes, and people who are associated with the management projects. It also extends to internal operational projects, projects that relate to business development, as well as external projects such as those that involve clients.

Another example in Latvia's business environment is HC Latfood, which was established in 1993 and produces potato chips and other salty snacks. The company has been and remains a leader in this field in Latvia. In 2005, there was a fire in its manufacturing plant because of a power blowout. The factory was badly damaged, and the company faced a crisis and risk communication plan. This is something that is very rare for Latvian enterprises, and the crisis team and a PR agency saved the company's reputation by engaging in online communication. In urgent meetings, employees were told that they would not lose their jobs. It is very important to keep employees informed during a crisis. Latfood continued to provide logistical services, buying potatoes from farmers and moving its operations for a while to Scandinavia. The company was the key source of information, and there was increased communication, as well (Voronkova, 2013). The company continued to rebuild the factory and spoke to members of the public during this period. Had it not done so, it would have risked losing customers, suppliers and partners. Instead, the company communicated during this period, avoided project risks, and developed successfully.

In this chapter risk communication has been dealt with separately and a sample form of risk communication plan has been developed based on theory, case studies and survey. Risk communication is rapidly becoming essential in any company's toolbox. They allow for the orderly and effective transmission of information during high-stress periods at the organisation. Communication is cyclical in nature in a successful risk management programme. Information or activities that are sent by administrators to practitioners should return in a feedback loop that allows for necessary adjustments. Communication allows those who have engaged in risky activities to identify distorted information. Communication about the organisational practices of risk management is at the micro and the macro level. An organisation-wide annual report that details how the organisation has done in terms of managing its risk should be made available. In order to be effective, early warning systems must have clearly defined variables. These are selected with the intent of choosing those activities or inactions that would have negative risk consequences. Early warning systems at law enforcement agencies should be used to track these types of variables. Those that satisfy the relevant criteria include complaints to internal affairs departments, abuse of sick leave and excessive numbers of collisions. The potential for

substantial risk management through early warning systems is at a high level (Hughes & Andre, 2007: 19).

Communication means that pertinent information is captured and relayed to individuals who need it to perform their jobs. Pertinent information from internal and external sources must be identified, captured and communicated in a form and within a timeframe that enable personnel to carry out their responsibilities. When it comes to answering telephones, several forms of communication must occur. First of all, plans to deal with the identified event must first be communicated among employees. If inclement weather is expected, for instance, employees need to know whether there is a telephone number to ring, or whether their supervisor will ring them to tell them whether or not they are required to report to work. Additionally, there must be processes to ensure that critical functions are appropriately supervised in the event of the absence of normal supervisors. If answering telephone calls is a higher priority than processing cases, and if inclement weather keeps a sufficiently large portion of the call-taking staff from reporting for work, then there must be a mechanism to identify the best alternative call responders from other departments, notifying them of their temporary reassignments (Coombs, 2007: 9).

Communication and information are key components of management theory. The balanced scorecard model provides a basis for communicating and gaining commitment to the organisation's strategy in terms of different management layers therein (Kaplan & Norton, 2001: 91). The first leadership task relates to the development of the organisation's visions, values, purposes and missions. These are ways of communicating the organisation's orientation to the entire staff thereof. Funston refers to the communication of risks as a "risk nervous system" (Funston, 2003: 82), because it always involves a certain level of stress. Information and communication are key management tools in managing any organisation. Methods must be in place to ensure that the relevant information is identified from internal and external sources, captured and communicated to staff members so that they can do their jobs. The information should also be judicially correct.

The US Environmental Protection Agency defines risk communication as a way of ensuring open, responsible, informed, reasonable, scientific and value-laden discussions of risks that relate to personal health and safety practices when living or working in close proximity to harmful activities and hazardous substances. This approach toward risk communication usually involves large organisations that engage in activities that can cause risks for the surrounding community. According to Palenchar, dialogue about risks relates to the community infrastructure and is a communication process among individuals and organisations in relation to the character, cause, degree, significance, uncertainty, control and overall perception of the risk. Risk

communication provides a chance to understand and appreciate stakeholder concerns about risks that are generated by organisations, as well as to engage in dialogue so as to address differences and concerns, carry out appropriate activities that can reduce perceived risks, and create a climate of participatory and effective discourse to reduce friction and increase harmony and mutuality (Palenchar, 2005: 59–67). The second step in a risk management process, according to this author’s definition, involves decision-making, control, avoidance, risk minimisation, elimination of the risk, and judicially correct communication.

Risk communication means actively exchanging information among those who are involved in the management of any risks. Because of differing values, perceptions, ideologies and assumptions, it is very hard to ensure clear and accurate information about risks. This difficulty is compounded when risk-related issues are brought into the political and public arena, where more emotional reactions and involvement tend to occur. To help risk communicators with their efforts to work effectively with the public, legislators and the media, the Centre of Informed Decision-Making has defined seven cardinal rules for risk communication – accept and involve the public as a legitimate partner; plan and evaluate your performance carefully; listen to the public’s feelings; be honest, open and frank; co-ordinate and collaborate with other credible sources; satisfy the needs of the media; and speak clearly and with compassion (Centre of Informed Decision Making, 2014). “Communication as a means for informing the public is certainly relevant, but should not be given any priority before all measures to cope with the crisis have been ascertained.” (Organisation for Economic Co-operation and Development (OECD); “Guidance Document on Risk Communication, 2002)

Most theories and processes related to risk communication are rooted in the environmental arena and relate to work with public and other stakeholders, though in recent years the concepts have been used successfully to deal with any kind of hazardous situation or disaster. This historical aspect, however, does not mean that communication only exists in the environmental area.

A risk management plan (RMP) is a document used to record risks that have been identified through a risk management process, also look at the assessed level of the risk and the strategy for dealing with the risk. The RMP should also document strategies that are in place to communicate risk information to stakeholders, as well as the method for monitoring and reviewing risk information. The risk management framework is a set of elements in the business management system, and it relates to the management of risks. It describes systems, processes, attitudes and commitment that are needed to successfully integrate risk management with existing business management processes, also ensuring that the risk management programme assists the

business in reaching its corporate objectives. The author of the present thesis has developed a general risk communication sample plan based on theory and research data.

This chapter describes and analyses legal risk communication in the context of the risk management process. This author has described all concepts which relate to risk, risk management and risk communication concept and has also developed a sample risk communication plan for companies in Latvia.

From one point of view the findings of the study show that risk communication management ensures that there is less of a possibility that there will be a crisis but on the other hand, because of the mentioned aspects companies must develop risk management, including judicially correct risk communication plans while, at the same time, predicting whether the risk has a domino or non-domino effect. The findings demonstrate that potential sources of risks include commercial relationships and obligations, legal expectations and liabilities, economic shifts and circumstances, technological innovations and upheavals, political changes and trends, natural events and forces, human frailties and tendencies, as well as management shortcomings and excesses. An ideal risk management model should be capable of identifying organisational risks, as well as the individuals who are associated with or affected by the risks. The control function in risk management can be a critical determinant of organisational success. The findings show that a judicially correct risk management communication plan must include risk communication goals and strategies in terms of the key target audiences, with the team and decision-makers determining and analysing the risks, prioritising them, identifying the key audiences and assessing them, engaging in control and risk avoidance, and ensuring a risk minimisation and elimination system.

This discussion of risk communication plans concludes this chapter. In the next chapter, the author focuses on essential aspects of crises, their management and the relevant legal communication. At the end of the chapter, an overall crisis communication sample plan is offered.

### **3. Crisis Communication**

In this chapter, the author compares concepts related to crises, crisis management and crisis communication, and presents her own definitions in these areas.

