

Using Sampling in Auditing



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Audit Sampling has been defined in SAP 15 (issued in April 1998) as “the application of audit procedures to less than 100% of the items within an account balance or class of transactions to enable the auditor to obtain and evaluate audit evidence about some characteristics of the items selected in order to form or assist in forming a conclusion concerning the population”.

The auditor functions within the constraints of time and cost and therefore it is not possible and neither it is feasible for him to check each and every transaction. Thus he can limit his extent of checking by undertaking selective verification.

In practice, however, the auditor applies test checking i.e. checking an arbitrary portion of the transactions (say) checking of the first two months’ and last two months’ vouchers and one month in the middle of the year or he may check a part of the transactions occurring every month for the whole of the year. This practice, though suitable in most cases, is far from being scientific. But if the auditor applies the sampling technique he will not only have covered the same portion as covered under test checking but he will have almost 95% degree of assurance of the correctness of the transactions.

Some Precautions before Undertaking Statistical Sampling

But the auditor must take certain precautions: -

- He must ensure that the sample taken is a random sample. Often auditors are guided by the amount based on the premise that an error, even if undetected, will be of negligible value. The sample will

then be biased in nature. For a purely random sample, he should use the random number tables.

- He should take a sample of proper size. This should neither be too small nor too big but should be more than 30.

The use of sampling in this flowchart is restricted to the following two stages: -

- Determine Sample Size.
- Use Statistical Technique.

We, now, make out a simple table for calculating Sample Size:

Table A

Extract of sample sizes for Sampling Attributes
Expected Rate of occurrence not over 5%
Confidence Level 95%

Number of items in population	DESIRED PRECISION		
	±1%	±2%	±3%
8000	1485	431	198
9000	1517	434	198
10000	1543	436	199
15000	1626	443	200
20000	1672	446	201

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Table A means that the auditor would like a 95% level of assurance or confidence that his results will be within $\pm 2\%$ (say) precision level of the actual amount.

At this point, it would be noteworthy that the auditor can use a spreadsheet package in computer to calculate random numbers. **This is illustrated below:** -

- Step 1:** Open a blank worksheet in the LOTUS-123 spreadsheet package.
- Step 2:** Write down the total sample size in cell A1.
- Step 3:** Go to cell A3. Press / Range Format Fixed A3 .. A20 Enter
- Step 4:** In cell A3, Type @RAND*\$A\$1 and press Enter key.
- Step 5:** Press / Copy A3 Enter A4 .. A20 Enter.
- Step 6:** Note Down the random number in cells A3 to A20.
- Step 7:** Change the total sample size figure in A1 and all figures will automatically change.

Explanation: The @ RAND is the random number function. It is dependent upon time and will change each time you type it. The \$A\$1 is the absolute address of cell A1, which if copied, will not change relatively.

Step 3 is necessary to format the range to zero decimal places. The @ RAND gives a number between 0 and 1 (say 0.9235). This is multiplied by sample size to get random number.

An exhaustive illustration of audit sampling of attributes: -

An example of the application of sampling techniques on an attributes problem is given below: -

The population: (field)

The audit procedure being followed is the sending of letters to selected customers to obtain confirmation of their balances. The client has approximately 15,000 customers. Balances range from small amounts to seven digit figures. Over 80% of replies have been received in the past. As to the balance 20%, it is assumed that the auditor gets satisfaction equivalent to

the receipt of a signed confirmation from a “no reply” because there exist certain customers who will not reply no matter how persuasive the request might be. So, the sample will be considered to comprise all requests not only the replies.

Worksheet for Evaluation of Statistical Sample for Attributes.

1. The Population	Number	Amount
Total Population	15000	Rs. 3,23,75,000
2. The Sample		
a) Sample Size	443 (Table A) $\pm 2\%$ precision	
b) Errors found	42	
c) Percentage of total sample	$(42 / 443) \times 100$ 9.48%	
d) Amount of total error	Rs. 20,500	
e) Average Error per account	Rs. (20500 / 443) = Rs. 46.28	

f) We assume that Standard Error is negligible:

g) Applying Average error per account to total number of accounts:

$$(46.28 \times 15000) = \text{Rs. } 6,94,200$$

This implies that the total error will range around **Rs. 7 lakhs**. Thus the auditor may modify his audit programme accordingly. ■

NOTIFICATION

23rd July 2004

No.13-CA(EXAM)/UFM/F/N-2K3/ R.NO. 01368 (KK-039733):- In exercise of the powers conferred by Regulation 41 read with Regulation 176 of the Chartered Accountants Regulations, 1988, the Council of the Institute of Chartered Accountants of India has decided that the appearance of Shri Ashish Bansal, 32, Mahajani Tola, 1st Floor, ALLAHABAD – 211003, vide Roll No.1368 in the Final Examination held in November, 2003 be cancelled and he be debarred from appearing in the Final Examination till and inclusive of November, 2004.

(G. SOMASEKHAR)
JOINT SECRETARY (EXAMS.)-CC