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Foreign Approaches to Cover Uninsurable Risks Offering Opportunities for the Czech Insurance Market

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Abstract

Uninsurable risks belong to actual issues of insurance industry. These risks weaken the role of commercial insurance. Insurers make exceptions in coverage of excessive claims. Property, health and lives are excluded from protection of commercial insurance products. In order to look for an effective solution of uninsurable risk we have focused our interest in uninsurable risk of flood, which is significant non-life insurance risk in the Czech Republic. Main aim is to describe multi-sourcing system based on cooperation between the state, insurers and insured objects. The system as a result of the research includes features of foreign approaches to uninsurable flood risk and is adjusted according to specific conditions of the Czech insurance market. Foreign approaches of uninsurable flood risk have determined the opportunities for the Czech insurance industry and have made a contribution to define the multi-sourcing system.

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1. Introduction

Uninsurable risks belong to actual issues of insurance industry. These risks cause enormous losses and significantly weaken the role of commercial insurance. Insurance companies make exceptions in coverage of excessive claims development. Selected risks are uninsurable through the way of commercial insurance products.

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We will focus our interest in uninsurable risk of flood. This non-life insurance risk influences negatively millions of people all around the world. Property, health and lives are exposed to flood risk, which is not covered by common insurance products. However increasing losses are reasons to look for new solutions in order to protect affected objects.

The first part of the paper is focused on foreign approaches to uninsurable flood risk. The second part introduces opportunities for the Czech insurance industry and takes into consideration specific features of the Czech insurance market. Main aim of this part is to describe model, which is able to offer commercial protection in the form of insurance product.

2. Foreign Approaches to Uninsurable Risks

Excessive losses caused by floods are common features of several economies in the world. Changes in global climate affect loss development, which has negative impact on insurance industry. The role of commercial insurance protection is weakened by risk realization of excessive losses. Insurance coverage of the most of commercial insurance products is insufficient. Insurance companies change insurance conditions and make exceptions in insurance cover. Risk realization has negative impact on decreasing value of property in flood affected areas and also has impact on urban development. Repetitive claims meet a need to build anti-flood barriers and to implement preventive measures.

In order to protect property, health and lives against consequences of floods governments of affected countries look for an effective solution. We can notice some foreign approaches to uninsurable flood risks, which also negatively affect claims development in the Czech insurance market. Working approaches, which were taken into consideration, are following:

- National Flood Insurance Program (the United States of America)
- Flood Re (United Kingdom of Great Britain and Northern Ireland)

Approaches mentioned above are existing systems of flood loss solutions. Both approaches are different, but cover claims in case of flood risk realization.

2.1. National Flood Insurance Program

National Flood Insurance Program (NFIP) was introduced in the USA. The program is a substitute for insurance products in cases of poor commercial insurance protection. NFIP covers risks of floods.

NFIP was set up to solve consequences of flood risk realization, which include following:

- Insurance exclusions
- Flood risk areas founding
- Increasing costs of commercial insurance protection

The Program was introduced by the Congress of USA in 1968. NFIP was implemented by the National Flood Insurance Act. Insurance protection is guaranteed by the state and provided by insurance companies. In 2010 nearly 5.5 million of American households were members of the Program. Repetitive and excessive claims had negative impact on results of the Program, which has reported financial losses (loss of 24 billion in 2014).¹

Insurance companies are members of Federal Emergency Management Agency (FEMA), which provides insurance protection according to risk profile of insured objects and distinguishes types of protected objects. The Program also distinguishes 2 groups of protected areas:

¹ The National Flood Insurance Program. (2013): Summary of Coverage. USA: FEMA, 2013, available from: http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp.

- High risk areas
- Medium and low risk areas

Insurance is offered by insurance agents. Losses are settled by value of costs paid for loss remove and by value of property at the moment of risk realization. Minimum annual premium costs 129 USD.

The state also supports anti-flood barriers, which can decrease costs of insurance protection. Attendance in the Program is compulsory for objects located in high risk areas. Main advantages of the NFIP are:

- Simple differentiation of risks (high and medium/low)
- 2 risk profiles of risk areas
- Compulsory attendance

The NFIP provides coverage of uninsurable flood risks and cooperates with commercial insurance companies. Important disadvantage of the Program is unprofitable development.