A crisis is a “time of ambiguity, uncertainty, and struggle to regain control” (Millar & Heath, 2004: 247). When an organisation experiences a crisis, it tries to minimise the ambiguity and organisational crisis responsibility by responding to the crisis and to the public through appropriate response strategies. At the same time, the public seeks information related to the

crisis, also trying to evaluate responsibility for the crisis. A crisis is “an event for which people seek causes and make attributions” (Coombs, 2004: 269). Hermann’s definition of decision-making highlights crisis as a threat to the development of an enterprise – a crisis is a situation that threatens the high-priority goals of the decision unit, restricts the amount of time that is available before the decision is transformed, and surprises the members of the decision unit by its occurrence (Hermann, 1972: 97).

Crises can be defined in various ways, and in this paper the definitions reflect key elements of various debates as to what constitutes a crisis. A crisis is defined as a significant threat to the operations of a company – ones that can have negative consequences if they are not handled properly. A crisis can create three related threats – public safety, financial losses, and loss of reputation. Such crises as industrial accidents and faulty products can result in injuries or even loss of life. Crises can create financial losses by disrupting operations, creating a loss of market share or purchase intentions, or spawning lawsuits related to the crisis. As Dilenschneider (2000) wrote in *The Corporate Communication Bible*, all crises threaten to tarnish the relevant organisation’s reputation. A crisis reflects poorly on an organisation and will always damage its reputation to some degree. It is clear that these three threats are interrelated. Injuries or deaths lead to financial losses and a loss of reputation, while reputation has a financial impact on the relevant organisations (Coombs, 2007: 97).

According to Lehtonen (translated by Jolanta Derkevica-Pilskunga), a crisis is an event or situation which, at the public level, endangers the organisation’s activities, the reputation of the whole field, or prerequisites for action, while, at the individual level, a crisis influences the subjective world of the individual person. A crisis is an urgent situation for an organisation (Lehtonen et al., 2011: 51).

The author summarises the descriptions and introduces her own definition of a crisis at any company:

**A crisis is a risk that comes into effect with positive or negative consequences in any area, and it may trigger a domino effect.**

Crisis management is a process that is designed to prevent or lessen the damage that a crisis can inflict upon an organisation and its stakeholders. As a process, crisis management is not just one thing. Coombs divides crisis management into three phases – pre-crisis, crisis response, and post-crisis. The pre-crisis phase has to do with prevention and preparation. The crisis response phase is when management must actually respond to a crisis. The post-crisis phase looks for ways to better prepare for the next crisis and to fulfil commitments made during the

crisis phase, including follow-up information. This three-part view of crisis management serves as the organising framework for this entry (Coombs, 2007: 8-10).

To summarise, **crisis management is a process that is divided into three phases – pre-crisis, crisis response, and post-crisis. Pre-crisis management processes include crisis identification, determination of the influence of a domino effect, quick analysis and decisions, communication, and action.**

The crisis phase involves the response to the crisis – quick analysis of the situation, completion of the crisis team, determination of quick and judicially correct communication with the target audience, and action. The post-crisis phase involves avoiding the domino effect, communication, and action.

The next step in this regard is to describe definitions of crisis communication processes. Crisis communication is a part of crisis management, though it may also be a major tool to handle a crisis situation for governments, organisations or businesses. Crisis communication is sometimes considered to be a sub-specialty of business continuity. The aim of crisis communication in this context is to help organisations to continue their business processes during critical times. Crisis communication is sometimes seen as a sub-specialty of public relations, which is designed to protect and defend an individual, a company, or an organisation that faces public challenges to its reputation. These challenges may involve a government agency investigation, criminal charges, media inquiries, shareholder lawsuits, a violation of environmental regulations, or any of a number of other scenarios related to the legal, ethical or financial standing of the organisation. Effective crisis communication strategies will typically consider most, if not all, of the following objectives - maintain connectivity, be readily accessible to the news media, show empathy for the people who are involved, allow distributed access, streamline communication procedures, maintain information security, ensure uninterrupted auditing, deliver high-volume communication, support multi-channel communication and eliminate dependency upon paper-based processes (Coombs, 2007: 97).

Basic steps in effective crisis communication are not difficult to implement, but they require advance work to minimise damage. The slower the response, the more damage is incurred. This author has summarised these descriptions and identified her own definitions of crisis communication at any company:

**Crisis communication is a process whereby the company directs information to all interested persons in both directions. The information is clear, understandable, and directed via the closest communication channels.**

It is important for crisis managers to know how the organisational response strategies have been presented to the public and how responsibility for the crisis has been narrated in practice. It is critical to examine how the news media cover an organisation crisis and the relevant response messages, because most crisis response strategies are delivered to the public through the media. This examination identifies the messages that the public receives and the way in which the public receives the messages in terms of attributing crisis responsibility and organisational strategies. In previous studies, Coombs and Holladay (1996, 2004) developed the Situational Crisis Communication Theory (SCCT) by linking the attribution theory to analysis of image restoration. Assuming that different attributions of crisis responsibility are caused by different types of crises (Coombs, 2006), the SSCT categorises particular types of crises on the basis of attribution responsibility and matches them to particular response strategies. This assumption, however, overlooks the influence of the news media on people's perceptions about crisis responsibility and crisis response strategies.

The results of previous media framing research show that the framing of attribution responsibility can influence the perception of people about the crisis responsibility issue. Despite the importance of the role of the media in public perceptions about the crisis, it is unclear how the level of crisis responsibility is framed in crisis news coverage, because there is a lack of any systematic analysis of crisis news coverage by crisis types related to the SCCT. The doctoral thesis seeks, therefore, to show how the level of responsibility frames is often covered if at all and how they differ in terms of types of crises. This author also seeks to explore how crisis response strategies are reported in terms of types of crises in the news media. By applying Iyengar's (1991) theoretical framework of news framing to crisis context and by examining crisis response strategies on the basis of the assumptions of the SCCT, the doctoral thesis offers better information to crisis communication scholars about the influence of the news media on people's perceptions about crisis responsibility, also contributing toward the theoretical development of the field of crisis communication beyond the limitations of current crisis communication theories. In particular, the mass media have a primary role in a crisis situation in informing people about a crisis, and people are more likely to seek causal attribution in a negative and uncertain situation and demand crisis-related information from the news media (Augustine, 1995; Darling, 1994; Fearn-Banks, 1996). It is thus important to explore the way in which the news media cover crisis responsibility and response strategies for the public. Applying the news media (framing) theory to crisis contexts (the SSCT), this thesis seeks to determine how the level of crisis responsibility and crisis response strategies can be demonstrated to the public. That is the focus of this study in terms of the theoretical framework of crisis communications research.

According to the framing theory, the mass media decide what to include and omit from a story. This selection process frames the story, tells people how to interpret it, and limits or defines the meaning of the message by shaping the inference that individuals have about the message.

Effective crisis planning seeks to identify early warning signals. The programme may be oblique and much harder to recognise, or it is resident, but with no actions that are taken. Once the organisation has passed from the prodromal to the acute stage of the crisis, management can rarely recover lost ground, and the crisis will start to cause damage.

In the research the interviewed company representatives were asked to talk about the types of crises that they have experienced. Crises which interviewed companies have experienced are seen in table 3.1. The most part has experienced crises related to business and economics and bad management and incorrect management values.

**Table 3.1 Types of crises which companies have experienced**

Has your company ever experienced the following types of crises?	
Crises caused by natural forces	2
Crises caused by technological reasons	7
Crises caused by confrontations	13
Crises caused by malicious offences	8
Crisis caused by incorrect management values	88
Crises caused by deceitful offences	41
Crises caused by bad management	89
Crises related to business and economics	91

High levels of uncertainty, time urgency and negative moral are only the very few factors that can appear during a crisis. The role of leadership is very important which is ranked second as can be seen from the data above – crisis caused by bad management and it could be prevented if the risks are identified and measured.

Based on content analysis in theory and survey data the author of the present thesis has developed a sample form for crisis communication during the pre-crisis, crisis and post-crisis phases.

