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Evica B. Milenković, M.Sc.

Insurance Support Specialist, Dunav Insurance Company

COOPERATION BETWEEN THE STATE AND REINSURANCE COMPANIES IN PREVENTIVE ACTIVITIES AND RECOVERY FROM THE CONSEQUENCES OF CATASTROPHIC LOSSES CAUSED BY NATURAL DISASTERS AND ACTS OF GOD

This paper deals with the connection between state institutions and insurance and reinsurance companies aimed at the development of preventive activities and mitigation of the effects of catastrophic losses caused by natural disasters and acts of god.

Key words: *prevention, natural disasters (hail, frost and other perils), acts of God (earthquake, flood and draught), catastrophic losses, reinsurance, statistics of insurance and reinsurance sector.*

Introduction

Today, the world is facing an ever increasing impact of so-called catastrophic risks, which can be divided into two groups: the first group is comprised of the risks caused by natural disasters whereas the risks classified in the second group are caused by human factors such as risks of war and terrorist attacks. The risks, the frequency of which is explained by climate changes, are the risks caused by natural disasters such as earthquakes, floods,

draughts, volcanoes, hurricanes, tornadoes and the like. On a daily basis the media report on natural catastrophes which affect particular countries and in addition to consequences suffered by population, leave the consequences such as the damage to property of those persons, sometimes on a very large-scale. Namely, these are the events with the following characteristics: 1) they do not occur regularly; 2) they leave very harmful consequences for people and material goods; 3) as a rule, they impact large population and threaten considerable material values; 4) may be caused by natural or human factors. In the past, catastrophic losses caused by natural disasters occurred at considerably longer time intervals, each hundred and fifty years. However, in the past ten years, firstly in the rest of the world and then in Serbia, they have become a part of everyday occurrence. These new conditions force people to adjust in an organised manner, within a community. However, there is an increasing need to become organised at regional, intergovernmental and even continental level. The cooperation firstly arises spontaneously, from the need to provide assistance to a country by another country at the times of catastrophic events and subsequently the concept of organised actions appears in insurance industry where international pools are formed.

Worldwide

Over the last 30 years, the number of catastrophes in the world has multiplied along with their devastating effects on communities and environment. The experiences of afflicted areas in the world and in Serbia, which in recent years have faced numerous catastrophes resulting in fatalities, suffering and material damage, confirm the fact that emergency situations, such as natural disasters and technical and technological accidents threaten the safety and survival of entire settlements, and even areas. Such conditions can be changed and consequences of catastrophes can be considerably diminished if people are well informed and acquainted with the ways to prevent catastrophes. If we are aware of possible perils and risks in our environment, if we know how and where to obtain information and how to become organised in critical moments, our life and the lives of our family members will be safer. In the developed parts of the world, preventive measures have been applied for a long time now, whereas in the developing countries, such as Serbia, this activity is in its infancy.

In the developed countries, insurance plays a key role in the disaster risk management by providing safeguards from financial indemnity. However, as of late, the occurrence of catastrophic events indicates that individual insurance

companies as well as the entire international insurance and reinsurance market have limited capacities. This limits the possibilities to accept particular catastrophe risks in insurance and reinsurance coverage. We are warned about this through the events such as the terrorist attack on the USA in 2001, and hurricanes of 2004 and 2005, where the aftermath of economic losses arising from natural catastrophes was two hundred and thirty billion dollars or 0.5 percent of the total worldwide GDP. The losses covered by insurance amounted to 83 billion Dollars. The total economic losses in 2008 and 2010 totalling to 130 billion Dollars should also be taken as a warning sign. Losses covered by insurance amounted to 37 billion Dollars. In the period from 2002 to 2011, 4.130 accidents were recorded at the global level, there were 1.117.527 affected persons and losses amounted to minimum 1.195.000.000.000 billion US Dollars. In 2010, 373 natural catastrophes occurred. These were earthquakes, floods, cyclones, volcano eruptions and different precipitations; 300.000 people died, 208 million were affected; losses amounted to 190 billion Dollars. In 2011, 302 disasters took place with the death toll of 29.782 people; 206 million people were affected and the claims reached 360 billion US Dollars. In the circumstances of increasing risks, (re)insurers must develop and introduce sophisticated tools to quantify and manage risks along with the models which help to analyse financial implications of catastrophic events so that insureds can reach higher understanding of potential risks. In return, insurers are able to better quantify potential losses and develop more efficient reinsurance programmes. In the developing countries, when the loss occurs, all eyes are on the Government. Being poor, with low GDP, permanent deficit, and over indebted, those countries do not have sufficient funds in their budgets for such circumstances. The appeal of the Government asking citizens to help the vulnerable leaves us in the vicious circle where the poor help the vulnerable, whereas the Government is emptying already emptied pockets.

