

ISSAI 1530

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Directriz de auditoría financiera

Muestreo de auditoría

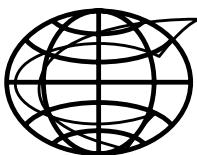
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La presente directriz de auditoría financiera se basa en la Norma Internacional de Auditoría (NIA) 530 “Muestreo de auditoría” formulada por el Consejo de Normas Internacionales de Auditoría y Aseguramiento (International Audit and Assurance Standards Board/IAASB) y publicada por la Federación Internacional de Contadores (International Federation of Accountants/IFAC). La NIA se ha incluido en la presente directriz con permiso de la IFAC.

Índice de la ISSAI 1530

NOTA DE PRÁCTICA PARA LA NIA 530	Párrafo
Fundamentos	
Introducción a la NIA	
Contenido de la Nota de Práctica	P1
Aplicabilidad de la NIA en la auditoría del sector público	P2
Orientaciones adicionales sobre cuestiones ligadas al sector público	
Consideraciones generales	P3–P4
Concepción de la muestra, tamaño y selección de los elementos a verificar	P5–8
Naturaleza y causa de las desviaciones e incorrecciones	P9
Extrapolación de las incorrecciones	P10
Evaluación de los resultados del muestreo de auditoría	P11–P12
NORMA INTERNACIONAL DE AUDITORÍA 530	
Introducción	
Alcance de la NIA	1
Fecha de entrada en vigor	2
Objetivo	3
Definiciones	4
Exigencias	
Concepción de la muestra, tamaño y selección de los elementos a verificar	6–8
Aplicación de procedimientos de auditoría	9–11
Naturaleza y causa de las desviaciones e incorrecciones	12–13
Extrapolación de las incorrecciones	14
Evaluación de los resultados del muestreo de auditoría	15
Disposiciones de aplicación y otras disposiciones explicativas	
Definiciones	A1–A3
Concepción de la muestra, tamaño y selección de los elementos a verificar	A4–A13
Aplicación de procedimientos de auditoría	A14–A16
Naturaleza y causa de las desviaciones e incorrecciones	A17
Extrapolación de las incorrecciones	A18–A20
Evaluación de los resultados del muestreo de auditoría	A21–A23
Apéndice 1: Estratificación y selección ponderada de valor	
Apéndice 2: Ejemplos de factores que inciden en el tamaño de la muestra para efectuar pruebas de controles	
Apéndice 3: Ejemplos de factores que inciden en el tamaño de la muestra para efectuar pruebas de detalles	
Apéndice 4: Métodos de selección de muestras	

Nota de Práctica¹ para la Norma Internacional de Auditoría (NIA) 530

Muestreo de auditoría

Fundamentos

Esta Nota de Práctica proporciona orientaciones adicionales sobre la NIA 530 “Muestreo de auditoría”, y debe leerse conjuntamente con ella. La NIA 520 entra en vigor para las auditorías de estados financieros correspondientes a los períodos que comiencen a partir de 15 de diciembre de 2009. Esta Nota de Práctica será efectiva en la misma fecha que la NIA.

Introducción a la NIA

La NIA 530 es aplicable cuando el auditor ha decidido recurrir al muestreo de auditoría al aplicar procedimientos de auditoría, y se refiere a la aplicación de muestreo estadístico y no estadístico al concebir y seleccionar la muestra de auditoría, efectuar pruebas de controles y de detalles, y evaluar los resultados de la muestra.

La NIA 530 complementa a la NIA 500², que expone la obligación del auditor de plantear y aplicar procedimientos de auditoría a fin de obtener evidencia suficiente y apropiada que le permita extraer conclusiones razonables en las que basar su opinión. La NIA 500 ofrece orientaciones sobre los medios de que dispone el auditor para seleccionar elementos para verificar, uno de los cuales es el muestreo de auditoría.

Contenido de la Nota de Práctica

- P1. La Nota de Práctica proporciona orientaciones adicionales para los auditores del sector público en relación con los aspectos siguientes:
- a) Consideraciones generales.
 - b) Concepción de la muestra, tamaño y selección de los elementos a verificar.
 - c) Naturaleza y causa de las desviaciones e incorrecciones.
 - d) Extrapolación de las incorrecciones.
 - e) Evaluación de los resultados del muestreo de auditoría.