The findings demonstrate that there must be a risk and crisis communication plan at every company and that it is impossible to put all emotions into judicial frameworks. The findings

demonstrate that a crisis is a risk that can appear at any company with positive or negative consequences in any sector and with a domino or non-domino effect. This is why companies must develop crisis communication management, including a judicially correct crisis communication plan.

The findings show that judicially correct crisis management communication plans must identify the pre-crisis, crisis and post-crisis phase, the person(s) who are responsible for the company's crisis communication planning, existing crisis communication plans, the influence of the domino effect, the situation as such, the internal and external target audiences, etc. Written agreements must be concluded with local emergency response officials in terms of who will release what information during the event. Public information release responsibilities and co-ordination activities with the state public information officer must be agreed. In crisis the domino effect is an important aspect and in this case decision making should be very quick and precise with a judicially correct background.

#### **4. Risk and Crisis Communication and the Law**

This chapter is devoted to the judicial aspects of risk and crisis management communication. The author analyses legal aspects from the perspective of communication norms – rights, embargoes, bans and duties. The author also analyses aspects of communication in the Republic of Latvia (the country's Constitution, the Civil law, the Civil Procedure law, the Insolvency law and the Electronic Mass Media law), as well as EU laws. The author analyses aspects of communication in codes of ethics in Latvia and the EU for journalists, the concept of mediation in Latvia, and judicial aspects in Latvia that are in practice. To carry out an in depth research, the author has interviewed representatives of 100 companies about necessary changes and problems related to risk and crisis processes in Latvia. These include board members, managers, lawyers, psychologists and communication experts from existing and bankrupted companies. The author has analysed the data on the basis of literary analysis, statistical analysis and direct observations. The main purpose of this chapter is to develop risk and crisis communication law guidelines for Latvia – ones that could be adopted by the Parliament.

The first respondent in the survey (all the interviews data in focus group 10.11.2012) is a board member of a book retailer that went bankrupt (Company X). In 2009, the company became insolvent because of a dishonest supplier and because of activities among partners. After several days of slanderous articles in many Latvian newspapers, the company suffered reputational harm and went insolvent. This was a “domino effect” chain among risk categories (related to finances, equipment, organisational issues, security, legal and regulatory compliance, reputation,

operations, service delivery, commercial issues, safety, stakeholder management). After a longer period, the crisis caused by deceit came into full force. The company didn't have risk and crisis communication plans, but the respondent said that such a plan was not really necessary. The company implemented all of its communication activities without any plans, and the result was massive chaos. A stakeholder began a negative public relations campaign in the mass media, and Company X did nothing except answering the charges. It did not submit its own news releases to the media, and that was wrong. At the speed of a domino effect, the crisis moved from one risk category to another, and insolvency was the result. During the crisis, X experienced mudslinging in the form of PR. He thinks that journalists were specially organised in the situation. In democratic countries, an editor is responsible for information, but in Latvia, the journalist is punished, and that is not democratic. If the editor had the responsibility, then information might be more objective because the editor would be afraid of being punished. Today, editors in Latvia hide behind the backs of journalists. In the case of X, the company phoned the journalist, who named the source. That is also unprofessional. Every media outlet has guidelines, and every journalist has his or her own opinions. The problem is that journalists are aware of the fact that they have power, but they are not familiar with the consequences in terms of how every word can influence the company's reputation or, as in the case with X, even insolvency.

The second respondent is Y. He is now a lawyer and the director of a communication company, but previously he was a board member on a dining services company. The company faced insolvency in 2007 because of a dishonest stakeholder and poor management practices. Y believes that the crisis began because of chaotic activities and excessive trust in his business partner. While Y was in hospital, the business partner stole a lot of money from the company, used it to renovate her house, and did not pay bills. Six months later, the company faced enormous debt and insolvency. The insolvency law helped it to deal with its creditors. There was no communication plan, but the employees of the company were the first priority during the crisis. Y spoke to them, had hope, described the situation, was calm, and said that the staff had to work hard. Y thinks that a risk and crisis communication plan is not necessary. What is necessary is to deal with the Commercial law (which has a separate chapter about commercial transactions), the Insolvency law, the Labour law, the Labour protection law, etc. If communication is bad, then it is possible to act under the auspices of these laws. Perhaps communication aspects are not sufficiently regulated in those laws but they do exist, and it is necessary to work in that context.

Respondent W is a company that suffered during the financial crisis in 2009, though it did not go bankrupt. The company is more than 20 years old and has more than 20 employees. It

has met financial, organisational, security, legal, and regulatory compliance, and it has dealt with reputational, operational, service delivery, commercial, project, safety, strategic technology and other risk categories. W says that an example of other risks is the death of a very good employee. Company W has faced opportunity-based, uncertainty-based and hazard-based types of risks. It has faced a natural disaster (a long-term power outage after a storm). W thinks that it is possible and necessary to put emotions into a judicial framework. The company does not have a risk and communication plan, and sheer intuition helped it to survive the financial crisis. The first step in the crisis was to talk to employees so as to avoid chaos and rumours, because management understood that bad communication could turn risks into crisis. W argues that one emotional decision could cause a crisis, and that is why it is necessary to frame emotions in the law.

The author asked respondents, whether it is possible to place emotions into juridical frameworks, and very diverse answers were received. The main conclusions from the discussion about the possibility to place emotions into juridical frameworks are that it is possible and necessary to place emotions into juridical frameworks, because that ensures safety in our lives and guarantees that there will be no panic or inadequate reactions. An example is the captain of the Titanic, who remained aboard to calm down passengers. Humans must learn to control themselves. Some say that impolite and vandalising activities are already a part of juridical frameworks and the third opinion is that it is not possible, because it is only possible to show emotions to clients during the work of companies, not to partners, and placing these into a juridical framework is an emotional issue and this depends on the individual, his or her situation and life experience, and other issues: “I have seen different situations, and that is why there is not a single answer to this question. In the specific situation related to the government and court proceedings, yes, it is both possible and necessary”. It is not possible to place emotions into frameworks, because a crisis is a period in time when people forget stricter rules and laws and allow emotions to erupt – something that happens spontaneously and unaware and it is not really a measurable thing. In court practice there are measurable things such as acts, evidence and statements by psychologists, with courts increasingly looking at the emotional condition of individuals.

The main conclusion here is that it is both possible and necessary to elaborate well-grounded frameworks for risk and crisis communication in a juridical sense. After analysing the law and the research results, this author developed guidelines for risk and communication planning for companies in Latvia and necessary amendments in existing law in Latvia. When it comes to communication that is related to legally appropriate legislation, embargos, duties and rights are of importance. Every company and individual has the right to communicate, but

everyone also faces duties and embargos in the process. Freedom of the press is essential in a democratic society. All of Latvia's governments have vowed to uphold and protect it, as well as to respect its diversity and its political, social and cultural missions.

The results of the study and long discussions with legal advisers of this doctoral thesis show that there are two ways to improve the situation: to include more aspects of communication in existing legislation and to create methodological recommendations for communication legislation addressing enterprises and their communication in the risk and crisis situations. In law these are amendments in The Law of Civil Protection and Disaster Management about risk and crisis communication aspects. The law must regulate the obligatory planning of risk and crisis communication and appointing of a spokesperson at every company whose founders are state or local governments. Of course, mediation is a huge step in conflict management in the risk and crisis processes, but it is not compulsory and is still questionable in society. Other recommendations for improving risk and crisis communication in companies in the private sector would be methodological recommendations of a recommendatory nature. Recommendations are designed for use by Latvian Employers' Confederation, Foreign Investors Council in Latvia and The Latvian Chamber of Commerce and Industry. Private and public companies as well as solutions for risk and crisis communication are strictly separated in the paper.