Disaster Preparedness and Prevention Initiative – DPPI

In 2000, the Stability Pact for South Eastern Europe launched the *Disaster Preparedness and Prevention Initiative* (DPPI) in an effort to continue the development of a regional strategy for disaster preparedness and prevention in South Eastern Europe. DPPI activities are coordinated by the *Regional Cooperation Council* established in Sarajevo, Bosnia and Herzegovina, in 2005. DPPI Secretariat, also seated in Sarajevo, provides administrative support to the work of DPPI. In September 2007, in Zagreb, Croatia, the Memorandum of Understanding on the Institutional Framework of the Disaster Preparedness

for South Eastern Europe was made, which so far has been signed by 11 SEE countries, including Serbia. This Memorandum was ratified in Serbia under the Law on Ratification of the Memorandum of Understanding on the Institutional Framework (*Official Gazette of RS* No. 5/2010 of 9 June 2010). The main objective of DPPI is its role in international relations, strengthening of good neighbourly relations and stability through the exchange of information, lessons learnt and the best practices in the field of disaster management. Other objectives relate to the cooperation between DPPI member countries in accordance with the EU enlargement and accession and the establishment of regulatory framework in the field of emergency management in accordance with the guidelines and practices accepted in the international community.

In Serbia

In Serbia, natural disasters recorded a growing trend in the past hundred years: from 1900 to 1940, 100 natural catastrophes occurred every ten years; 1960–1970 their number was multiplied seven times; 1980–1990 two thousand times; from 1990 to 2000, the number of natural catastrophes rose to 2.800.

In Serbian legislation, the term disaster is defined as any natural or other hazard and event which by its size, intensity and suddenness threatens health and lives of a larger number of people, material goods and environment; disaster is also an accident occurred by war destruction or act of terrorism [2]. According to the previous definition, disaster risks may be classified into two groups: in the first group there are disasters caused by natural hazards whereas the second group includes disasters caused by human factors (war risks and terrorism). The Law on Emergency Situations of the Republic of Serbia regulates the protection and rescue system from natural disasters, technical and technological hazards, catastrophes, consequences of terrorism, wars and other large-scale disasters. Thus, this law establishes a framework for protection and rescue in the event of actuation of catastrophe risks, as defined above. In addition to the recognition of importance of this type of protection, one of the main principles of protection and rescue defined in this Law is that everyone has the right to be protected from catastrophes caused by natural and other disasters.

The Sector for Emergency Situations of the Ministry of Interior of the Republic of Serbia

The National Security Strategy adopted by the Ministry of Defence of the Republic of Serbia is the basis for drafting strategic documents in all areas of social life and functioning of state bodies and institutions, in order to preserve and protect the security of citizens, society and the state. Thus, based on this document and in accordance with the Law on Emergency Situations, the National Assembly adopted the *National Strategy for Emergency Protection and Rescue*, as a document which defines and determines national coordination mechanisms and programme guidelines for disaster risk reduction, protection and elimination of the consequences of natural and other disasters. This Law also produced the *National Strategy for Disaster Risk Reduction and Protection and Rescue in Emergencies*; the Law also stipulates the obligation to prepare a *Vulnerability Assessment of the Republic of Serbia as regards natural and other disasters*, and drafting of the *National Plan of Protection and Rescue in Emergency Situations*.

