



# Audit Sampling: Statistical Sampling, Monetary Unit Sampling and Evaluating Results



## **Audit Sampling: Statistical Sampling, Monetary Unit Sampling and Evaluating Results**

### **Introduction:**

Audit sampling decisions are often made by habit: a fixed count of 25 items, selection by whoever is at hand, and conclusions that cannot say how much risk remains. When a reviewer or audit committee asks how the sample supports the opinion, the working papers fall silent. This Core Concept course trains auditors to design statistical and non-statistical samples, calculate sample sizes, select items defensibly, project misstatements and evaluate results against tolerable limits. Participants build an Audit Sampling Plan and Evaluation Workbook covering controls testing and substantive testing that they can reuse on live engagements.

### **Course Objectives:**

- Distinguish sampling risk from non-sampling risk and choose between statistical and non-statistical sampling for a given audit objective
- Calculate sample sizes for tests of controls and tests of details from confidence level, tolerable deviation rate or tolerable misstatement and expected error
- Select sample items with random, systematic, monetary unit, haphazard and block methods and apply stratification to skewed populations
- Evaluate attribute samples and project misstatements from monetary unit and classical variables samples to reach a population conclusion
- Decide when full-population testing with spreadsheet and audit analytics tools replaces sampling, and document the choice
- Document sample design, execution and evaluation in working papers consistent with ISA 530 Audit Sampling

### **Target Audience:**

- Internal auditors who test controls and transactions on financial, operational and compliance engagements
  - External audit staff who perform substantive tests of details on account balances
  - Public-sector auditors who examine expenditure, revenue and grant transactions
  - Audit supervisors who review sample design and sign off working papers
  - Quality assurance and inspection staff who check the sufficiency of audit evidence
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## **Course Outline:**

### **Day 1: Audit Sampling Foundations and Risk**

- ISA 530 Scope: Population, Sampling Unit and Audit Sampling Definitions
- Sampling Risk and Non-Sampling Risk: Type of Error and Its Effect on the Audit Opinion
- Statistical Versus Non-Statistical Sampling Decision Criteria
- Tests of Controls Versus Tests of Details: Matching the Sampling Approach to the Assertion
- Current-State Review of Sample Practice in Existing Audit Files

### **Day 2: Sample Design and Selection Methods**

- Population Definition, Completeness Checks and Sampling Frame Reconciliation
- Random Number Generation in Excel for Simple Random Selection
- Systematic Selection with a Random Start and the Periodic Pattern Risk
- Haphazard and Block Selection: Permitted Uses and Limitations
- Stratification of Skewed Populations and Key Item Testing Above a Threshold

### **Day 3: Attribute Sampling and Monetary Unit Sampling**

- Attribute Sampling Size Tables: Confidence Level, Tolerable and Expected Deviation Rate
- Upper Deviation Limit Calculation and Controls Reliance Decision
- Monetary Unit Sampling Interval, Reliability Factors and Sample Size Formula
- Probability Proportional to Size Selection and Cell Selection Worksheets
- Tainting, Basic Precision and Incremental Allowance in the Upper Misstatement Limit

### **Day 4: Variables Sampling, Projection and Problem Cases**

- Classical Variables Sampling: Mean-per-Unit, Difference and Ratio Estimation
- Projecting Misstatements and Comparing Against Tolerable Misstatement
- Anomalies, Deviation Root Cause and Qualitative Evaluation of Exceptions
- Full-Population Testing with Excel and Audit Analytics Tools: When It Replaces Sampling
- Common Sampling Failures: Unrepresentative Frames, Undocumented Size and Unprojected Errors

### **Day 5: Sampling Workbook Build and File Review**

- Case Data Pack: Purchase Payments, Payroll Records and Grant Disbursements
  - Controls Testing Model: Attribute Plan, Selection and Deviation Evaluation
  - Substantive Testing Model: Monetary Unit Sample and Misstatement Projection
  - Working Paper Documentation Checklist Aligned to ISA 530
  - Audit Sampling Plan and Evaluation Workbook Presentation and Peer Review
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## Skills You Will Gain:

- Sample Size Calculation
- Sampling Risk Assessment
- Stratified Sample Design
- Monetary Unit Sampling
- Attribute Sampling Evaluation
- Misstatement Projection
- Population Data Validation
- Sampling Documentation

## Why Attend This Course:

- Leave with an Audit Sampling Plan and Evaluation Workbook, with working formulas for attribute, monetary unit and variables samples
- Answer reviewer questions on why a sample size was chosen and how much risk the conclusion still carries
- Practise on case data from procurement, payroll and public grants rather than textbook examples
- Recognise when a full electronic population makes sampling unnecessary and how to record that decision

## Conclusion:

A sample is only as good as the reasoning behind its size, its selection and its evaluation. The course moves from sampling risk and the choice between statistical and non-statistical methods, through selection and stratification, to attribute sampling, monetary unit sampling and classical variables estimation, then to projecting misstatements and deciding when full-population testing is the better route. The final day turns this into an Audit Sampling Plan and Evaluation Workbook that participants can apply on their next engagement and defend at file review.

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