## **Conclusions and recommendations**

### The main research results carried out for doctoral thesis

A domino effect has speed and time distance and force, as well as communication at a quicker pace, shorter time, and more powerful force and according to Nelms (1992), it consists of four causes – the root cause, latent causes, human causes and physical causes, with latent causes very often causing crises in that they are based on a spokesperson's lies in a manner that could influence the company's reputation. According to several authors (Bagster and Pitblado (1991), Khan and Abassi (2001), Cozzani and Salzano (2004) who have analysed aspects of domino accidents, it is seen that the domino effect can appear in a company's internal and external environment, with external effects often having more severe consequences than internal ones, because the affected area is larger, and more equipment is involved, that is why companies must strive to avoid a domino effect by including this aspect in risk and crisis communication plans. Domino effect could be prevented.

According to Reiners (2005), it must be started with an analysis of efficiency of current risk. Not always companies are aware of the need of risk analysing because what is not compulsory very often does not apply to person or company. A legislative system in this field is necessary. According to the author of the present research, mostly companies report financial

and commercial risks. And the largest part of respondents (68%) say that risks undergone were legal and regulatory problems.

According to Schmitt-Geiger, “litigation public relations are used in all kinds of legal disputes” (Schmitt-Geiger, 2013; 450). It means that companies facing crisis are closely connected to the law. That is why focus on law in communication is important and there should not be any chaos. According to Wills (2000), in chaos human feelings are instinctive and crisis situations often involve chaos, decisions are taken in a hurry and chaos. Certain frames are necessary in risk and crisis communication and there is a need for a general legislative system for any company when it comes to risk and crisis situations to avoid harm to human lives and other resources. This could be a law related to risk and crisis communication. The target of the law must be to avoid the domino effect or chain reaction that influences other companies, audiences and states in crisis situations. Communication law and clear guidelines of risk assessment is suggested for policy makers in Latvia. Latvia must adopt a risk and crisis communication law, because it would be more understandable and focus upon all necessary activities such as risk and crisis plans, responsible individuals and their training, dark sites, information about the risk, etc. The law must make it obligatory for all companies to prepare risk and crisis communication plans.

According to Kaplan (1981), risk is uncertainty plus damage while according to other scientists, risk is predicted possibility (Lehtonen 2001, Rogov 2001 and others) but in some cases risk could be predictable it means that - risks are predictable or unpredictable and can cause negative or positive accidents or crises in any company, with positive or negative consequences in any sector. Planned risk management which means identifying, analysing and then either accepting or mitigating uncertainty in the investment related decisions is important. According to ISO31000 risk management standard, risk management refers to a coordinated set of activities and methods that are used to direct an organisation and control the many risks that can affect its ability to achieve its objectives. In theory it is called the risk management “architecture” which includes risk management principles and framework. As the author of the present thesis mentioned, these frameworks could not be in chaos and policies for this framework are necessary and such should be put in legal frames, for example communication law. As there is risk management and risk communication and these aspects are closely connected, such framework should also include aspects of risk communication. According to Covello (1992), risk communication must accept and involve the public and other consumers as legitimate partners (e.g. stakeholders).

As risk categories are connected to different legal categories, e.g. finances, budgetary requirements, tax obligations, creditor and debtor management, general use of equipment, security, legal and regulatory compliance, commercial etc., the legal aspects of risk communication in this field must be considered, too. As the author researched, the most popular types of risks experienced in companies are financial, commercial, legal and regulatory compliance and reputation. It means that legal aspects of risk communication are binding upon companies and many companies have experienced them. The other important aspect in risk communication is the domino effect. As the author researched, four banks in Latvia faced the risk of rumours. The first was Baltija Bank which bankrupted (June 1995), then followed Parex Bank (Year 2008) which was restructured. After 3 years came AS Latvijas Krājbanka which bankrupted. The public did not trust banks in Latvia which is why in the year 2011 (21 days after AS Latvijas Krājbanka) rumours about Swedbank's impending bankruptcy spread.

The time distance in relation to this domino effect is very important. It means that domino effect can influence the surroundings. From one point of view the findings of the study show that risk communication management ensures that there is less of a possibility that there will be a crisis but on the other hand, because of the mentioned aspects companies must develop risk management, including judicially correct risk communication plans while, at the same time, predicting whether there is a risk has a domino effect or not. The findings demonstrate that potential sources of risks include commercial relationships and obligations, legal expectations and liabilities, economic shifts and circumstances, technological innovations and upheavals, political changes and trends, natural events and forces, human frailties and tendencies, as well as management shortcomings and excesses. Risk communication management is a two-way process that involves determination of the risk and handling it in the way that is best-suited in relation to the company's investment objectives and risk communication is a two-way process that directs judicially correct information about risks in any company and for all interested persons in both ways as well.

The information must be clear, understandable and directed through the closest communication channels. The findings show that a judicially correct risk management communication plan must include risk communication goals and strategies in terms of the key target audiences, with the team and decision-makers determining and analysing the risks, prioritising them, identifying the key audiences and assessing them, engaging in control and risk avoidance, and ensuring a risk minimisation and elimination system.

**Therefore the first thesis put forward for defence is that risk is a predictable or unpredictable possibility that could cause negative or positive accidents or crises in any**

**company, with positive or negative consequences in any sector and risk management is divided into two steps (determining the risks and then handling them in the most appropriate way in terms of the company's investment objectives).** Determination of risks includes identification, analysis and assessment, as well as judicially correct communication about the first steps in the management process. Risk handling includes decision-making, control, avoidance, minimisation, elimination of unacceptable risks, as well as judicially-correct communication about the second step in the management process.

According to Coombs (2007), crisis reflects poorly on an organisation and will always damage its reputation to some degree. Injuries and deaths lead to financial losses and a loss of reputation, while reputation has a financial impact on the relevant organisations. According to Lehtonen (2011), a crisis is an event or situation, which, at the public level, endangers the organisation's activities, the reputation of the whole field, or prerequisites for action, while, at the individual level, a crisis influences the subjective world of the individual person. The findings show that the main characteristics of a crisis means that immediate actions are needed under extreme time constraints and internal and external stress at the company so as to avoid major damage. The findings demonstrate that there must be a risk and crisis communication plan at every company and that it is impossible to put all emotions into judicial frameworks. The findings demonstrate that a crisis is a risk that can appear at any company with positive or negative consequences in any sector and with a domino effect or without. This is why companies must develop crisis communication management, including a judicially correct crisis communication plan.

Crisis management is a two-way process designed to prevent or lessen the damage that the crisis can inflict on an organisation and its stakeholders. Crisis management is divided into three phases – the pre-crisis, crisis response and post-crisis phase. Pre-crisis communication management includes crisis identification, determination of the influence and distance of the domino effect, quick analysis and decisions, communication and action. The crisis phase communication process includes the actual response to the crisis, quick analysis of the situation, establishment of a crisis team, determination of the target audience for quick and judicially correct communication, as well as action. Post-crisis communication management involves avoiding the domino effect, as well as communication and action. The findings show that judicially correct crisis management communication plans must identify the pre-crisis, crisis and post-crisis phase, the person(s) who are responsible for the company's crisis communication planning, existing crisis communication plans, the influence of the domino effect, the situation as such, the internal and external target audiences, etc. Written agreements must be concluded with

local emergency response officials in terms of who will release what information during the event.

Public information release responsibilities and co-ordination activities with the state public information officer must be agreed. In crisis the domino effect is an important aspect and in this case decision making should be very quick and precise with a judicially correct background (Drucker 2011). According to Paraskevas (2006), there are several tips of effective crisis communication which includes communication strategy, methods and relevant requirements. According to Harrison (2011), companies must admit legal liability in any crises it means that a professional crisis team is needed. Crisis situations are connected to domino effect and involves speed, time distance and force, and communication about it must be quicker and more powerful. Companies must avoid the domino effect by including this aspect in risk and crisis communication plans. The findings show that from the philosophical point of view, the concept of communication has only an indirect regulation in laws, because communication is an activity, while laws settle disputes and determine standards for various activities. For instance, the relationship between an employer and employee can cause a crisis, as can the level of the relationship between officials and their employers. Communication of these relationships can cause a crisis that must be solved taking into account the relevant legal aspects.