2.2. *Flood Re*

Flood Re is an approach of uninsurable excessive flood losses in Great Britain. Flood Re is a part of Flood Re Scheme, which has been implemented into the Water Act legislation from 2014. Governmental organization DEFRA (Department for Environment, Food and Rural Affairs) prepares and provides regulation. Experts, insurance specialists, the British association of insurance companies, representatives of banks and brokers, members of the Parliament and other interest and lobby groups took attendance in a process of approach definition.

Main aim of the British government was to reduce occurrence of uninsurable objects in risk areas and to influence trend of increasing costs of commercial insurance protection. The approach should be an effective solution offering protection for 350 thousand British households. Costs of insurance protection were calculated on the level of 210 GBP annually.

Flood Re Scheme distinguishes roles of the system participants:

- DEFRA
- The state (the Parliament)
- National Audit Office
- Supervisor

DEFRA is responsible for legislation and for ensuring main aim (i.e. an effective coverage of uninsurable flood risks). DEFRA screens risk profile and risk assessment of floods. Flood Re subsequently participates in financial management and provides information to DEFRA, which analysis impacts on public finance and defines objects of insurance protection. DEFRA reports information to the British Parliament, which is connected with the National Audit Office (NAO). NAO controls compliance with rules of economy, effectiveness and efficiency. Authority of supervision takes care about legislation, prepares rules of insurance companies evaluation and analysis compliance with capital requirements of commercial insurance companies.

Main advantages of the Flood Re are following:

- Strengthened role of commercial insurance industry
- Unified legislation
- Clear definition of reserves establishment and administration
- Changing reserves in case of risk development
- Compatibility of risk assessment and calculation of premium
- Prevention of increasing costs of insurance protection

Flood Re benefits from results of wide discussion with experts. Flood Re is a non-profitable entity. Management of Flood Re has also introduced a system of issuing flood bonds. Between disadvantages of Flood Re belong

difficult legislation and a number of administrative participants of the state. Intermediary of insurance product hasn't been defined clearly.

2.3. Comparison of foreign approaches to uninsurable flood risk

Previous parts describe selected foreign approaches to uninsurable flood risks. Both approaches are working systems in conditions of insurance markets of USA and Great Britain. Approaches in comparison have some joint features and on the other side we can notice some different ways of solution. Table 1 compares 6 main features of foreign approaches.

Table 1. Comparison of main features of foreign approaches.

Feature	NFIP (USA)	Flood Re (GB)
Insured object	Estates and equipment (for private and commercial purposes)	Estates (for private and limitedly for commercial purposes)
Participation	Compulsory in high risk areas	Voluntary
Risk profile	High risk areas and medium/low risk areas	Risk determined areas due to historical development
Supervision	Federal Emergency Management	Institutions of regulation, National Audit Office
Number of participants	5,500,000 households	350,000 households
Minimum premium (annual) ²	120 USD	304 USD

Source: Department for Environment, Food & Rural Affairs. (2014.): The Flood Reinsurance Scheme – Regulations, Department for Environment, Food & Rural Affairs, DEFRA; The National Flood Insurance Program. (2013): Summary of Coverage, FEMA; own processing

Insurance protection of NFIP is extended by protection of commercial objects. This system is compulsory for specified group of estates (e.g. in case of mortgage or according to risk exposure per location). Participation in Flood Re is voluntary. Both systems are based on insurance principles. Nevertheless American NFIP is unprofitable. On the other hand Flood Re is relatively new system. Both systems distinguish risk profile of uninsurable areas. The role of supervision is also similar described. Certainly the number of participants is higher in USA than in Great Britain especially due to number of inhabitants.

Significant difference is between minimum premium. Flood Re insurance premium is nearly 3 times higher than premium calculated by NFIP. It is necessary to notice, that NFIP is unprofitable approach and Flood Re depends on interest of participants influenced by their voluntary attendance in Flood Re system.

Both systems have advantages and disadvantages. These solutions mean opportunities for the definition of the Czech uninsurable flood risk approach, which is modified according to conditions of the Czech insurance market. The approach is described in next part of the paper.

² FX rate of USD valid for 30th January 2015 (CZK/USD 24.585)

3. Opportunities for the Czech insurance market

Foreign approaches determine suitable assumptions to solve actual issues of uninsurable flood risks and flood areas in the Czech republic. Negative consequences of flood risk realization meet requirements to flood coverage by public and private finance. The Czech insurance market has noticed catastrophic losses in 1997 and 2002. These shock losses forced insurers to exclude excessive flood risk from their portfolio of flood coverage or caused high increase in reinsurance premium. Influence of enormous flood claims in the Czech republic was reflected in actual trend of enlargement of flood map. This flood map in conditions of the Czech insurance market differs 4 flood areas according to a probability of flood risk realization. Flood map describes areas of the most frequent loss occurrence.