Aplicabilidad de la NIA en la auditoría del sector público

- P2. La NIA 530 es aplicable a los auditores de las entidades del sector público en el desempeño de su función de auditores de los estados financieros.

¹ Todas las Notas de Práctica habrán de leerse conjuntamente con la ISSAI 1000 “Introducción general a las directrices de auditoría financiera de la INTOSAI”.

² NIA 500, “Evidencia de auditoría”.

Orientaciones adicionales sobre cuestiones ligadas al sector público

Consideraciones generales

- P3. En una auditoría financiera en el sector público los objetivos suelen ir más allá de la emisión de una opinión sobre si los estados financieros han sido elaborados, en todos sus aspectos significativos, de acuerdo con el marco de información financiera aplicable (es decir, el alcance de las NIA). El mandato de auditoría, o las obligaciones para las entidades del sector público derivadas de leyes, reglamentos, órdenes ministeriales, exigencias de política pública o resoluciones del poder legislativo puede contener obligaciones adicionales de auditoría e información, por ejemplo, si el auditor ha detectado casos falta de conformidad con las normas, incluidas cuestiones presupuestarias o de rendición de cuentas, o sobre la eficacia del control interno. En consecuencia, puede verse afectada la utilización de l muestreo de auditoría. Los auditores del sector público pueden recurrir al muestreo para cumplir con las mencionadas obligaciones además de emitir una opinión sobre los estados financieros.
- P4. La utilización del muestreo de auditoría para verificar la conformidad con las normas es similar a la utilización del muestreo en otros casos en la medida en que los auditores del sector público:
- Determinan la concepción de la muestra y los parámetros que se emplearán en la auditoría, incluida la materialidad, el nivel de confianza deseado y el método de selección de la muestra.
 - Aplican procedimientos de auditoría oportunos a cada elemento seleccionado.
 - Investigan la naturaleza y las causas de la falta de conformidad.
 - Evalúan los resultados, extrapolando éstos a la población si la muestra se selecciona mediante procedimientos estadísticos.

Concepción de la muestra, tamaño y selección de los elementos a verificar

- P5. Al concebir una muestra de auditoría, como establece el párrafo 6 de la NIA, los auditores del sector público pueden tener obligaciones adicionales, como se indica en el párrafo P3. En estas situaciones, pueden establecer distintos niveles de parámetros, incluida la materialidad y un grado de confianza más elevado, todo lo cual puede afectar al tamaño de la muestra. Los auditores del sector público a menudo recurren al muestreo de auditoría para verificar, por una parte, la eficacia de los controles internos y, por otra, como prueba de confirmación para controlar la conformidad con las normas, para lo cual pueden concebir muestras separadas o una sola muestra para verificar ambos aspectos. Por ejemplo, una muestra de desembolsos podría utilizarse para comprobar los controles de los desembolsos y para determinar si éstos se efectuaron de conformidad con las normas.
- P6. Es más probable que los auditores del sector público se planteen la necesidad de proceder a un muestreo de la información no financiera que los auditores del sector privado. Como resultado de los objetivos adicionales para el sector público, como la comprobación de la conformidad con las normas y el examen de la información no financiera contenida en los estados financieros, los auditores de este sector estudiarán la utilidad del muestreo para verificar dicha información. Por ejemplo, si los estados financieros de un hospital público utilizan el número de pacientes tratados para calcular medidas de rendimiento clave (como el coste por paciente), podrían recurrir al muestreo para comprobar la exactitud y la integridad del número de pacientes notificado.

- P7. Los auditores del sector público pueden recibir el mandato de proporcionar información adicional sobre muestreo de auditoría, como por ejemplo, informar de los métodos utilizados, si los resultados de la muestra pueden extrapolarse a la población y, en ese caso, comunicar los resultados de la extrapolación. Asimismo, pueden considerar estas necesidades a la hora de decidir utilizar enfoques estadísticos o no estadísticos.
- P8. La ISSAI 1320³ contiene orientaciones para los auditores del sector público sobre la determinación de la materialidad.

Naturaleza y causa de las desviaciones e incorrecciones

- P9. Al analizar las desviaciones e incorrecciones detectadas mencionadas en el párrafo A17 de la NIA, los auditores del sector público tendrán en cuenta la posibilidad de que sus obligaciones de auditoría e información sean mayores en relación con la existencia de fraudes. La ISSAI 1240⁴ ofrece información adicional para los auditores del sector público.

