

CYBER RISK AND CYBER INSURANCE

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Abstract - Cyber risk is a form of risk from the exposure resulting from a cyber-attack or data breach. Organizations tend to become more vulnerable to these kinds of threats due to their high reliability on computers, networks, and information in order to get along with the delivery of the services. In case of failure in these systems, these organization will face a negative impact in the processes, which will create a negative impact on the organization. So, this paper deals with the understanding the various views on cyber risk insurance and its challenges that arises in insurance markets in the recent years.

MOTIVATION

Living in the digital age means cyberterrorists have opportunities to exploit the information of individuals, government institutions, and even larger organization. Due to the effect of covid-19 pandemic, the new opportunities for cybersecurity risk areas are emerging. In order to figure it out, it is necessary to perform an empirical strategy for cyber risk assessment which would be helpful in concluding with perspective of whether cyber risk to be covered by capital management or risk-based approach.

PROPOSED APPROACH

The study explores the different views of cyber risk that has emerged in the recent years. First approach deals with the study of Operational Risk which is risk that are caused by the actual losses due to inappropriate procedures, systems or policies followed by the organizations^{[1][2]}. It focusses on how things are accomplished in an organization and not on what is produced from that organization. So, operational risk can be utilized as a technique to get along with this exposure.

Second approach deals with utilization of a mechanism for avoiding cyber risk that seeks to remove the possibility of activities that creates risk^[3]. Cyber risk insurance is a tool that are useful to compensate the loss from the cyber risk incidents^{[3][4]}. For this study, we are preparing the various components for an efficient cyber risk management by analyzing internal risk management with risk awareness factors.

REFERENCES

1. Romanosky, S., Ablon, L., Kuehn, A., & Jones, T. (2019). Content analysis of cyber insurance policies: how do carriers price cyber risk?. *Journal of Cybersecurity*, 5(1), tyz002.
2. Falco, G., Eling, M., Jablanski, D., Miller, V., Gordon, L. A., Wang, S. S., ... & Donavan, E. (2019). A research agenda for cyber risk and cyber insurance. In *Workshop on the Economics of Information Security (WEIS)*.

3. Mukhopadhyay, A., Chatterjee, S., Bagchi, K. K., Kirs, P. J., & Shukla, G. K. (2019). Cyber risk assessment and mitigation (CRAM) framework using logit and probit models for cyber insurance. *Information Systems Frontiers*, 21(5), 997-1018.
4. Camillo, M. (2017). Cyber risk and the changing role of insurance. *Journal of Cyber Policy*, 2(1), 53-63.

APPLICABLE JOURNALS

1. Oxford Journal of Cybersecurity
2. Journal of Information Assurance & Cybersecurity
3. The Journal of Cyber Security and Information Systems
4. Journal of Cyber Security Technology

CONFERENCES

1. International Conference on Cyber Security and Internet of Things
2. International Conference on Cyber Security and Protection of Digital Services(Cyber Security)
3. International Conference on Information Systems Security and Privacy
4. RSA Conference

NAME OF THE ORGANIZATIONS/RESEARCH GROUPS

1. Cyber Defense Labs
2. Center for Internet Security
3. National Council for ISACs
4. CyberCube
5. RiskLens

INDUSTRIAL PUBLICATIONS

1. Krebs on Security
2. TaoSecurity
3. Threat Post

NEWS SOURCE

1. <https://www.propertycasualty360.com/2020/10/02/pandemic-threats-top-cyber-risks-as-the-biggest-threat-for-businesses-in-2020/?slreturn=20200905120520>
2. <https://www.insurancebusinessmag.com/us/news/cyber/cyber-risk-may-eventually-surpass-insurance-industrys-capacity--experts-235096.aspx>