From the above it can be concluded that the Republic of Serbia takes a serious approach to the problem solution and disaster risk reduction. The reforms in this area have been particularly intensified since 2009, when the Sector for Emergency Situations was formed in the Ministry of Interior of the Republic of Serbia, which merges the following: the Sector for Protection and Rescue of the Ministry of Interior, Department of Emergency Situations of the Ministry of Defence, units in charge of chemical accidents from the former Ministry of Environment and Spatial Planning and the Sector for Anti-Hail Defence of the Republic Hydro-Meteorological Service of Serbia. The objective of the Sector for Emergency Situations is to establish in the Republic of Serbia an integrated protection and rescue system in emergency situations whereon the activities have been intensively carried out in the context of a new organisational structure of that sector.

In 2009, in emergency situations (fires, technological incidents, explosions and the like) 700 persons died on the territory of Serbia and material damage amounted to \approx 2.1 billion US Dollars.

In February 2012, in the emergency situation caused by snow, there were 30 fatalities on the territory of Serbia and material damage was estimated to \approx 0.36 billion Dollars. From January to September 2012, there were 18.115 fires affecting 20.238 ha of forest, 8.549 ha of fields and low vegetation, 260 ha of orchards and vineyards, and material damage was estimated to \approx 0.04 billion Dollars.

The mission of the Emergency Situation Sector of the Ministry of Interior is to protect human lives, environment, material goods and cultural and historical heritage as well as the construction, maintenance and improvement of capabilities of the entire nation for risk-related preventive actions. The Emergency Situation Sector seeks to respond to the challenges and alleviate the consequences of disasters which may affect our region. Accidents of different types – fires, floods, earthquakes, landslides, chemical accidents – may occur anywhere and at any moment, without warning. Therefore, the priority of the Sector is to timely and professionally respond in such situations.

Role of Insurance in Disaster (Natural Disasters and Other Accidents) Risk Reduction (Management)

Natural catastrophes, which affect particular countries and, in addition to fatal consequences suffered by population, leave the consequences such as the damage to property of those persons, can be on a very large scale. Namely, these are the events with the following characteristics: 1) they do not occur regularly; 2) they leave very harmful consequences for the population and their property; 3) as a rule, they impact large population and damage considerable material values; 4) could be caused by natural or human factors.

The role of insurance is huge and multiple. Firstly, insurance should be generally accepted as the way in which we protect ourselves against the catastrophic risks and should also play a considerable role in preventive activities which differ depending on the type of disaster risks: floods, earthquakes – promoting the activities of using sustainable techniques to strengthen new structures (due to both floods and earthquakes), promoting construction of defence solutions (due to floods), assistance in identifying areas affected by floods or earthquakes (risk map design), economic incentives to discourage construction in different areas (in connection with floods and landslides), promoting construction of defence solutions.

Due to the aforementioned, in the last ten years, climate changes have become one of the most important and most common topics of many conferences. One of three main topics of the 12th Congress of the International Insurance Law Association (*Association Internationale de Droit des Assurances – AIDA*) held in May 2010 in Paris were climate changes and insurance against catastrophe risks.

In the beginning of June this year, at the latest regional conference of insurers and reinsurers, SorS, which is traditionally held in Sarajevo, discussed were the latest catastrophic losses in the region, which occurred in Slovenia and

Croatia in the beginning of 2014. This was freezing rain. Then, discussed were the disasters affecting Bosnia and Serbia in floods beyond living memory in these areas. Many questions were asked and informal conclusions were made:

- Should compulsory insurance against natural disasters be considered?
- Should flood insurance be included in the first (standard) loss?
- What kind of services we provide in insurance industry?
- What is, for the time being, a standard and what is an additional risk and is it time to offer new services?
- Should the Government be included?
- Should a reinsurance pool be organised at the level of one country or the entire region?
- What are the experiences of Turkey and Romania and can their experiences help us in our decisions?

At the said Conference, it was concluded that the idea on the formation of a regional pool is conceived but in which way, when and how it is going to be implemented remains an open question. A disturbing fact, which speaks about an increased intensity of catastrophic losses, is that we hardly had a chance to recover from unremembered floods when only six weeks after, a devastating wind started and in only five minutes caused the damage of almost 200.000 Euros in the surrounding areas of Belgrade.

