

**AUDIT RISK**

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# LEARNING OBJECTIVE

“Understanding  
application of  
Risk Based  
Auditing  
Approach in FA.”

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# OVERALL AUDIT RISK

# Incorporating Risk Based Approach in FA

Deciding how much risk is affordable vis a vis expressing a wrong opinion

Relates to what can go wrong in the entity



Assessing Risks in the Operation

Probability of occurrence

Significance/Impact



Assessing Controls Effectiveness for Mitigation



Estimating required assurance from the audit procedures

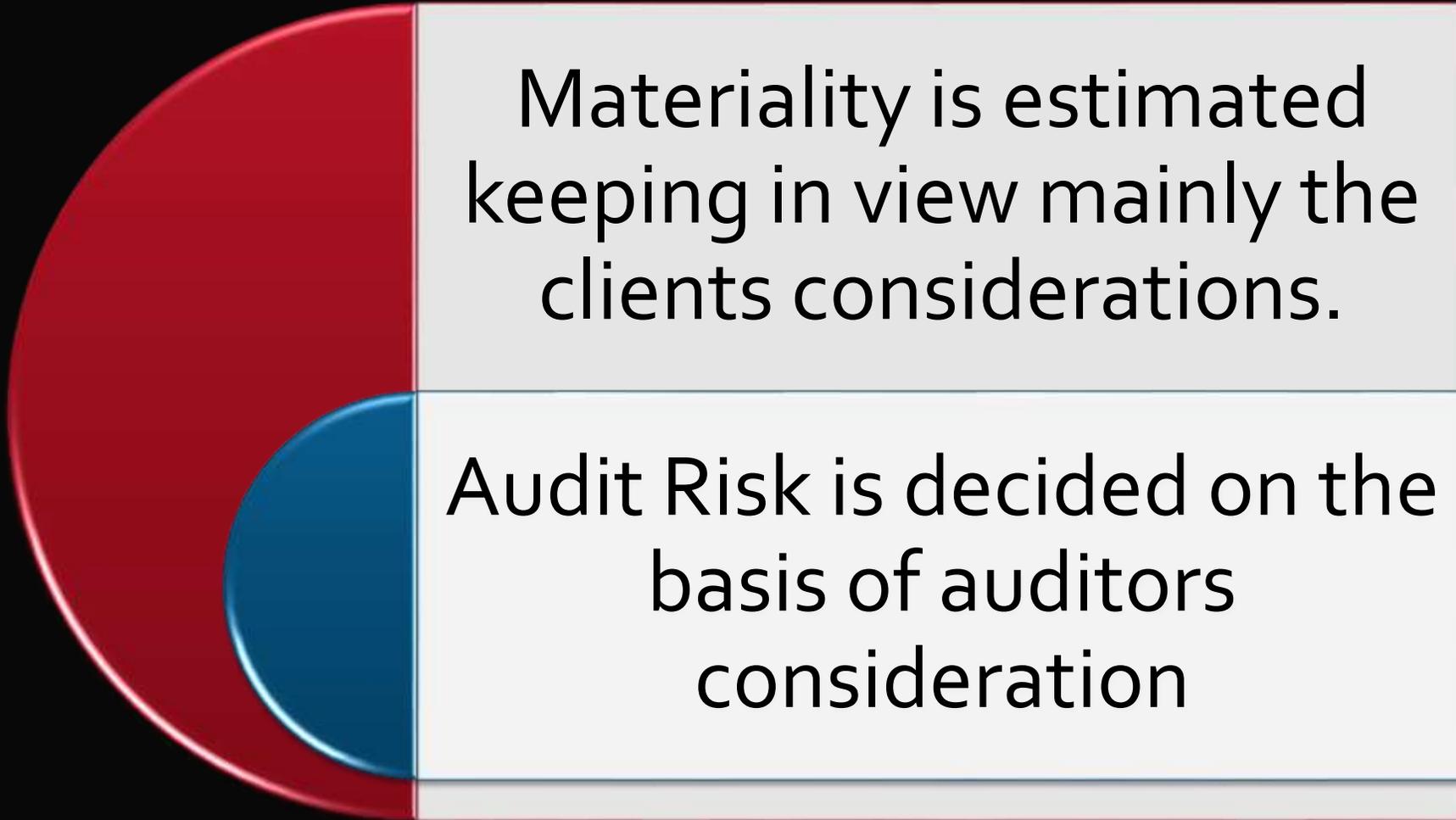
# ASSESSING AUDIT RISK

“Audit Risk” is the maximum risk that material misstatements exist but the auditor fails to detect and report these.

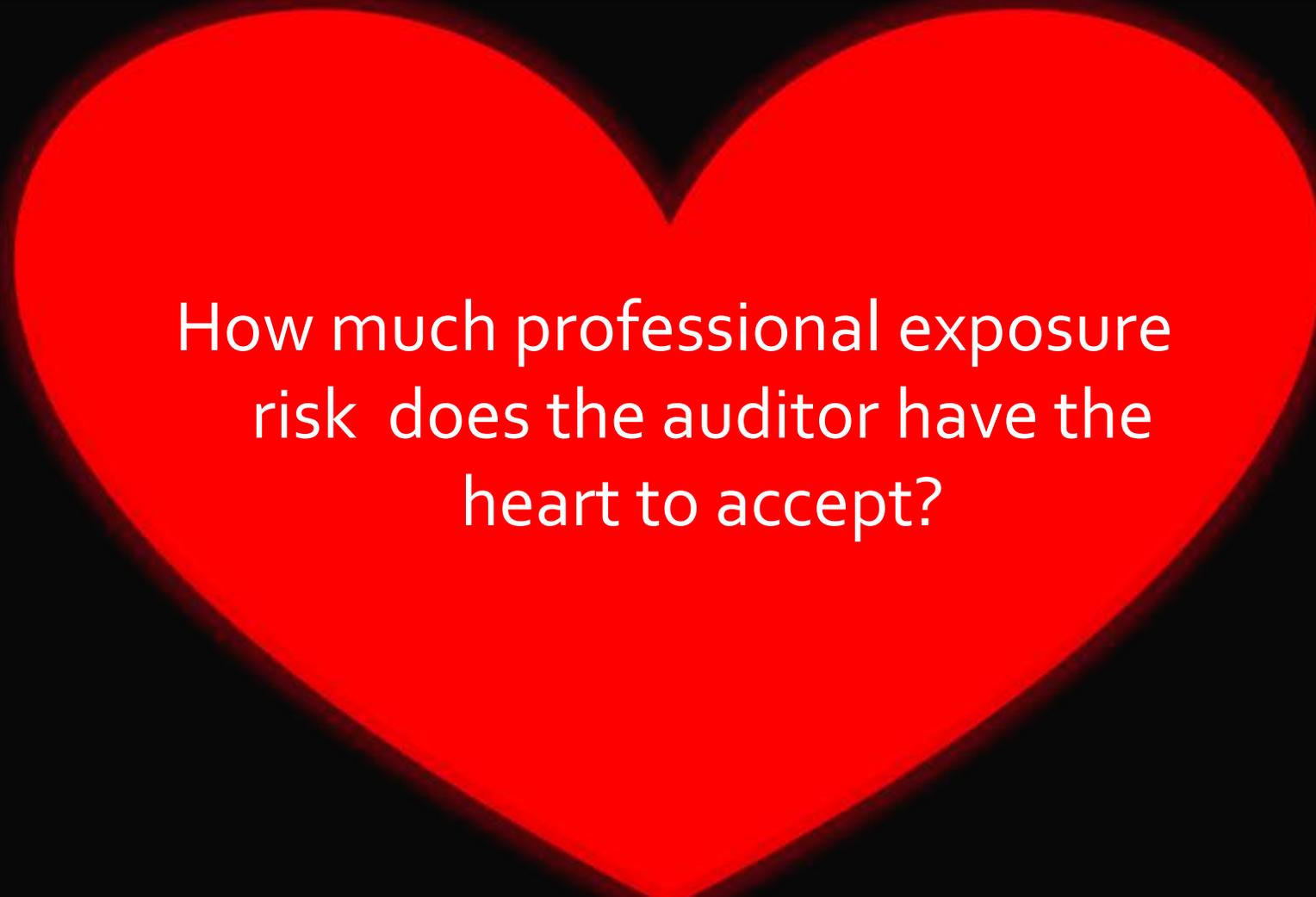
Materiality and Audit Risk are key parameters of an audit.