**Therefore the second thesis put forward for defence – A crisis is a risk that comes into effect with positive or negative consequences in any area, and it may trigger a domino effect but crisis management is a process that is divided into three phases – pre-crisis, crisis response, and post-crisis.**

Pre-crisis management involves crisis identification, determining the domino effect impact, quick analysis, decision making and action. The crisis phase involves the response to the crisis – quick analysis, crisis team, quick and judicially correct communication with the target audience, and response. The post-crisis phase involves avoiding the domino effect, communication, and action. Crisis communication helps companies to direct information to all stakeholders in both directions. The information is clear, understandable, and directed via the closest communication channels.

It is both possible and necessary to elaborate well-grounded frameworks for emotions in a juridical sense. After analysing the law and the research results, this author developed an overall draft of risk and communication law for companies in Latvia. When it comes to communication that is related to judicially appropriate to the legislation, embargos, duties and rights are of importance. Every company and individual has the right to communicate, but everyone also faces duties and embargos in the process. Legal aspects of risk and crisis processes influence

businesses because crisis situations are a very important factor – one that influences the business and causes it to suffer, mostly because of low-quality communication at the state level.

The nuances of legal regulations will be different in every crisis situation. Borders and consequences, not the aims and problems of a crisis, are legally regulated in risk and crisis communication, which indicates that such communication must be managed, and legal regulations must apply to it in the state administration and the business microenvironment. Based on the research carried out by the author analysing different connected laws in Latvia and comparing them with laws and directives in EU, USA and other countries in the world it could be concluded that communication aspects are not regulated sufficiently enough in Latvian laws.

**Therefore the third thesis put forward for defence - from the communication point of view, the concept of communication and its regulation in the laws of the Republic of Latvia is insufficient and self-regulation is not working, because communication is an activity, while laws settle disputes and determine standards for various activities but communication in stakeholders relationship can cause a crisis that can be resolved on the basis of legal aspects of regulation or prevented using mediation or methodological guidelines for the risk and crisis communication.** Legal aspects of risk and crisis processes influence businesses because crisis situations are a very important factor – one that influences the business and can cause harm specifically because of the poor quality of communication at the state level. It is both possible and necessary to elaborate well-grounded frameworks for risk and crisis communication in a juridical sense.

**Therefore the fourth thesis put forward for defence - The amendments in The Law of Civil Protection and Disaster Management in the Republic of Latvia must regulate obligatory risk and crisis communication planning at every company whose founders are state or local government and the amendments must regulate the mandatory person who is responsible for risk and crisis communication.**

Mediation is an enormous step toward conflict management in risk and crisis processes, but it has no obligatory functions and is questioned by the public. Mediation is a fairly new conflict resolution method, and it is practically impossible if one of the parties acts maliciously and does not want to co-operate.

#### **Recommendations:**

1) Every company must develop risk management, including a judicially correct risk communication plan while also predicting whether the risk will be with or without the domino effect.

- 2) Risk communication at any company must be a two-way process that involves the determination of the risk and then the handling of the risk in a way that best satisfies the company's investment objectives.
- 3) Every company in Latvia must have a judicially correct risk management communication plan that includes risk communication goals and strategies in terms of key target audiences, determination of the team and decision-makers, risk analysis, determination and prioritising, identification and assessment of key audiences, control and risk avoidance, and a system to minimise and eliminate the risk.
- 4) Every company in Latvia requires crisis communication management, including a judicially correct crisis communication plan.
- 5) Crisis management must be a two-way process designed to prevent or lessen the damage that the crisis can have on an organisation and its stakeholders, and that applies to all companies in Latvia.
- 6) The judicially correct crisis management communication plan of any company must identify the pre-crisis, crisis and post-crisis phase, the person(s) responsible for crisis communication planning, identification and review of existing crisis communication plans, if any, determination of the influence of the domino effect, analysis of the situation, identification of internal and external audiences, written agreements with local emergency response officials in terms of who will release what information during the event, as well as determination of public information release responsibilities and co-ordination activities with the state public information officer.
- 7) Companies must avoid the domino effect by including this aspect in risk and crisis communication plans.
- 8) Latvia must adopt risk and crisis communication aspects in amendments in the Law of Civil Protection and Disaster Management for the companies whose founders are state or local governments, because it would be more understandable and concentrate all necessary activities such as risk and crisis plans, responsible individuals and their training, dark sites, information about the risk, etc.
- 9) The amendments must make it obligatory for all companies whose founders are state or local governments to prepare risk and crisis communication plans.
- 10) The amendments must also make it obligatory for all companies whose founders are state or local governments to identify the person who is responsible for risk and crisis communication.
- 11) The process of mediation must be developed further in risk and crisis communication in Latvia.

12) For improving risk and crisis communication in companies in the private sector the author has created methodological recommendations of a recommendatory nature. Recommendations are designed for use by Latvian Employers' Confederation, Foreign Investors Council in Latvia and The Latvian Chamber of Commerce and Industry.

### **Theses for defence**

1. Risk is a predictable or unpredictable possibility that could cause negative or positive accidents or crises in any company, with positive or negative consequences in any sector and risk management is divided into two steps (determining the risks and then handling them in the most appropriate way in terms of the company's investment objectives).

2. Crisis is a risk that comes into effect with positive or negative consequences in any area, and it may trigger a domino effect but crisis management is a process that is divided into three phases – pre-crisis, crisis response, and post-crisis.

3. From the communication point of view, the concept of communication and its regulation in the laws of the Republic of Latvia is insufficient and self-regulation is not working, because communication is an activity, while laws settle disputes and determine standards for various activities but communication in stakeholders relationship can cause a crisis that can be resolved on the basis of legal aspects of regulation or prevented using the mediation or methodological guidelines for the risk and crisis communication.

4. The amendments in The Law of Civil Protection and Disaster Management in the Republic of Latvia must regulate obligatory risk and crisis communication planning at every company whose founders are state or local government and the amendments must regulate the mandatory person who is responsible for risk and crisis communication.

### **The reliability, reproduction and character of the results**

The results of the paper are reliable because different methods were used – literature analysis, surveys, pilot research, focus group interviews and individual interviews. The results have both representative and indicative character. The results were reproduced in different scientific conferences, published in scientific and other magazines, introduced in lectures for communication field students. Broadcasts were made on radio about different topics, connected to different risk categories and crises in Latvia.

## **Scholar work and publications**

### **Publications – articles**

Derkevica-Pilskunga, J. (27.06.2017). The Future Perspectives of Risk and Crisis Communication Legislation [Riska un krīzes komunikācijas tiesiskā regulējuma nākotnes perspektīvas]. *Jurista Vārds*, Nr. 27(981), Latvijas Vēstnesis, 31. – 36.lpp.

Derkevica-Pilskunga, J. (2017). The Domino Effect in Risk and Crisis Communication in the Context of its Legal Aspects. *Acta Prosperitatis*, Journal of Turība University, No. 7, pp. 7-23.

Derkevica-Pilskunga, J. (2008). Juridical Aspects in the Communication on Risk and Crisis Processes. May 30, 2008. *Turība University IX International Scientific Conference, Social & Economic Challenges for Labour Market, Proceedings*, ISBN: 9789984828060. Accession Number: 45408495, pp. 155-162.

### **Abstracts/participation with reports in scientific conferences**

Derkevica-Pilskunga, J. (2011). Aspects of the Bad Communication Management in the Context of Domino Effect and Crisis in Latvian Companies: Abstract. The 9th Conference on Baltic Studies in Europe at Södertörn University, Huddinge Stockholm, 12-15 June 2011. USB Book of Abstracts.

