SUPPLYCHAIN
FINANCE

Assessing the Value of Courier Delivery Audits

Courier delivery is a fundamental service where goods are transferred to end users, but billing documents are often incomplete and confusing to accounts payable clerks and transportation managers. Shippers that assign or hire external resources to audit invoices are mitigating current risks and deter future billing errors; however, organizations use cost-effective measures to justify their budgeted expenditures.

An accepted standard used by most companies is Return on Investment (ROI) which is a profitability ratio used to evaluate projects. Invoice audits may identify savings at first, but savings decline as the audit becomes more successful. Audit ROI becomes less attractive as the audit program acts as sentinel and guards against billing errors.

Measuring an auditing investment is like measuring computer security investments where the organization calculates how much loss you can avoid thanks to the investment. Calculating auditing ROI involves quantifying the risk environment and the auditing service cost. The components include:

- Expected amount of money what will be lost when a billing error occurs (Single Loss Expectancy - SLE)
- Rate of occurrence (Annual Rate of Occurrence - ARO)
- Mitigation ratio (locating error percentage - MR)
- Cost of auditing service (Cost of Solution - COS)

An auditing ROI calculation combines the quantitative risk assessment and the cost of the auditing service to produce an estimated audit ROI.

$$\text{Audit ROI} = \frac{(\text{Single Loss Expectancy} * \text{Rate of Occurrence}) * \text{Mitigation Ratio} - \text{Cost of Service}}{\text{Cost of Service}}$$

Each organization has a different Audit ROI due to number of deliveries, complexity, and courier ethics. Supply Chain Finance often reviews courier invoices and generates invoice ratios that can be uses to establish a shipper's Audit ROI. The following is an example for the Audit ROI.

Single Loss Expectancy (Overbilled Amount on Invoice) = $625

Rate of Occurrence (Frequency for Overbilled – Biweekly invoice) = 24

Mitigation Ratio (percentage of records identified during audit) = 75%

Cost of Service (yearly cost for service $300 per month) = $3,600

Audit ROI =	($625 * 24) * 75% - 3,600	3,600

Audit ROI = 212.5%

The Audit ROI allows the company to evaluate this risk mitigation investment by estimating Loss Expectancy, Rate of Occurrence, and Mitigation Ratio (percentage of errors identified). Cost of Service is the actual cost for the audit service.

About Supply Chain Finance

Supply Chain Finance is a leader in Courier Management Solutions providing auditing services and delivery management tools that enables the pharmacy director to manage deliveries. For more information, see www.supplychainfin.com.

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