Extrapolación de incorrecciones

- P10. En el caso de las pruebas sustantivas o de detalles es necesaria una extrapolación explícita de las incorrecciones. El párrafo A20 de la NIA indica que en el caso de las pruebas de controles no es necesaria una extrapolación explícita de las desviaciones, puesto que la tasa de desviación de la muestra es la misma que la tasa de desviación extrapolada a la totalidad de la población. Al efectuar un muestreo de auditoría para verificar los controles, los auditores del sector público pueden tener que extrapolar la tasa de desviación de la población, incluyendo un intervalo de confianza, e informar de los resultados de la muestra como se señala en el párrafo P7. En algunos entornos de auditoría, como un Tribunal de Cuentas, puede ser necesario informar de las tasas de desviación para explicar, por ejemplo, las deficiencias en el control interno y la falta de conformidad con las normas.

Evaluación de los resultados del muestreo de auditoría

- P11. Además de las orientaciones del párrafo A23, los auditores del sector público tendrán en cuenta las obligaciones que les impone su mandato cuando la dirección no pueda dar una explicación satisfactoria de las desviaciones e incorrecciones. Por ejemplo, en el caso de un Tribunal de Cuentas, los auditores pueden verse en la necesidad de investigar con mayor profundidad las razones subyacentes a la falta de información e identificar a los responsables.
- P12. Además de las orientaciones del párrafo A23 (segundo punto), los auditores del sector público tendrán en cuenta cualquier obligación adicional de informar de la eficacia de los controles internos y de la falta de conformidad con las normas.

3 ISSAI 1320, "La materialidad al planificar y ejecutar una auditoría."

4 ISSAI 1240, "Obligaciones del auditor en relación con el fraude en una auditoría de estados financieros".

International Standard on Auditing

Audit Sampling



**International Federation
of Accountants**

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This International Standard on Auditing (ISA) 530, “Audit Sampling” was prepared by the International Auditing and Assurance Standards Board (IAASB), an independent standard-setting body within the International Federation of Accountants (IFAC). The objective of the IAASB is to serve the public interest by setting high quality auditing and assurance standards and by facilitating the convergence of international and national standards, thereby enhancing the quality and uniformity of practice throughout the world and strengthening public confidence in the global auditing and assurance profession.

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INTERNATIONAL STANDARD ON AUDITING 530

AUDIT SAMPLING

(Effective for audits of financial statements for periods
beginning on or after December 15, 2009)

CONTENTS

	Paragraph
Introduction	
Scope of this ISA	1–2
Effective Date	3
Objective	4
Definitions	5
Requirements	
Sample Design, Size and Selection of Items for Testing	6–8
Performing Audit Procedures	9–11
Nature and Cause of Deviations and Misstatements	12–13
Projecting Misstatements	14
Evaluating Results of Audit Sampling	15
Application and Other Explanatory Material	
Definitions	A1–A3
Sample Design, Size and Selection of Items for Testing	A4–A13
Performing Audit Procedures	A14–A16
Nature and Cause of Deviations and Misstatements	A17
Projecting Misstatements	A18–A20
Evaluating Results of Audit Sampling	A21–A23
Appendix 1: Stratification and Value-Weighted Selection	
Appendix 2: Examples of Factors Influencing Sample Size for Tests of Controls	
Appendix 3: Examples of Factors Influencing Sample Size for Tests of Details	
Appendix 4: Sample Selection Methods	

International Standard on Auditing (ISA) 530, “Audit Sampling” should be read in conjunction with ISA 200, “Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing.”

Introduction

Scope of this ISA

1. This International Standard on Auditing (ISA) applies when the auditor has decided to use audit sampling in performing audit procedures. It deals with the auditor's use of statistical and non-statistical sampling when designing and selecting the audit sample, performing tests of controls and tests of details, and evaluating the results from the sample.
2. This ISA complements ISA 500,¹ which deals with the auditor's responsibility to design and perform audit procedures to obtain sufficient appropriate audit evidence to be able to draw reasonable conclusions on which to base the auditor's opinion. ISA 500 provides guidance on the means available to the auditor for selecting items for testing, of which audit sampling is one means.