Insurance Sector in the Region, in 2013

➤ Insurance and reinsurance sector in B&H, in 2013

- The business is conducted in the market of B&H by 23 insurance companies and one reinsurance company.
- The total growth in 2013 amounts to 4.36 percent. This growth is largely based on the rise of life business, whereas non-life is mildly stagnating.
- Liability insurance premium still has the biggest share in non-life premium.
- In 2013, the Insurance Supervision Agency of the Federation of Bosnia and Herzegovina and the Insurance Agency of the Republic of Serbia adopted the set of by-laws regulating and improving the activities in connection with supervision and reporting in insurance sector.

- Regarding market liberalization in connection to compulsory third party motor liability, B&H will have to allow this liberalisation if it wants to become an EU member state.
- The activities in connection with the draft law on amendments and supplements to the Law on Fire Protection and Fire-Fighting in the Federation of Bosnia and Herzegovina have been underway for two years now. This law, with its provision on allocating funds for fire protection and fire-fighting in the amount of six percent of the total non-life premium and one percent of the total motor liability insurance premium, would bring insurance companies to an unequal position and its application would affect the financial stability of insurance companies in the Federation of Bosnia and Herzegovina.

➤ **Insurance and reinsurance sector in Montenegro, in 2013**

- In 2013, there were no significant changes in the insurance and reinsurance market compared to the previous year.
- In the premium structure, non-life compulsory lines are still predominant, whereas life business is still underrepresented.
- A mild growth trend of all insurance lines is noticeable compared to the previous period.
- Foreign capital is still predominant in the capital structure.
- The most important change is the introduction of a new non-life premium tax in the amount of nine percent of all non-life insurance lines, except for accident, voluntary health insurance and insurance of agriculture.
- Since August 2013, new motor liability insurance limits have been applied and their application will be in force until August 2014, when new, higher limits will come into force.
- Regardless of a relatively small market penetration compared to the neighbouring countries, the market has still shown a relative stability considering that insurance sector has made profit.

➤ **Croatian insurance and reinsurance market, in 2013**

- After the drop in total premium for four consecutive years, in 2013, the insurance market still managed to record a mild growth in the total gross premium of 0.42 percent.
- Average growth rate went down from 6.08 percent to 5.64 percent in the period from 2000 to 2013.

- In the market, there are seven companies dealing exclusively with life business and participating in gross life premium with 17.61 percent, and there are ten companies dealing solely with non-life lines and participating in gross non-life premium with 33.74 percent, whereas the largest market share still take composite companies with 83.39 percent in life insurance premium and 66.26 percent in non-life insurance premium.
- An average life premium growth rate in the last thirteen years has been reduced and amounts to 10.14 percent and 4.46 percent for non-life premium.

➤ **Insurance and reinsurance market in Macedonia, in 2013**

- In the conditions of European economic and financial crisis, which has been going on for couple of years now, the insurance sector in the Republic of Macedonia records growth up to the level of GDP.
- In particular types of insurance, the growth is far above GDP and is probably the biggest in the region and beyond.
- Insurance market in Macedonia is legally regulated and financially stable, particularly after the Insurance Supervision Agency - ASO was established (in 2009).
- In 2013, insurance sector recorded growth of 2.6 percent i.e. one percent in non-life and 22 percent in life.
- Insurance companies in Macedonia are predominantly owned by foreign shareholders (84 percent).
- In the next period, insurance sector is expected to address big issues such as: implementation of Solvency II and the selection of TPL liberalization model.

➤ **Insurance and reinsurance market in Slovenia, in 2013**

- In 2013, there were not many changes in the insurance market in Slovenia.
- 22 companies still operate in the market, 20 insurance and two insurance companies.
- The premium growth was slowed down in the last couple of years whereas now, for the third year in a row, it records the premium decline, which was notably caused by a negative life premium rate (-7.37 percent).

- In the beginning of 2013, the new Government started the activities on the stabilisation of economy.
- The debate on the new insurance law was initiated where the implementation of the Solvency II Directive is marked as the most important.
- Activities were intensified on education of citizens to maintain a relatively high trust of people in insurance, which was the basis for a successful growth of insurance in the last 20 years.