- In deciding about how much audit effort is required

# CONSIDERATION



# PURPOSE OF ASSESSING AUDIT RISK



How much professional exposure  
risk does the auditor have the  
heart to accept?

# Factors Affecting AR

**Professional Exposure Risk** - is the risk of loss or injury to the auditor's reputation from events arising in connection with the financial statements reported upon.

- It is considered to be highest when there is a good chance that the financial statements and the audit report thereon will undergo a lot of scrutiny.

# FACTORS AFFECTING AR

**This could occur in special situations such as when an entity is:**

Receiving a lot of bad publicity for an authority violation or other matter;

Being privatised, transferred to another level of government, or turned into a special operating agency;

Issuing new debt; and/or

Getting into financial difficulty.

# FACTORS AFFECTING AR

## Reporting Considerations

- include the number of users and the extent to which they rely on the entity's financial statements and audit report.

## Ease of Auditing

- Factors to be considered here could include the practical availability of audit evidence and the existence of an audit trail.

# Guidelines – Audit Risk

95%	97%	99%
<ul style="list-style-type: none"><li>• The most common level of overall audit assurance should probably be 95%.</li><li>• This level should be appropriate for the vast majority of audit entities.</li></ul>	<ul style="list-style-type: none"><li>• 97% should be adequate for virtually all of those few public sector entities that are so sensitive (“high risk”) that a level higher than 95% is considered necessary.</li></ul>	<ul style="list-style-type: none"><li>• It should be <u>very</u> rare, restricted to entities :<ul style="list-style-type: none"><li>• have significant outside users who rely extensively on the financial statements; and/or</li><li>• are so susceptible to material misstatement and are so politically sensitive and/or receive so much publicity that, the auditor desires to use a very high level of overall audit assurance as one of the ways of restricting professional exposure risk.</li></ul></li></ul>

# ASSURANCE AND AUDIT RISK

**Audit Risk and Certainty  
are  
the inverse of one another**

Audit Risk	Certainty Level
0%	100%
10%	90%
20%	80%
30%	70%
40%	60%
50%	50%
60%	40%
70%	30%
80%	20%
90%	10%
100%	0%



Factor That Could Cause Auditor to Reduce Audit Risk (Seek a Higher Level of Overall Audit Assurance)	Applicable to This Entity
Entity is receiving a lot of bad publicity.	1
Entity is being privatised, transferred to another level of government, or turned into a special operating agency.	1
Entity is issuing new debt.	0
Entity is in financial difficulty (or expected to be in financial difficulty in the short term).	1
The financial statements have a large number of users who, are relying to a large extent on those statements and the audit opinion thereon.	1
Entity is very easy to audit (and consequently users expect the auditor to obtain a higher than usual level of assurance).	0
Other factor(s) (please specify) _____	

# Overall Audit Risk-Key Points



It is not the actual risk that, after completing the audit, material error will remain undetected in the financial statements.

Rather, it represents the maximum possible risk that the auditor is prepared to assume that error aggregating to more than materiality will remain undetected.

The actual risk is often considerably less.

# Overall Audit Risk-Key Points



Overall audit risk does not include the risk of the auditor erroneously concluding that the financial statements are materially misstated.