Derkevica-Pilskunga, J. (2010). Aspects of Bad Communication Management in the Context of the Domino Effect and Crises in Latvian Companies: Abstract. EUKO 10th conference on European business communication, Local Aspects of European Business Communication, Riga, August 20-22. Published: <http://www.turiba.lv/en/bizness-zinatne/research/history-of-scientific-conferences/euko-2010/participants/514/>.

Derkevica-Pilskunga, J. (2009). Juridical Aspects of Communication and Their Influence on Society in Terms of Risk and Crisis Processes in Latvia. Abstract and report. Vytautas Magnus University, 8th Conference on Baltic Studies in Europe, June 11-14.

Derkevica-Pilskunga, J. (2008). Juridical Aspects in the Communication on Risk and Crisis Processes: Abstract. *Turība University IX International Scientific Conference: Social & Economic Challenges for Labour Market Proceedings*, May 30, 2008. ISBN: 9789984828060. Accession Number: 45408495.

Derkevica-Pilskunga, J. (May 19, 2011). Judicial Aspects of Risk and Crisis Communication in Practice in Latvia. University of Liepaja, 14th International Scientific Conference, Society and Culture: Borders and New Possibilities, certificate No. 18/123.

Derkevica-Pilskunga, J. (May 26-28, 2010). Aspects of Bad Communication Management in the Context of the Domino Effect and Crises in Latvian Companies. Slovak University of Agriculture, 11th International Conference, Global Economy: Challenges and Perspectives.

Derkevica-Pilskunga, J. (April 29-30, 2010). Aspects of Bad Communication Management in the Context of the Domino Effect and Crises in Latvian Companies. University of Liepaja, 13th International Scientific Conference, Society and Culture: Chaos and Harmony.

### **Research results approbation and practical use**

The result of the research could be given to the government to supplement laws with communication aspects in risk and crisis processes. The research results are recommended as a methodological material for companies to supplement internal rules in the communication aspect of risk and crisis. The methodological materials designed and the thesis can be used by scholars and academicians in study processes and lectures.

### **The main sources of the scientific literature**

1. Abdolhamizadeh, B., Abbasi, T. & D. Raschtchian. (2010) The Domino Effect in Process-Industry Accidents: An Inventory of Past Events and Identification of Some Patterns. India Sharif University of Technology. *Journal of Loss Prevention in the Process Industries*, (2010) 1- 19, pp. 19.
2. Abdulla, R.A. (2007). The Internet in the Arab World: Egypt and Beyond. New York Peter Lang, International Academic Publishers. *International Journal of Communication*, 5 (2011), Book Review 85–86 1932–8036/2011BKR0085, pp 175.
3. Alhawari, S., Kaadshebb, L, Taletc, A.N. & Mansour, E. (2011). A Knowledge-Based Risk Management Framework for an Information Technology Project. Science Private University, Jordan; ECPI University, Raleigh, NC; King Fahd University of Petroleum & Minerals, Saudi Arabia.
4. Alhawari, S., Thabath, F., Karadsheh, L. & Hadi, W. (2008). A Risk Management Model for Project Execution. 9th IBIMA Conference “Information Management in Modern Organisations, 04.01 – 06.01.2008., Marrakech, Morocco: Hofstra University, pp. 90.
5. An, S.K, Gower, K.K. & Cho S.H. (2011). Level of Crisis Responsibility and Crisis Response Strategies of the Media. *Journal of Communication Management*, 15(1), pp. 70-83.
6. Antonioni, G., Spadoni, G. & V. Cozzani. (2009). Application of Domino Risk Effect Quantitative Risk Assessment to an Extended Industrial Area. *Journal of Loss Prevention in Processing Industries*, 22 (2009), pp. 614.

7. Arnold, V., Hampton, D., Khazanchi, D. & Suttom S.G. (2004). *Enterprise Risk Management: Identifying Risks in B2B E-Commerce Relationships*. Altamonte Springs, FL: The Institute of Internal Auditors (IIA) Research Foundation, pp. 266.
8. Bagster, D.F. & R.M. Pitblado. (1991). The Estimation of Domino Incident Frequencies: An Approach. *Process Safety and Environmental Protection*, 69 (4), pp. 195. - 199.
9. Baron, G.R. (2002). The Role of Technology in Communication and News Management. *British Journal of Guidance and Counselling*, 30 (1), pp. 1-15.
10. Barton, L. (2007). *Crisis Leadership Now: A Real-World Guide to Preparing for Threats, Disaster, Sabotage and Scandal*. New York: McGraw-Hill, 346 p.
11. Barton, L. (2001). *Crisis in Organizations (2nd ed.)*. Cincinnati: College Divisions South-Western, 269 p.
12. Bernstein, A.B. & Rakovitz, C. (2012). *Emergency Public Relations. Crisis Management in A 3.0 World (4th ed.)*. USA: Xlibris Corporation, 202 p.
13. Boin, A. & Lagadec, P. (2000). Preparing for the Future: Critical Challenges in Crisis Management. *Journal of Contingencies and Crisis Management*, 8(4), pp.185. – 191. Doi: 10.1111/1468-5973.00138.
14. Buchel, K. (2013). Do Words Matter? The Impact of Communication on the PIIGS' CDS and Bond Yield Spreads During Europe's Sovereign Debt Crisis. *European Journal of Political Economy*, 32(c), pp 412-431.
15. Bugaric, B. (2008). Populism, Liberal Democracy and the Rule of Law in Central and Eastern Europe. *Journal Communist and Post-Communist Studies*, 41(2), pp. 191-203. doi: 10.1016/j.postcomstud.2008.03.006.
16. Cabinet of Ministers Order No.147, "Order on the Plan of Crisis Communication Measures for 2011-2013". Adopted on 06.04.2011. Published: Latvijas Vēstnesis, 56 (4454), 08.04.2011.
17. Cabinet of Ministers Regulation No 442, "Procedures for the Ensuring Conformity of Information and Communication Technologies Systems to Minimum Security Requirements". Adopted on 28.07.2015. Published: Latvijas Vēstnesis, 149 (5467), 03.08.2015.
18. Cabinet of Ministers Regulation No 440, "Procedure for the establishment, operation and financing of the National Early Warning System". Adopted on 08.08.2017.. Published: Latvijas Vēstnesis, 158 (5985), 10.08.2017.
19. Cabinet of Ministers Regulation No 530, "Procedures for the Establishment, Use and Financing of a Civil Alarm and Reporting System". Adopted on 07.08.2007. Published: Latvijas Vēstnesis, 129 (3705), 10.08.2007. Lapsed with Procedure for the establishment, operation and financing of the National Early Warning System Cabinet of Ministers Regulation No 440 (2017)
20. Cabinet of Ministers Regulation No 626, "Regulations on the objects of increased danger and the criteria for this object owners (possessors, managers) of the risk reduction measures to ensure". Adopted on 18.09.2007. Published: Latvijas Vēstnesis, 153 (3729), 21.09.2007. Last amendments - lapsed with The Civil Protection and Disaster management law 05.05.2016. law/LV, 100 (5672), 25.05.2016.
21. Civil Law. Adopted on 28.01.1937. Published: Valdības Vēstnesis, 41, 20.02.1937. Last amendments 19.11.2015.
22. The Civil Procedures Law. Adopted on 14.10.1998. Published: Latvijas Vēstnesis, 326/330 (1387/1391), 03.11.1998., "Ziņotājs", 23, 03.12.1998. Lasts amendments 05.07.2017.

