

# **The Optimal Allocation of Liability Between Internet Providers And End-Users – A Theoretical Perspective**

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Ideally, authorities should deal with cybercrime by stopping cybercriminals. Unfortunately, due to several technological and jurisdictional limitations, law enforcement agencies are very limited in their ability to deter criminals from causing harm. Investing in security is helpful, but it is not enough. Cyber-attacks continue to affect individuals and companies, in spite of the major efforts invested in security. Attacks often succeed because users fail to take sufficient protective actions. Service providers can warn users about possible risks (e.g., risky links or mail attachments). The question arises, who should pay for the damage, caused by a successful cyber-attack. If users are required to pay, they may be more cautious, but they may also cease to use online services with possible risks. If service providers pay for the damage if they failed to warn users, they may become overly cautious and may issue excessive warnings that are ignored by users. We analyze the problem in a game-theoretic framework and compute the outcomes from different allocations of the damage. These game theoretic analyses can inform system design and policy decisions regarding relevant legislation.