Recurrent claims have also social impacts, when estates are selected according to flood areas. Claims development affects insurance premium rate of estates especially in case of the third and the fourth flood areas. The problem lays in application of several different flood maps, which aren't in mutual compliance. It can cause essential impacts on value of property.

Main aim of foreign approaches research is to define a system, which is possible to reflect domestic claims development in the Czech republic offering an effective solution. This solution should enable distribution of flood risk between insurers, the state and insurance buying public. At present the state doesn't declare strict rules and insurers are competent authority to make decisions of risk coverage. The most of available systems are based on 2 main features:

- Dependent organization established by the state
- Insurance pool included several insurers

Opportunities of foreign approaches for the Czech insurance market can cause some difficulties. The Czech insurance market is relatively small to spread of risks of flood areas in a particular year so as to regions. Risk realization in flood areas is also difficult issue due to compensation of reserves, which are established in areas of lower probability of flood occurrence. Compared with foreign regions it is also quite difficult to calculate and compensate insurance premium due to small territory on the assumption that the most of "flood" countries won't be affected by claims in case of insurance event.

- Role of the state authority

The state guarantee of insurance protection was offered in the Czech republic several years ago. According to the historical development in the Czechoslovak republic the Czech State Insurance Company was a sole insurer using the full state share. Excess of loss was reduced, which had impact on budget. This system was unsustainable in a long term. It seemed necessary to divide reserves establishment into all members of market for flood risk.

- Insurers risk

Risk fluctuation can influence negatively small economy such as economy of the Czech republic. Floods realized in 1997 affected all regions. Total claims were calculated on the level of 62.6 billion CZK, which had meant 3.3 % of GDP. Only 15 % of claims were covered by commercial insurance protection. Floods in 2002 caused claims in the amount of 73.14 billion CZK. It had meant 2.8 % of GDP.³

Commercial insurance companies are exposed to high risk. Subsequently insurers exempt these excessive flood risks of their risk portfolio. This effect is influenced by market distribution. The strongest non-life insurers (3 companies) in the Czech republic administer more than a half of insurance contracts. Market concentration can

³ The National Flood Insurance Program. (2013): Summary of Coverage. USA: FEMA, 2013, available from: http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp.

influence risk distribution, which is insufficient inside the insurance pool. Concluded this effect it is necessary to join the most of participants into the pool attendance.

- Multi-sourcing system

As a result of our research it is important to look for an optimal mix of cooperation between insurers, the state and also participation of person insured. Main aim is to reduce negative impact on public finance and to ensure availability of commercial insurance protection.

Domestic system has to be undoubtedly established in the form of multi-sourcing system. The state plays an important role. We can distinguish 2 ways of solution:

- To legalize compulsory insurance of estates
- To provide reinsurance by guarantees of the insurance pool

The first solution weakens the role of free market and involves an implementation of administrative arrangements. The second solution is based on assumption of adopting preventive measures and liability for claims caused by floods.

Features, which influence an opportunity of application of different foreign approaches in conditions of the Czech insurance market, are possible to join into one system. The system should be based on several approaches consisting of roles of the state, insurance pool and supervision. The multi-sourcing system enables reliable flood risk coverage without excessive burden of participating members.

4. Conclusion

Uninsurable risks belong to actual issues of insurance industry. We have focused our interest in non-life uninsurable risk of flood. Some foreign insurance markets solve the problem of uninsurable flood risk. We have compared 2 foreign approaches – National Flood Insurance Program (USA) and Flood Re (Great Britain). Each of them has advantages and disadvantages. Our aim was to select features in order to describe the system of uninsurable flood risk solution, which should be implemented in specific conditions of the Czech insurance market.

Described system of uninsurable flood risk solution enables insurers to reduce portfolio of uninsurable risks. The system is based on the state guarantee and implements preventive measures due to pool reserves establishment. The system has positive impact on public finance, because insurers share risks and finance insurance pool. Inhabitants are also positively affected by availability of commercial insurance product, which protects their property.

Selected features of foreign approaches to uninsurable flood risk have determined the opportunities for the Czech insurance market and have made a contribution to define the multi-sourcing system.

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