23. Code of Ethics. (2008). EthicNet (collection of codes of journalism ethics in Europe), Department of Journalism and Mass Communication website. Retrieved: 25.10.2016. from [http://ethicnet.uta.fi/codes\\_by\\_country](http://ethicnet.uta.fi/codes_by_country).
24. The Commercial Law. Adopted on 13.04.2000. Published: Latvijas Vēstnesis, 158/160 (2069/2071), 04.05.2000. Last amendments 29.06.2017.
25. The Constitution of the Republic of Latvia. Adopted on 15.02.1922.. Published: Latvijas Vēstnesis, 43, 01.07.1993. Last amendments 31.05.2016.
26. Coombs, T.W. (2006). Crisis Management: a Communicative Approach. In Botan, C.H. and V. Hazleton (eds.). Public Relations Theory. Mahway, NJ: Lawrence Erlbaum Associations, p 197.
27. Coombs, T.W. (2004). Impact of Past Crises on Current Crisis Communication. Insights From Situational Crisis Communication Theory. *International Journal of Business Communication*, 41(3), pp. 265-289. doi. <https://doi.org/10.1177/0021943604265607>
28. Coombs, T.W. (2014). *Ongoing Crisis Communication: Planning, Managing and Responding (4th ed.)*. London: Sage Publications Ltd., 241 p.
29. Cooper, M.C. & Ellram, L.M. (1990). Characteristics of Supply Chain Management and the Implications for Purchasing and Logistics Strategy. *The International Journal of Logistics Management*, 4(2), pp.13-24.
30. Council Directive 2003/105/EC, 16.12.2003 on amending Council Directive 96.82/EC on the control of major accident hazards involving dangerous substances (Seveso III), Official Journal, L 345.
31. Council Directive 82/501/ EEC, 24.06.1982, on major accident hazards of certain industrial activities (Seveso I). Official Journal of the European Communities, L230/25, Brussels, 5 August 1982.
32. Council Directive 96.82/EC, 9.12.1996, on the control of major accident hazards involving dangerous substances (Seveso II). Official Journal of the European Communities, LL 10/13, Brussels, 14 January 1997.
33. Covello, V.T., & Allen, F. (1988). Seven Cardinal Rules of Risk Communication. US Environmental Protection Agency, Office of Policy Analysis, Washington, DC, OPA-87-020.
34. Covello, V.T., Sandman P., & Slovic P. (1988). Risk Communication, Risk Statistics and Risk Comparisons: A Manual for Plant Managers. Chemical Manufacturers Association, Washington, D.C.
35. Cozzani, V., Gubinelli, G. & Atonioni, G. The Assessment of Risk Caused by the Domino Effect in Quantitative Area Risk Analysis. *Journal of Hazardous Materials*, 16 (2005), pp. 127.
36. Cozzani, V., Tugnoli, A. & Salzano E. (2007). Prevention of the Domino Effect: From Active and Passive Strategies to Inherently Safer Design. *Journal of Hazardous Materials*, 139(2007), pp. 209.
37. Cross-Border Alternative Dispute Resolution in the European Union. (2011). Directorate – general for internal policies. Policy department A: Economic and scientific policy. European Parliament, IP/A/IMCO/ST/2010-15. Retrieved 14.02.2015. from [http://www.europarl.europa.eu/meetdocs/2009\\_2014/documents/imco/dv/adr\\_study/\\_adr\\_study\\_en.pdf](http://www.europarl.europa.eu/meetdocs/2009_2014/documents/imco/dv/adr_study/_adr_study_en.pdf).
38. D'Arcy, J. (1969). Direct Broadcast Satellites and the Right to Communicate. EBU Review, 118(1969), pp. 14-18.
39. Darbra, R.M., Palacios, A. & Casal J. (2010). The Domino Effect in Chemical Accidents: Main Features and Accident Sequences. *Journal of Hazardous Materials*, 183 (1-3), pp. 565 – 573. doi. 10.1016/j.jhazmat.2010.07.061.

40. Darling, J.R. (1994) Crisis Management in International Business: Keys to Effective Decision Making. *Leadership & Organization Development Journal*, 15(8), pp. 3-8, doi: <https://doi.org/10.1108/01437739410073047>
41. Delvosalle, C. (1996). Domino Effects Phenomena: Definition, Overview and Classification. In First European Seminar on Domino Effects, Leuven. Belgium, Federal Ministry of Employment, Safety Administration, Direction Chemical Risks, Brussels, Belgium, pp. 5-15
42. Ethics of journalism. Resolution 1003 (1993). Parliamentary Assembly. Assembly debate on 1 July 1993 (42nd Sitting). Retrieved 15.10.2016. from <http://assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-EN.asp?fileid=16414&lang=en>
43. European Charter on the Freedom of the Press. (2014). District Court of Hamburg website. Retrieved 16.08.2014. from <http://www.pressfreedom.eu/en/index.php>.
44. European Commission report. Media Police and Regulatory Practices in a Selected Set of European Countries. (2010), The EU and the Council of Europe. Retrieved 01.06.2016. from [http://www.academia.edu/939045/Media\\_policies\\_and\\_regulatory\\_practices\\_in\\_a\\_selected\\_set\\_of\\_European\\_countries\\_the\\_EU\\_and\\_the\\_Council\\_of\\_Europe](http://www.academia.edu/939045/Media_policies_and_regulatory_practices_in_a_selected_set_of_European_countries_the_EU_and_the_Council_of_Europe).
45. Faganel, A. (2011). Recognised Values and Consumption Patterns of Post-Crisis Consumers. University of Primorska. Retrieved 12.12.2015. from [http://www.academia.edu/778026/Recognized\\_Values\\_and\\_Consumption\\_Patterns\\_of\\_Post-Crisis\\_Consumers](http://www.academia.edu/778026/Recognized_Values_and_Consumption_Patterns_of_Post-Crisis_Consumers).
46. Fink, S. (1986). Crisis Management: Planning for the Inevitable. Elsevier Inc Public Relations Review 2007, 33(2), pp. 147. – 157.
47. Fischhoff, B. (1995). Risk Perception and Communication Unplugged: Twenty Years of Process. Society of Risk Analysis, 15 (2). Retrieved 15.06.2015. from <http://sds.hss.cmu.edu/risk/articles/unplugged.pdf>.
48. Hermann, C.F. (1972). International Crisis: Insights from Behavioural Research. New York: Free Press.
49. Higuera, R.P. & Haines Y.Y. (1996). Software Risk Management. Pittsburgh: Carnegie - Mellon University, ADA310913, pp.51. - 59.
50. Hollnagel, E. & Gotemann Ö. (2004). The Functional Resonance Accident Model. University of Linköping. Retrieved 28.02.2014. from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.579.1930&rep=rep1&type=pdf>.
51. Hughes, F. & Andre, LB. (2007). Problem Officer Variables and Early-Warning Systems. The Police Chief, 74(10), 18. – 22.pp.
52. Hutto, J.C. (2009). Risk Management in Law Enforcement: A Model Assessment Tool. Texas State University at San Marcos, 12. – 21.pp.
53. The Insolvency Law. Adopted on 26.07.2010. Published: Latvijas Vēstnesis, 124 (4316), 06.08.2010. Last amendments 05.01.2017.
54. International Bill of Human Rights. Fact Sheet No.2 (Rev.1). (1996). Universal Declaration of Human Rights (art. 1), adopted by General Assembly resolution 217 A (III) of 10 December 1948. United Nations, Geneva. Retrieved 05.06.2013. from <http://www.ohchr.org/Documents/Publications/FactSheet2Rev.1en.pdf>, 1. – 10.pp.

