Teaching Note: Introduction to Financial Impact of Data Breaches and Insurance

Rajneesh Sharma, Saint Joseph's University
Michael Angelina, Saint Joseph's University

Given that Data Breaches and Data Breach Insurance have exploded over the last few years. These issues are becoming an essential part of the curriculum. We will present simple techniques on how instructors get started on incorporating these topics into their courses. Our proposed coverage is introductory and as such can be incorporated in a variety of courses.

We will present two simple techniques for students to value the loss from a data breach. The first one uses Cash Flow to the Firm methodology. We show a simple example which can help students start on estimating the costs of a data breach. The students can start by identifying various types costs associated with the data breaches. These include costs generated from harmed parties, reputational costs, cost of lost business, and costs of preventive measures against future breaches. All the future costs (or loss of revenues) need to be discounted back and added.

The second methodology determines the impact of a data breach on the stock price of the firm. When a data breach is made public, there is a negative impact on the share prices of the firm. We show how a simple exercise can help students think about the loss of value for shareholders. Students will start by identifying the first public announcement of a data breach. A standard event study methodology calculates abnormal returns for the firm on days surrounding the announcement. This easy exercise can help students generate an estimate of the losses.

We will show how to discuss the potential influence of geographical location (countries), the size of firm and type of industry on the cost of the data breach in the classroom. Impact of preventive measures and post-breach actions can also be discussed in this topic.

We believe students should also be exposed to the role of data breach insurance. They should learn about premium costs and payouts. Insurance companies require certain actions from insured. These actions can reduce the likelihood of data breaches and costs related to data breaches. This reduces adverse selection problem faced by insurers.