P3 Formula Sheet

GoQualified

Risk Management (P3) . CIMA Strategic level . For revision use only

Expected Value & Decision Trees

Expected value = S (Outcome x Probability)

Roll back decision trees from final outcomes to the initial decision point

EV is a long-run average - use with caution for one-off decisions

Measures of Risk

Variance = S [(Outcome - EV)^2 x Probability]

Standard deviation = sqrt(Variance)

Coefficient of variation = Std deviation / Expected value

Value at Risk (VaR) — concept

VaR = the maximum expected loss, over a given time period, at a given confidence level

e.g. '1-day 95% VaR of $2m' = 5% chance of losing more than $2m in one day

Risk Appetite & Control

Risk appetite = the amount of risk an organisation is willing to accept in pursuit of objectives

Risk tolerance = the acceptable range of variation around a risk target

Control cost-benefit: implement a control only where expected benefit > cost of control

Cyber & Operational Loss Quantification

Expected annual loss = Probability of event x Impact if it occurs

Summed across all identified risk events for an aggregate risk exposure figure

Enterprise Risk Management

Three lines model: (1) Operational management, (2) Risk/compliance oversight functions, (3) Internal audit

COSO ERM: strategy and objective-setting, performance, review and revision, information/communication/reporting