Hyver Cost of Breach Model

The Cost of Breach (CoB) is a mathematical model leveraging AI and data science algorithms to estimate the monetary loss to organizations due to a breach. It is essential for quantifying and managing cyber exposure, enabling prioritized mitigation plans that most effectively address specific business needs and the current threat environment.

Dependable Data Sources

Advisen©
Dataset

Ponemon©
Research

Cyberinsurers
Claim Data

Incident
Response Data

- The CoB model was built using proven and reliable internal and external data sources.

- Outcomes of real-world breaches from similar organizations are extrapolated to determine CoB.

Comprehensive, Simple to Understand

- Hyver's CoB produces figures that cover each aspect of breach loss beyond direct, traditional containment and compensation damages.

- The CoB model does not just output a single figure. Damages are attributed to different cost factors such as fines and settlements or loss of business continuity.

- Hyver provides the Industry Cost of Breach benchmark, which is the estimated monetary damage that other companies with a similar business profile and from the same industry sector may incur in the event of a breach. Compare your breach impact with your industry peers.

- A key input for the CoB model is the organization's cybersecurity maturity level. Maturity is measured in Hyver in a detailed and evidence-based way, relying on common frameworks like NIST CSF. Maturity is an essential part of the estimation, because it considers the ability of a company to detect faster, respond faster, or recover faster from a breach, which will directly impact the overall estimated business loss an organization will suffer from a breach.

- Changes to organizational attributes are reflected immediately in the CoB estimate. For example, an increase in revenue will be translated to increased reputational damage, business continuity loss, etc.

Cost of Breach Calculation

The breach impact model uses sophisticated algorithms, prediction tools, and machine learning techniques, along with responses to business profile questions and the maturity assessment of selected NIST subcategories. It is based on data from public sources, external collaborations, and CYE's internal data and expertise. CoB accuracy is assured through comprehensive data integration, validation, and sophisticated modeling techniques.
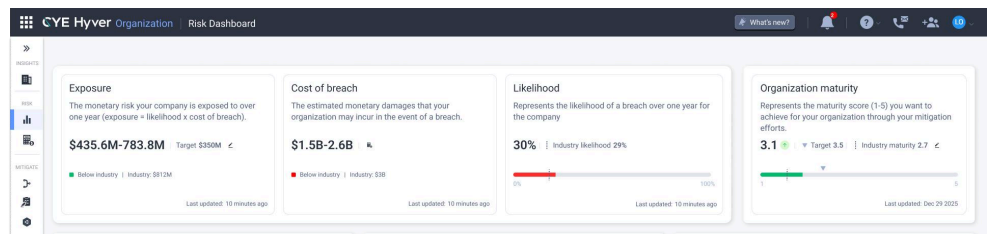

- **Data Sources:**
  Accuracy is enhanced by leveraging data from Advisen, CYE's proprietary data, and hundreds of thousands of breach events.

- **Historical Data:**
  CoB uses a large dataset of historical cybersecurity incidents validated against real historical data for precision.

- **Maturity:**
  Incorporates NIST subcategories from the maturity assessment ensuring that maturity scores impact the CoB, enhancing accuracy and objectivity.

Validated Predictions

CYE's CoB prediction model is one of the most accurate tools for predicting breach-related costs in the industry. CYE trained the breach prediction model using real-world data from thousands of historical incidents. The model's performance was evaluated using an 80/20 data split, with 80% of the data used to train the model and the remaining 20% used for assessment. The evaluation yielded highly accurate costs of breach estimations.

Cost of Breach Breakdown

Hyver provides a CoB breakdown by business assets, and by first- and third-party as shown in these examples.
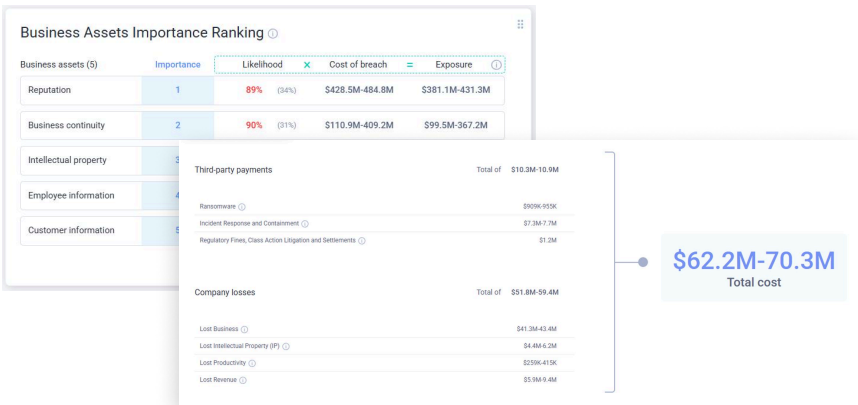
Want to learn more about how Hyver determines the cost of breach?
Contact us.

About CYE

CYE's exposure management platform, Hyver, transforms the way security teams protect their organizations. With CRQ at its core, the platform reveals enterprises' exposure in financial terms, visualizes the most exploitable attack routes to critical business assets, and creates mitigation plans tailored to each business. CYE's customized reporting enables the sharing of vital board-level metrics and validating exposure reduction over time. In addition, CYE improves cybersecurity maturity by mapping weaknesses and defining targets based on industry frameworks. Founded in 2012 in Israel with operations around the world, CYE has served hundreds of organizations across industries globally. Visit us at cyesec.com.