Bridging the Gap Between Businesses and Insurers: A Systematic Review of Cyber Insurance Research

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Abstract

Cyber insurance has become a complementary risk-transfer mechanism to traditional cybersecurity investments. While firm-level adoption (policy purchase) has risen in recent years, many organizations remain hesitant due to unclear policy terms, high premiums, and complex underwriting. At the same time, insurers face difficulties in pricing coverage, assessing heterogeneous risks, and addressing systemic threats. This paper presents a systematic literature review of cyber-insurance research published between 2015 and 2025, examining both business and insurer perspectives. We analyzed 41 peer-reviewed sources using thematic coding to identify recurring themes, barriers, and enablers. On the business side, studies frame cyber insurance as an investment decision, investigating adoption drivers, policy comprehension, and cost-effectiveness. On the insurer side, research highlights challenges in premium calculation, loss modeling, data collection, and standardization. Across both perspectives, moral hazard, asymmetric information, and the lack of harmonized policy language remain central obstacles. The review also identifies emerging opportunities, including the use of AI and standardized frameworks to improve risk assessment and underwriting. We conclude with a research agenda outlining six directions for future work with implications for both academia and industry.

Index terms: Cyber insurance, Cyber insurer, Cybersecurity, Insurance adoption, Policy coverage, Systematic literature review, Underwriting

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