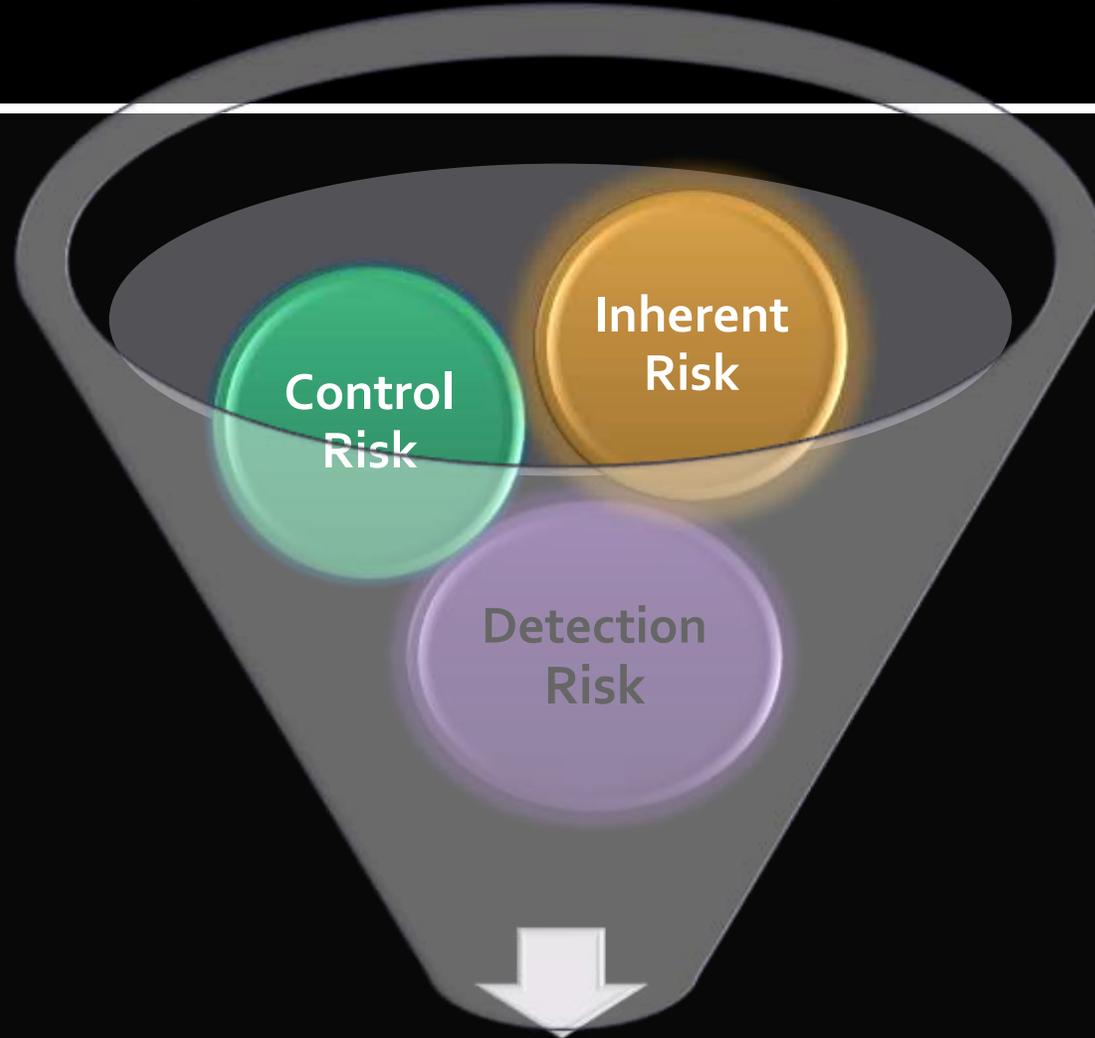
The chance of this situation occurring is assumed to be negligible because, should the auditor's procedures lead to a conclusion that the financial statements are materially misstated,

- either the auditor or the entity would perform further procedures to ensure that this was indeed the case.
- These further procedures would usually lead the auditor to the correct conclusions.