Effective Date

3. This ISA is effective for audits of financial statements for periods beginning on or after December 15, 2009.

Objective

4. The objective of the auditor, when using audit sampling, is to provide a reasonable basis for the auditor to draw conclusions about the population from which the sample is selected.

Definitions

5. For purposes of the ISAs, the following terms have the meanings attributed below:
 - (a) Audit sampling (sampling) – The application of audit procedures to less than 100% of items within a population of audit relevance such that all sampling units have a chance of selection in order to provide the auditor with a reasonable basis on which to draw conclusions about the entire population.
 - (b) Population – The entire set of data from which a sample is selected and about which the auditor wishes to draw conclusions.
 - (c) Sampling risk – The risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure. Sampling risk can lead to two types of erroneous conclusions:
 - (i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of a test of

¹ ISA 500, "Audit Evidence."

details, that a material misstatement does not exist when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

- (ii) In the case of a test of controls, that controls are less effective than they actually are, or in the case of a test of details, that a material misstatement exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.
- (d) Non-sampling risk – The risk that the auditor reaches an erroneous conclusion for any reason not related to sampling risk. (Ref: Para A1)
 - (e) Anomaly – A misstatement or deviation that is demonstrably not representative of misstatements or deviations in a population.
 - (f) Sampling unit – The individual items constituting a population. (Ref: Para A2)
 - (g) Statistical sampling – An approach to sampling that has the following characteristics:
 - (i) Random selection of the sample items; and
 - (ii) The use of probability theory to evaluate sample results, including measurement of sampling risk.A sampling approach that does not have characteristics (i) and (ii) is considered non-statistical sampling.
 - (h) Stratification – The process of dividing a population into sub-populations, each of which is a group of sampling units which have similar characteristics (often monetary value).
 - (i) Tolerable misstatement – A monetary amount set by the auditor in respect of which the auditor seeks to obtain an appropriate level of assurance that the monetary amount set by the auditor is not exceeded by the actual misstatement in the population. (Ref: Para A3)
 - (j) Tolerable rate of deviation – A rate of deviation from prescribed internal control procedures set by the auditor in respect of which the auditor seeks to obtain an appropriate level of assurance that the rate of deviation set by the auditor is not exceeded by the actual rate of deviation in the population.

Requirements

Sample Design, Size and Selection of Items for Testing

6. When designing an audit sample, the auditor shall consider the purpose of the audit procedure and the characteristics of the population from which the sample will be drawn. (Ref: Para. A4-A9)
7. The auditor shall determine a sample size sufficient to reduce sampling risk to an acceptably low level. (Ref: Para. A10-A11)
8. The auditor shall select items for the sample in such a way that each sampling unit in the population has a chance of selection. (Ref: Para. A12-A13)

Performing Audit Procedures

9. The auditor shall perform audit procedures, appropriate to the purpose, on each item selected.
10. If the audit procedure is not applicable to the selected item, the auditor shall perform the procedure on a replacement item. (Ref: Para. A14)
11. If the auditor is unable to apply the designed audit procedures, or suitable alternative procedures, to a selected item, the auditor shall treat that item as a deviation from the prescribed control, in the case of tests of controls, or a misstatement, in the case of tests of details. (Ref: Para. A15-A16)

Nature and Cause of Deviations and Misstatements

12. The auditor shall investigate the nature and cause of any deviations or misstatements identified, and evaluate their possible effect on the purpose of the audit procedure and on other areas of the audit. (Ref: Para. A17)
13. In the extremely rare circumstances when the auditor considers a misstatement or deviation discovered in a sample to be an anomaly, the auditor shall obtain a high degree of certainty that such misstatement or deviation is not representative of the population. The auditor shall obtain this degree of certainty by performing additional audit procedures to obtain sufficient appropriate audit evidence that the misstatement or deviation does not affect the remainder of the population.

Projecting Misstatements

14. For tests of details, the auditor shall project misstatements found in the sample to the population. (Ref: Para. A18-A20)

Evaluating Results of Audit Sampling

15. The auditor shall evaluate:
 - (a) The results of the sample; and (Ref: Para. A21-A22)

- (b) Whether the use of audit sampling has provided a reasonable basis for conclusions about the population that has been tested. (Ref: Para. A23)

Application and Other Explanatory Material

Definitions

Non-Sampling Risk (Ref: Para. 5(d))

- A1. Examples of non-sampling risk include use of inappropriate audit procedures, or misinterpretation of audit evidence and failure to recognize a misstatement or deviation.