➤ **Insurance and reinsurance market, in 2013**

- In 2013, 28 insurance companies operated in the market of the Republic of Serbia and this number did not change compared to the previous year.
- Three quarters of the total number of companies were in the majority foreign ownership.
- The level of insurance market development in the Republic of Serbia measured by market penetration and density is still low, however, recording a continuous growth year on year.
- The total premium in this sector amounted to EUR 566.000.000 were non-life insurance lines account for the majority part.
- The growth of total premium recorded in 2013 is the consequence of rise in life premiums, whereas non-life premiums saw stagnation where compulsory motor third party liability takes a considerable share, as is usual for underdeveloped markets. However, a progress was achieved in this area, in the form of life growth at the expense of continuous decline in the share of compulsory insurance lines.
- Insurance market is still characterised by high share of motor insurance premium (MTPL and Casco) of as much as 40 percent.
- High growth potentials are notably seen in life insurance, accident insurance and particularly voluntary health insurance.
- Insurance companies which were the leaders in the market maintained the leading position with a slight drop in the market share at the expense of tentatively smaller insurance companies.
- Insurance market in Serbia recorded a mild growth in the last year despite considerably lagging behind the developed countries in the field of insurance. It can be noticed that it records a moderate and continuous progress.

Conclusion

Activities to be taken in order to responsibly manage disaster risks caused by natural disasters and acts of god:

- 1) establishing regulatory framework which ensures the protection of insureds and efficient insurance activities; (determining an appropriate insurance cost for these risks and enabling the extension of the list of standard risks, etc.)
- 2) planned approach that will be reflected in the establishing of funds for disaster control is necessary. This will ensure a strategic approach to disaster risk management
- 3) cooperation between public and private sector – the state, together with insurance companies, should have a prevention role in terms of disaster risk reduction (environmental protection, developing new risk maps, development of risk statistics, etc.)
- 4) continuous education of citizens in order to increase their awareness of importance of insurance as the protection against all risks, including the disaster risks
- 5) cooperation between all institutions at all levels which could be beneficial for the entire community, providing equal conditions for advancement.

Through the implementation of all these activities, the existing insurance and reinsurance companies, in cooperation with the state, can gradually but surely and according to the plan i.e. in the long run, address these challenges. The mechanisms for disaster risk financing shift their focus from actions taken after the occurrence of a disaster (ex post) to preventive actions for the reduction of such risks (ex ante). This is a big opportunity for insurance business because the development of the Sector for Emergency Situations provides (re)insurance companies with tools and possibilities to use statistical and other data and findings (risk maps and the like). Activities will be directed toward the development of preventive measures: further improvement of insurance services. To that extent, it will be necessary that the Government cooperates with the relevant institutions on disaster risk reduction, which is in the common interest of the entire region, and to educate citizens (about both the importance of insurance against natural disasters and the very natural disasters and appropriate behaviour in emergency situations – activities of the Sector for Emergency Situations at the local level). An increase in financial and other resources should be sought for the recovery from possible consequences of catastrophic events.

May 2014

Remainder of global catastrophes

EUROPE

Date	Event	Location	Deaths	Structures/ claims	Economic losses (USD)
5/13-5/21	Flooding	Southeast Europe	80	150,000+	4.5 + billion
5/24	Earthquake	Greece Turkey	0	hundreds +	millions +
5/27-5/31	Flooding	Russia	0	16,000+	15 + millions

UNITED STATES

Date	Event	Location	Deaths	Structures/ claims	Economic losses (USD)
5/7-5/9	Severe weather	Plains, Midwest	0	25,000+	250 + million
5/10-5/15	Severe weather	Plains, Midwest, Mid-Atlantic	0	80,000+	650 + million
5/11-5/20	Wildfires	Texas, Kalifornia	2	400+	100 + million
5/18-5/23	Severe weather	Midwest, Rockies, Northeast	0	300,000+	2,5 + billion
5/24-5/28	Severe weather	Southwest	0	25,000+	200 + million

Impact Forecasting | May 2014 Global Catastrophe Recap Aon Benfield

*Translated by: **Zorica Simović***

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