# COMPONENTS OF AUDIT RISK

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# COMPONENTS OF AUDIT RISK



**AUDIT RISK**

# INHERENT RISK

Inherent Risk:  
the risk that, in  
the absence of  
preventive  
internal controls,  
a material error  
will occur in the  
process.

*(i.e., probability  
of occurrence  
without any  
prevention)*

# Inherent Risk

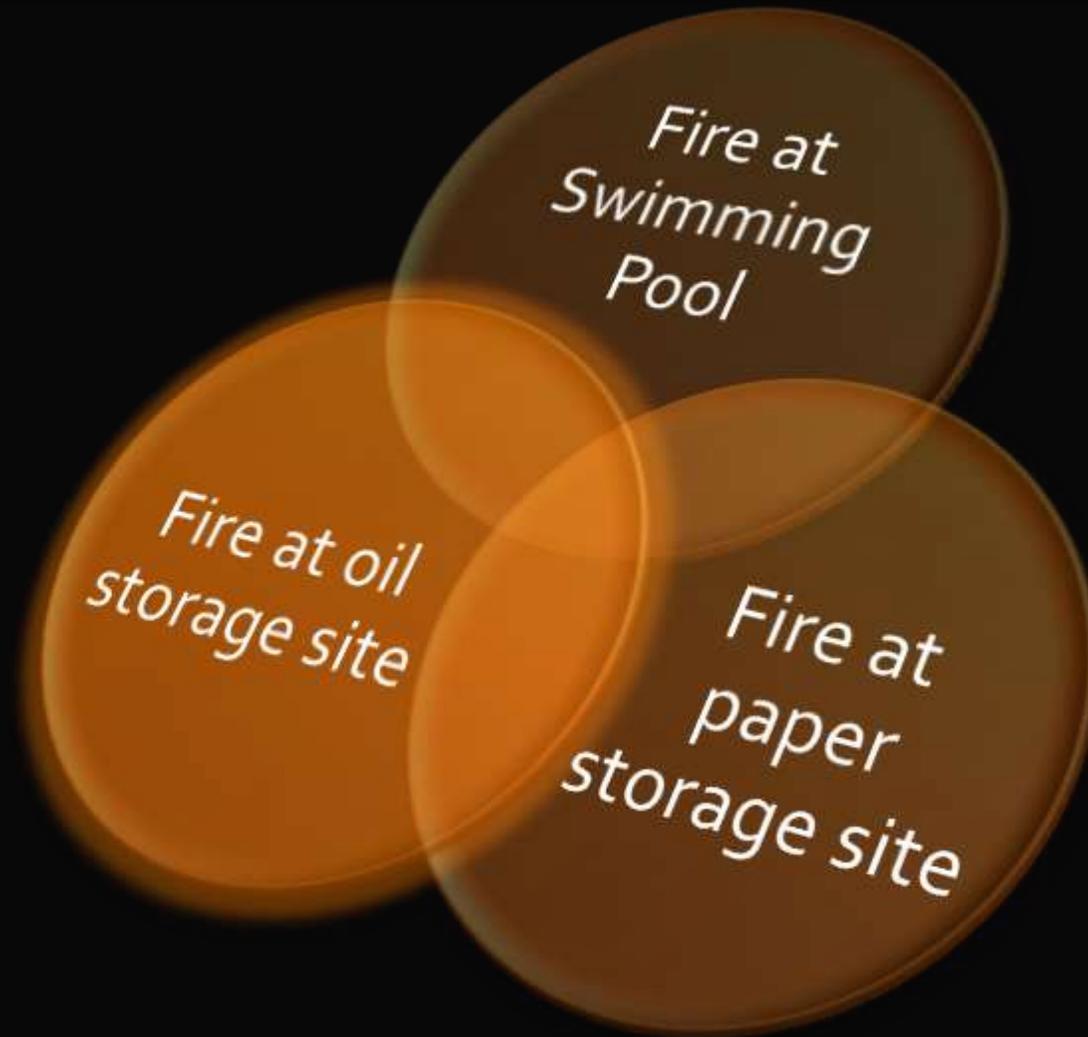
Inherent risk is the chance of material error occurring in the first place assuming that there are no internal controls in place. "Material error" may be one error or the sum of multiple smaller errors.