Sampling Unit (Ref: Para. 5(f))

- A2. The sampling units might be physical items (for example, checks listed on deposit slips, credit entries on bank statements, sales invoices or debtors' balances) or monetary units.

Tolerable Misstatement (Ref: Para. 5(i))

- A3. When designing a sample, the auditor determines tolerable misstatement in order to address the risk that the aggregate of individually immaterial misstatements may cause the financial statements to be materially misstated and provide a margin for possible undetected misstatements. Tolerable misstatement is the application of performance materiality, as defined in ISA 320,² to a particular sampling procedure. Tolerable misstatement may be the same amount or an amount lower than performance materiality.

Sample Design, Size and Selection of Items for Testing

Sample Design (Ref: Para. 6)

- A4. Audit sampling enables the auditor to obtain and evaluate audit evidence about some characteristic of the items selected in order to form or assist in forming a conclusion concerning the population from which the sample is drawn. Audit sampling can be applied using either non-statistical or statistical sampling approaches.
- A5. When designing an audit sample, the auditor's consideration includes the specific purpose to be achieved and the combination of audit procedures that is likely to best achieve that purpose. Consideration of the nature of the audit evidence sought and possible deviation or misstatement conditions or other characteristics relating to that audit evidence will assist the auditor in defining what constitutes a deviation or misstatement and what population to use for

² ISA 320, "Materiality in Planning and Performing an Audit," paragraph 9.

sampling. In fulfilling the requirement of paragraph 10 of ISA 500, when performing audit sampling, the auditor performs audit procedures to obtain evidence that the population from which the audit sample is drawn is complete.

- A6. The auditor's consideration of the purpose of the audit procedure, as required by paragraph 6, includes a clear understanding of what constitutes a deviation or misstatement so that all, and only, those conditions that are relevant to the purpose of the audit procedure are included in the evaluation of deviations or projection of misstatements. For example, in a test of details relating to the existence of accounts receivable, such as confirmation, payments made by the customer before the confirmation date but received shortly after that date by the client, are not considered a misstatement. Also, a misposting between customer accounts does not affect the total accounts receivable balance. Therefore, it may not be appropriate to consider this a misstatement in evaluating the sample results of this particular audit procedure, even though it may have an important effect on other areas of the audit, such as the assessment of the risk of fraud or the adequacy of the allowance for doubtful accounts.
- A7. In considering the characteristics of a population, for tests of controls, the auditor makes an assessment of the expected rate of deviation based on the auditor's understanding of the relevant controls or on the examination of a small number of items from the population. This assessment is made in order to design an audit sample and to determine sample size. For example, if the expected rate of deviation is unacceptably high, the auditor will normally decide not to perform tests of controls. Similarly, for tests of details, the auditor makes an assessment of the expected misstatement in the population. If the expected misstatement is high, 100% examination or use of a large sample size may be appropriate when performing tests of details.
- A8. In considering the characteristics of the population from which the sample will be drawn, the auditor may determine that stratification or value-weighted selection is appropriate. Appendix 1 provides further discussion on stratification and value-weighted selection.
- A9. The decision whether to use a statistical or non-statistical sampling approach is a matter for the auditor's judgment; however, sample size is not a valid criterion to distinguish between statistical and non-statistical approaches.

Sample Size (Ref: Para. 7)

- A10. The level of sampling risk that the auditor is willing to accept affects the sample size required. The lower the risk the auditor is willing to accept, the greater the sample size will need to be.
- A11. The sample size can be determined by the application of a statistically-based formula or through the exercise of professional judgment. Appendices 2 and 3 indicate the influences that various factors typically have on the determination of sample size. When circumstances are similar, the effect on sample size of

factors such as those identified in Appendices 2 and 3 will be similar regardless of whether a statistical or non-statistical approach is chosen.

