#ForensicPerspectives

Model Errors

A risk that knows no industry, regulatory, or geographic boundaries

When models do not function as intended or advertised – or are not used as intended – the results can be catastrophic. The stakes continue to rise across the globe, industries, and regulators.

Representative enforcement actions

Securities & Exchange Commission (SEC)

An online lender was charged with securities fraud because a model it used to calculate and report net returns excluded certain written-off loans, thereby overstating the annualized net return figures in its marketing materials. Investors relied upon these false representations when deciding to make additional investments. The company paid $3 million in penalties.

Environmental Protection Agency (EPA)

A group of employees at an automobile manufacturer recently reported possible problems with a model used to calculate mileage and emissions. The company launched an investigation into whether it overstated gas mileage and understated emissions on a “large number” of models and voluntarily disclosed the matter to the EPA and the California Air Resources Board. The US Department of Justice subsequently opened a criminal investigation over the company’s emissions-certification processes. The internal investigation and regulatory probes are continuing, and a group of customers filed a $1 billion class action law suit.

Federal Energy Regulatory Commission (FERC)

A modeling error at an electric system operator affected market schedules and prices. The error was present for 12 days before it was discovered and corrected. The operator filed a report with FERC within 30 days explaining: when and how the error was discovered; why it did not self-report; whether it notified its market monitor of the tariff violation; and the steps it took to inform market participants, stakeholder committees, and the FERC. The net impact was estimated to be $7.4 million.

Financial Conduct Authority UK (FCA)

The FCA found failings in a global financial institution’s change management processes, its maintenance of the reference data used in reporting, and how it tested the accuracy of the transactions it reported to the FCA. Because the institution agreed to resolve the case, it qualified for a 30% discount in the overall penalty and was fined £28 million. Without this discount, the fine would have been £40 million.

CRA Charles River Associates

Prepare for model errors

Model errors often lead to fines, monitors, litigation, and other sanctions. Consider the tips below to help reduce these risks, prepare to more nimbly respond to an incident, and defend against litigation and regulatory scrutiny.

Reducing the risk

- Develop a robust model risk management program, including appropriate governance and audits
- Periodically test your models (even if a model works today, it may not work tomorrow)
- Ensure your marketing materials are accurate and don't overstate the importance of the "proprietary" model in your decision-making

Responding to an incident

- Covering up a mistake or responding in a non-timely manner is often worse than the mistake
- If there is a whistleblower, don't retaliate
- Understand what happened before and after the error was identified
- Be transparent with regulators and present results/findings along with remediation measures taken
- Ensure that the person who caused the error is not assigned to lead the investigation
- If model errors cause losses to some customers and gains to others, you will not be able to net them for purposes of assessing the company's overall exposure

Defending yourself

- Be prepared to demonstrate sound business judgment and why your judgment was reasonable
- Board members should be prepared to handle questions appropriately
- Understand the downstream impact on exposure to customers for damages, exposure to investors for reduced stock price, and exposure to penalties and sanctions from regulators
- Regulators will be looking for evidence of someone manipulating the model

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