Inherent risk is evaluated to determine how much testing of internal controls and substantive testing the auditor needs to perform to achieve the desired level of assurance.

# Inherent Risk and Audit Effort



# Examples



# Examples



# Factors Affecting IR

## *The nature of the component*

- Components such as cash are more susceptible to manipulation or loss than, say, fixed assets.

## *Homogeneity*

- If the population is composed of relatively homogeneous items, it would be easier for management (and the auditor) to detect anomalous transactions and amounts.

## *The volume of activity*

- If there are a lot of transactions being processed, the chances of an error occurring may be higher than if only a few transactions are being processed.

# Factors Affecting IR

## *Competence of the staff*

- If staff are experienced and take their jobs seriously, there is a lower inherent risk

## *The number of locations*

- Entities operating out of a single location with a centralized accounting system may have a lower inherent risk than those operating out of many locations, each with its own accounting system.

## *The accounting policies being used*

- Many components have a lower risk of error when the cash basis of accounting is being used than when the accrual basis of accounting is being used.

# Source of Information

evaluation of inherent risk is based primarily on the auditor's knowledge of the entity and its environment.

This knowledge is acquired primarily while updating the *understanding of the entity's business & processes.*

# Assessing Inherent Risk

The assessment of inherent risk is subjective, and requires the use of professional judgment.

- Most experienced and knowledgeable individuals on the audit team make the assessment of inherent risk.

Inherent risk may differ by component and by specific financial audit objective.

- The risk of cash being improperly valued is low (*Measurement*), but the risk of cash not being complete (*Completeness*) may be quite high.

Inherent risk needs to be assessed throughout the audit.

- For example, if inherent risk is assessed as “low” at the general planning phase but numerous errors are found during the fieldwork phase, then the assessment of inherent risk may need to be revised.

# IR Guidelines

Level of Inherent Risk	Risk	Resulting Insurance
High risk	High inherent risk	100%
Moderate inherent risk	Moderate inherent risk	100%
Low inherent risk	Low inherent risk	100%

Short Cut 'Generally take High IR'

# ESTIMATION OF INHERENT RISK

Review of IR  
Assessment  
Performa

Factor	High/ Mod/ Low
The nature of the component, e.g. Susceptibility to loss or Susceptibility to fraud.	
The extent to which the items making up the component are similar in size and composition: The more homogeneous the component, the lower the risk.	
The volume of activity. If a lot of transactions are being processed, the chances of an error occurring may be higher than if only a few transactions are being processed.	
Capability of the staff processing the transactions: If the staff are experienced and take their jobs seriously, there is probably a lower inherent risk than if the staff are inexperienced or careless.	
Number of locations: Entities operating out of a single location with a centralised accounting system may have a lower inherent risk than those operating out of many locations, each with its own accounting system.	
Accounting policies being used: Many components have a lower risk of error when the cash basis of accounting is being used than when the accrual basis of accounting is being used.	