Selection of Items for Testing (Ref: Para. 8)

- A12. With statistical sampling, sample items are selected in a way that each sampling unit has a known probability of being selected. With non-statistical sampling, judgment is used to select sample items. Because the purpose of sampling is to provide a reasonable basis for the auditor to draw conclusions about the population from which the sample is selected, it is important that the auditor selects a representative sample, so that bias is avoided, by choosing sample items which have characteristics typical of the population.
- A13. The principal methods of selecting samples are the use of random selection, systematic selection and haphazard selection. Each of these methods is discussed in Appendix 4.

Performing Audit Procedures (Ref: Para. 10-11)

- A14. An example of when it is necessary to perform the procedure on a replacement item is when a voided check is selected while testing for evidence of payment authorization. If the auditor is satisfied that the check has been properly voided such that it does not constitute a deviation, an appropriately chosen replacement is examined.
- A15. An example of when the auditor is unable to apply the designed audit procedures to a selected item is when documentation relating to that item has been lost.
- A16. An example of a suitable alternative procedure might be the examination of subsequent cash receipts together with evidence of their source and the items they are intended to settle when no reply has been received in response to a positive confirmation request.

Nature and Cause of Deviations and Misstatements (Ref: Para. 12)

- A17. In analyzing the deviations and misstatements identified, the auditor may observe that many have a common feature, for example, type of transaction, location, product line or period of time. In such circumstances, the auditor may decide to identify all items in the population that possess the common feature, and extend audit procedures to those items. In addition, such deviations or misstatements may be intentional, and may indicate the possibility of fraud.

Projecting Misstatements (Ref: Para. 14)

- A18. The auditor is required to project misstatements for the population to obtain a broad view of the scale of misstatement but this projection may not be sufficient to determine an amount to be recorded.

- A19. When a misstatement has been established as an anomaly, it may be excluded when projecting misstatements to the population. However, the effect of any such misstatement, if uncorrected, still needs to be considered in addition to the projection of the non-anomalous misstatements.
- A20. For tests of controls, no explicit projection of deviations is necessary since the sample deviation rate is also the projected deviation rate for the population as a whole. ISA 330³ provides guidance when deviations from controls upon which the auditor intends to rely are detected.

Evaluating Results of Audit Sampling (Ref: Para. 15)

- A21. For tests of controls, an unexpectedly high sample deviation rate may lead to an increase in the assessed risk of material misstatement, unless further audit evidence substantiating the initial assessment is obtained. For tests of details, an unexpectedly high misstatement amount in a sample may cause the auditor to believe that a class of transactions or account balance is materially misstated, in the absence of further audit evidence that no material misstatement exists.
- A22. In the case of tests of details, the projected misstatement plus anomalous misstatement, if any, is the auditor's best estimate of misstatement in the population. When the projected misstatement plus anomalous misstatement, if any, exceeds tolerable misstatement, the sample does not provide a reasonable basis for conclusions about the population that has been tested. The closer the projected misstatement plus anomalous misstatement is to tolerable misstatement, the more likely that actual misstatement in the population may exceed tolerable misstatement. Also if the projected misstatement is greater than the auditor's expectations of misstatement used to determine the sample size, the auditor may conclude that there is an unacceptable sampling risk that the actual misstatement in the population exceeds the tolerable misstatement. Considering the results of other audit procedures helps the auditor to assess the risk that actual misstatement in the population exceeds tolerable misstatement, and the risk may be reduced if additional audit evidence is obtained.
- A23. If the auditor concludes that audit sampling has not provided a reasonable basis for conclusions about the population that has been tested, the auditor may:
- Request management to investigate misstatements that have been identified and the potential for further misstatements and to make any necessary adjustments; or
 - Tailor the nature, timing and extent of those further audit procedures to best achieve the required assurance. For example, in the case of tests of controls, the auditor might extend the sample size, test an alternative control or modify related substantive procedures.

³ ISA 330, "The Auditor's Responses to Assessed Risks," paragraph 17.

Appendix 1

(Ref: Para. A8)

Stratification and Value-Weighted Selection

In considering the characteristics of the population from which the sample will be drawn, the auditor may determine that stratification or value-weighted selection is appropriate. This Appendix provides guidance to the auditor on the use of stratification and value-weighted sampling techniques.