55. International Justice Resource Centre. Special Rapporteur of Human Rights Defenders. (2015) Retrieved 15.10.2015. from <http://www.ijrcenter.org/regional/african/special-rapporteur-on-human-rights-defenders/>.
56. Introduction of Mediation in Handling Civil Disputes (2012). Retrieved 30.10.2012. from [http://www.tm.gov.lv/lv/jaunumi/tm\\_info.html?news\\_id=3307](http://www.tm.gov.lv/lv/jaunumi/tm_info.html?news_id=3307).
57. Kallman, J.W. & Romy, V.M. (2004). A Refined Risk Management Paradigm. *An international journal Risk Management*, 6 (3), pp. 57-68.
58. Kaplan, S. & Garrick, B.J. (1981). On the Quantitative Definition of Risk. *Risk Analysis. An International Journal Risk Analysis*, 1(1), pp.11-27. doi: 10.1111/j.1539-6924.1981.tb01350.x.
59. Kaplan, R.S. & Norton, D.P. (2001). Transforming the Balanced Scorecard From Performance Measurement to Strategic Management. *Accounting Horizons*, 15(1), pp.87. - 104.
60. Khan, K.I. & Abassi, S.A. (2001). An Assessment of the Likelihood of Occurrence and the Damage Potential of the Domino Effect (Chain of Accidents) in a Typical Cluster of Industries. *Journal of Loss Prevention Procedures*, 283, pp. 279. - 290.
61. The Labour Law. Adopted on 20.06.2001. Published: *Latvijas Vēstnesis*, 105 (2492), 06.07.2001. Last amendments 02.08.2017.
62. The Law on the Electronic Mass Media. Adopted on 12.07.2010.. Published: *Latvijas Vēstnesis*, 118 (4310), 28.07.2010. Last amendments 01.12.2016.
63. The Law of Civil Protection and Disaster Management. Adopted on 05.05.2016.. Published: *Latvijas Vēstnesis*, 100 (5672), 25.05.2016.
64. The Law of Official Publications and Legal Information. Adopted on 31.05.2012. Published: *Latvijas Vēstnesis*, 96 (4699), 20.06.2012. Last amendments 10.12.2016.
65. Lehtonen, J., Siliņa, R. & Ābelniece, B. (2011). *Riska un krīzes komunikācija* (Risk and Crisis Communication). Rīga: SIA Turība University, p 197.
66. Macnamara, J. (2005). PR Metrics: How to Measure Public Relations and Corporate Communication. The New Australian and New Zealand Public Relations Manual. Sydney: Tymson Communications, pp. 100 – 134.
67. The Mediation Law. Adopted on 22.05.2014.. Published: *Latvijas Vēstnesis*, 108 (5168), 04.06.2014.
68. Mediation Process. Directive 2008/52/EC of the European Parliament and of the Council of 21 May 2008 on certain aspects of mediation in civil and commercial matters. *Official Journal of the European Union*, 24 May 2008, L136/3.
69. Nelms, C.R. (2010). Root Cause Analysis: NOT What You Might Think. Failsafe Network Inc, Montebello, VA 24464 540-377-2010. Retrieved 10.10.2010. from <http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=80C7DC647BA0C6E6930D8331720C5342?doi=10.1.1.541.2291&rep=rep1&type=pdf>.
70. OECD Guidance Document on risk communication for chemical risks. OECD website. Retrieved 01.06.2002 from [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono\(2002\)18&doclanguage=en](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=env/jm/mono(2002)18&doclanguage=en)
71. O'Hair, H. D., Kelley, K., & Williams, K. (2011). Managing community risks through a community communication infrastructure approach. In H. Canary & R. McPhee (Eds.), *Communication and*

- organizational knowledge: Contemporary issues for theory and practice, New York: Routledge, pp. 223-243.
72. Ó Siochrú, S. (2012). Communication: An Essential Human Need. The Right to Communicate in the Information Society. United Nations Research Institute for Social Development.
  73. Palenchar, M.J., Heath, R.L. & Dunn E. (2005). Terrorism and Industrial Chemical Production: A New Era of Risk Communication. *Communication Research Reports*, 22(1), pp. 67.
  74. Palenchar, M.J. (2005). Risk Communication. In Heath, R.L. (ed.). *Encyclopaedia of Public Relations*. Thousand Oaks, CA: Sage, 755 p.
  75. Paraskevas, A. (2006). Crisis Management or Crisis Response System? A Complexity Science Approach to an Organisational Crisis. *Management Decision*, 44(7), pp.892 – 907. doi: <http://dx.doi.org/10.1108/00251740610680587>.
  76. Pollard, D. & Hotho S. (2006). Crisis Scenarios and the Strategic Management Process. *Management Decision*, 44(6), pp. 721–736. doi: <http://dx.doi.org/10.1108/00251740610673297>.
  77. Reniers, G. (2010). An External Domino Effects Investment Approach to Improve Cross-Plant Safety Within Chemical Clusters. *Journal of Hazardous Materials*, 177(2010), pp.167-174.
  78. Reniers, G., Dullaert, W. & Karel S. (2009). Domino Effects Within a Chemical Cluster: A Game-Theoretical Modelling Approach by Using the Nash-Equilibrium. *Journal of Hazardous Materials*, 167(1/3), pp.289-293.
  79. Reniers, G. & Dullaert, W. (2005). The Use of Current Risk Analysis Tools Evaluated Towards Preventing External Domino Accidents. *Journal of Loss Prevention in the Process Industries*, 18(3), pp.119-126. doi:10.1016/j.jlp.2005.03.001.
  80. Rone, D. (2006) Mediācija: Jēdziens un iespējas (Mediation: Concept and Opportunities), *Jurista Vārds*, 11 (414), 14.03.2006.
  81. Ross, D & Bodapati. M.R. (2006). A risk management analysis of the claims, litigation, and losses of Michigan law enforcement agencies: 1985-1999. *An International Journal of Police Strategies & Management*, 20 (1), pp. 38 – 57.
  82. Summala, H. (2007). Risk Control is not Risk Adjustment: The Zero-Risk theory of Driver Behaviour and its Implications. *The National Academy of Sciences Engineering Medicine*, 208 p.
  83. Schmitt-Geiger, A. (2013). Litigation PR: Blessing or Curse? *Magazine for Corporate Communications and Public Relations Communication Director*, pp. 44-47.
  84. Seeger, M.W. (2007). Best Practices in Crisis Communication: An Expert Panel Process. *Journal of Applied Communication Research*, 34(3), pp. 232 – 244.
  85. Slovic, P., Finucane, M.L., E. Peters, E. (2004). Risk as Analysis and Risk as Feelings; Some Thoughts about Affect, Reason, Risk and Rationality. *Risk Analysis*, 24(2):311-22. doi: 10.1111/j.0272-4332.2004.00433.x.
  86. Standards Australia and Standards New Zealand, AS/NZS 4360 Australia and New Zealand Standard on Risk Management. (2004). Ministry of Business, Innovation and Employment, Auckland website. Retrieved 10.12.2016. from <https://www.standards.govt.nz/search-and-buy-standards/standards-information/risk-managment/>.

87. Trossen, A. (2006). Mediācija: izpratne un jēdziens latviešu valodā (Mediation: Concept and Term in Latvian) *Jurista Vārds*: 29 (432), 25.07.2006.
88. The United Nations Universal Declaration of Human Rights. (1948). United Nations website. Retrieved 28.09.2016. from <http://www.un.org/en/universal-declaration-human-rights/>.
89. Veinott, E.S. & Palatano, A.L. (2003). *Hard Decisions, Bad Decisions: On Decision Quality and Decision Aiding*. Cambridge University Press, 712 p.
90. Weber, E.U. (2006). Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare us Yet. *Climate Change*, 77(1), pp. 103-120. DOI: 10.1007/s10584-006-9060-3.
91. Wold, G.H. & Schriver R.F. (1997). Risk Analysis Techniques. *Disaster Recovery Journal*, 7 (3), pp. 52. – 59.
92. Yates, J.F. (2003). *Hard Decisions, Bad Decisions: On Decision Quality and Decision Aiding*. Cambridge Series on Judgment and Decision Making: pp. 13-25
93. Zeleny, M. (1982). *Multiple Criteria Decision-Making*. New York: McGraw-Hill Books, 563 p.