Stratification

1. Audit efficiency may be improved if the auditor stratifies a population by dividing it into discrete sub-populations which have an identifying characteristic. The objective of stratification is to reduce the variability of items within each stratum and therefore allow sample size to be reduced without increasing sampling risk.
2. When performing tests of details, the population is often stratified by monetary value. This allows greater audit effort to be directed to the larger value items, as these items may contain the greatest potential misstatement in terms of overstatement. Similarly, a population may be stratified according to a particular characteristic that indicates a higher risk of misstatement, for example, when testing the allowance for doubtful accounts in the valuation of accounts receivable, balances may be stratified by age.
3. The results of audit procedures applied to a sample of items within a stratum can only be projected to the items that make up that stratum. To draw a conclusion on the entire population, the auditor will need to consider the risk of material misstatement in relation to whatever other strata make up the entire population. For example, 20% of the items in a population may make up 90% of the value of an account balance. The auditor may decide to examine a sample of these items. The auditor evaluates the results of this sample and reaches a conclusion on the 90% of value separately from the remaining 10% (on which a further sample or other means of gathering audit evidence will be used, or which may be considered immaterial).
4. If a class of transactions or account balance has been divided into strata, the misstatement is projected for each stratum separately. Projected misstatements for each stratum are then combined when considering the possible effect of misstatements on the total class of transactions or account balance.

Value-Weighted Selection

5. When performing tests of details it may be efficient to identify the sampling unit as the individual monetary units that make up the population. Having selected specific monetary units from within the population, for example, the accounts

receivable balance, the auditor may then examine the particular items, for example, individual balances, that contain those monetary units. One benefit of this approach to defining the sampling unit is that audit effort is directed to the larger value items because they have a greater chance of selection, and can result in smaller sample sizes. This approach may be used in conjunction with the systematic method of sample selection (described in Appendix 4) and is most efficient when selecting items using random selection.

Appendix 2

(Ref: Para. A11)

Examples of Factors Influencing Sample Size for Tests of Controls

The following are factors that the auditor may consider when determining the sample size for tests of controls. These factors, which need to be considered together, assume the auditor does not modify the nature or timing of tests of controls or otherwise modify the approach to substantive procedures in response to assessed risks.

FACTOR	EFFECT ON SAMPLE SIZE	
1. An increase in the extent to which the auditor's risk assessment takes into account relevant controls	Increase	The more assurance the auditor intends to obtain from the operating effectiveness of controls, the lower the auditor's assessment of the risk of material misstatement will be, and the larger the sample size will need to be. When the auditor's assessment of the risk of material misstatement at the assertion level includes an expectation of the operating effectiveness of controls, the auditor is required to perform tests of controls. Other things being equal, the greater the reliance the auditor places on the operating effectiveness of controls in the risk assessment, the greater is the extent of the auditor's tests of controls (and therefore, the sample size is increased).
2. An increase in the tolerable rate of deviation	Decrease	The lower the tolerable rate of deviation, the larger the sample size needs to be.
3. An increase in the expected rate of deviation of the	Increase	The higher the expected rate of deviation, the larger the sample size needs to be so that the

FACTOR	EFFECT ON SAMPLE SIZE	
population to be tested		auditor is in a position to make a reasonable estimate of the actual rate of deviation. Factors relevant to the auditor's consideration of the expected rate of deviation include the auditor's understanding of the business (in particular, risk assessment procedures undertaken to obtain an understanding of internal control), changes in personnel or in internal control, the results of audit procedures applied in prior periods and the results of other audit procedures. High expected control deviation rates ordinarily warrant little, if any, reduction of the assessed risk of material misstatement.
4. An increase in the auditor's desired level of assurance that the tolerable rate of deviation is not exceeded by the actual rate of deviation in the population	Increase	The greater the level of assurance that the auditor desires that the results of the sample are in fact indicative of the actual incidence of deviation in the population, the larger the sample size needs to be.
5. An increase in the number of sampling units in the population	Negligible effect	For large populations, the actual size of the population has little, if any, effect on sample size. For small populations however, audit sampling may not be as efficient as alternative means of obtaining sufficient appropriate audit evidence.

Appendix 3

(Ref: Para. A11)

Examples of Factors Influencing Sample Size for Tests of Details

The following are factors that the auditor may consider when determining the sample size for tests of details. These factors, which need to be considered together, assume the auditor does not modify the approach to tests of controls or otherwise modify the nature or timing of substantive procedures in response to the assessed risks.

FACTOR	EFFECT ON SAMPLE SIZE	
1. An increase in the auditor's assessment of the risk of material misstatement	Increase	The higher the auditor's assessment of the risk of material misstatement, the larger the sample size needs to be. The auditor's assessment of the risk of material misstatement is affected by inherent risk and control risk. For example, if the auditor does not perform tests of controls, the auditor's risk assessment cannot be reduced for the effective operation of internal controls with respect to the particular assertion. Therefore, in order to reduce audit risk to an acceptably low level, the auditor needs a low detection risk and will rely more on substantive procedures. The more audit evidence that is obtained from tests of details (that is, the lower the detection risk), the larger the sample size will need to be.
2. An increase in the use of other substantive procedures directed at the same assertion	Decrease	The more the auditor is relying on other substantive procedures (tests of details or substantive analytical procedures) to reduce

FACTOR	EFFECT ON SAMPLE SIZE	
		to an acceptable level the detection risk regarding a particular population, the less assurance the auditor will require from sampling and, therefore, the smaller the sample size can be.
3. An increase in the auditor's desired level of assurance that tolerable misstatement is not exceeded by actual misstatement in the population	Increase	The greater the level of assurance that the auditor requires that the results of the sample are in fact indicative of the actual amount of misstatement in the population, the larger the sample size needs to be.
4. An increase in tolerable misstatement	Decrease	The lower the tolerable misstatement, the larger the sample size needs to be.
5. An increase in the amount of misstatement the auditor expects to find in the population	Increase	The greater the amount of misstatement the auditor expects to find in the population, the larger the sample size needs to be in order to make a reasonable estimate of the actual amount of misstatement in the population. Factors relevant to the auditor's consideration of the expected misstatement amount include the extent to which item values are determined subjectively, the results of risk assessment procedures, the results of tests of control, the results of audit procedures applied in prior periods, and the results of other substantive procedures.

FACTOR	EFFECT ON SAMPLE SIZE	
6. Stratification of the population when appropriate	Decrease	When there is a wide range (variability) in the monetary size of items in the population, it may be useful to stratify the population. When a population can be appropriately stratified, the aggregate of the sample sizes from the strata generally will be less than the sample size that would have been required to attain a given level of sampling risk, had one sample been drawn from the whole population.
7. The number of sampling units in the population	Negligible effect	For large populations, the actual size of the population has little, if any, effect on sample size. Thus, for small populations, audit sampling is often not as efficient as alternative means of obtaining sufficient appropriate audit evidence. (However, when using monetary unit sampling, an increase in the monetary value of the population increases sample size, unless this is offset by a proportional increase in materiality for the financial statements as a whole [and, if applicable, materiality level or levels for particular classes of transactions, account balances or disclosures].)

Appendix 4

(Ref: Para. A13)

Sample Selection Methods

There are many methods of selecting samples. The principal methods are as follows:

- (a) Random selection (applied through random number generators, for example, random number tables).
- (b) Systematic selection, in which the number of sampling units in the population is divided by the sample size to give a sampling interval, for example 50, and having determined a starting point within the first 50, each 50th sampling unit thereafter is selected. Although the starting point may be determined haphazardly, the sample is more likely to be truly random if it is determined by use of a computerized random number generator or random number tables. When using systematic selection, the auditor would need to determine that sampling units within the population are not structured in such a way that the sampling interval corresponds with a particular pattern in the population.
- (c) Monetary Unit Sampling is a type of value-weighted selection (as described in Appendix 1) in which sample size, selection and evaluation results in a conclusion in monetary amounts.
- (d) Haphazard selection, in which the auditor selects the sample without following a structured technique. Although no structured technique is used, the auditor would nonetheless avoid any conscious bias or predictability (for example, avoiding difficult to locate items, or always choosing or avoiding the first or last entries on a page) and thus attempt to ensure that all items in the population have a chance of selection. Haphazard selection is not appropriate when using statistical sampling.
- (e) Block selection involves selection of a block(s) of contiguous items from within the population. Block selection cannot ordinarily be used in audit sampling because most populations are structured such that items in a sequence can be expected to have similar characteristics to each other, but different characteristics from items elsewhere in the population. Although in some circumstances it may be an appropriate audit procedure to examine a block of items, it would rarely be an appropriate sample selection technique when the auditor intends to draw valid inferences about the entire population based on the sample.