# INTERNAL CONTROL RISK

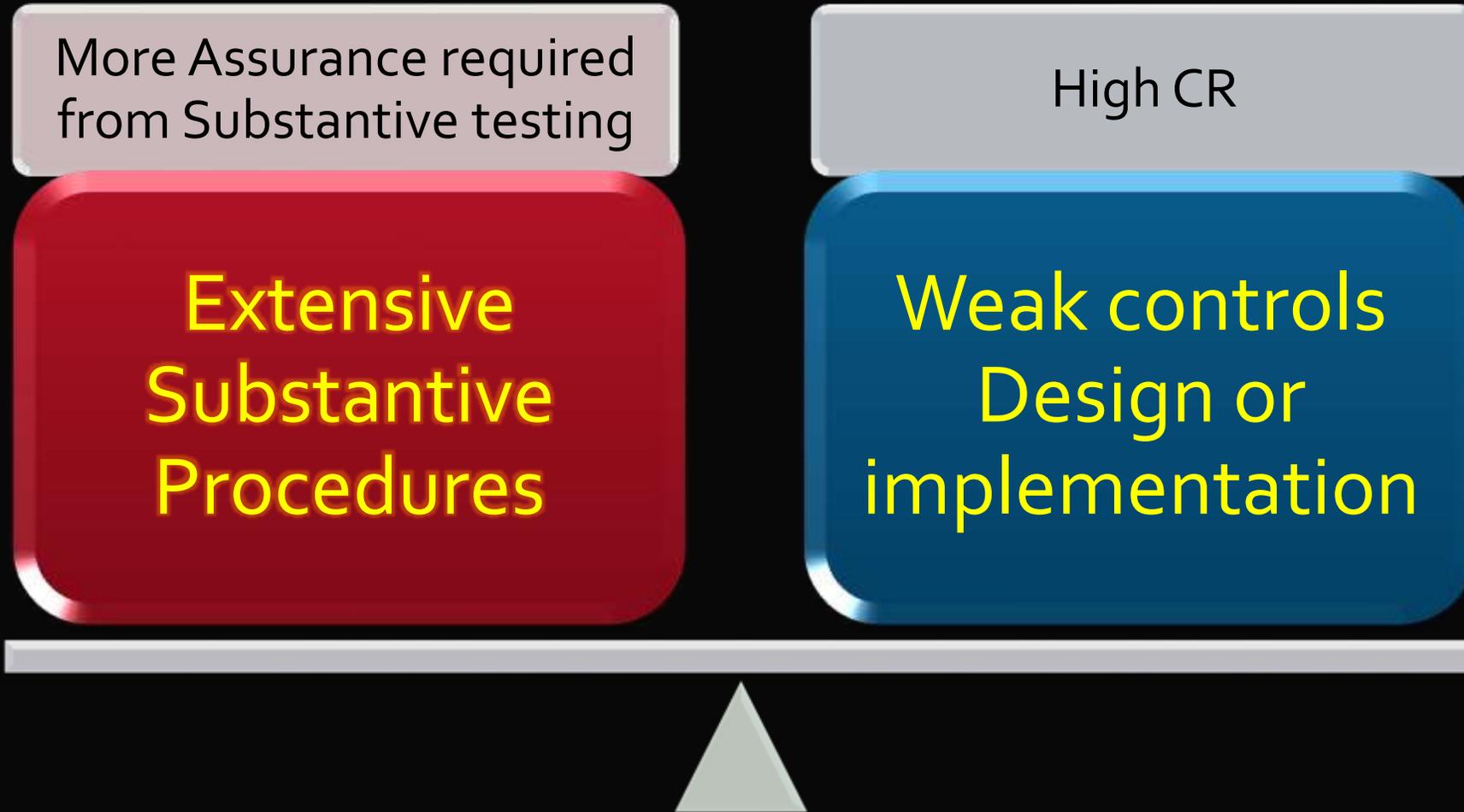
Internal Control Risk is the risk that an error that has occurred/chance of occurring in the component and that could be material, will **not be detected** or **prevented** on a timely basis by the internal controls in place.

# Control Risk

Control risk is the chance that the entity's internal controls will not prevent or detect material error and is directly related to the effectiveness of the internal control structure.

Control risk is evaluated at this stage as it limits the amount of assurance that the auditor can obtain from tests of internal control.

# Control Risk and Substantive Testing



# Factors Affecting Control Risk

## Control Environment

Consciousness and commitment of management and staff for observing and maintaining controls.

## Control Design

Adequately designed control system reduces CR.

## Use of IT

Use of IT (ERP) reduces CR if the IS audit has so suggested.

## Risk of Fraud

Management can override the internal controls- the auditor needs to keep alert for evidence that contradicts reliability of documents or management's representations.

# Source of Information



# Assessing CR

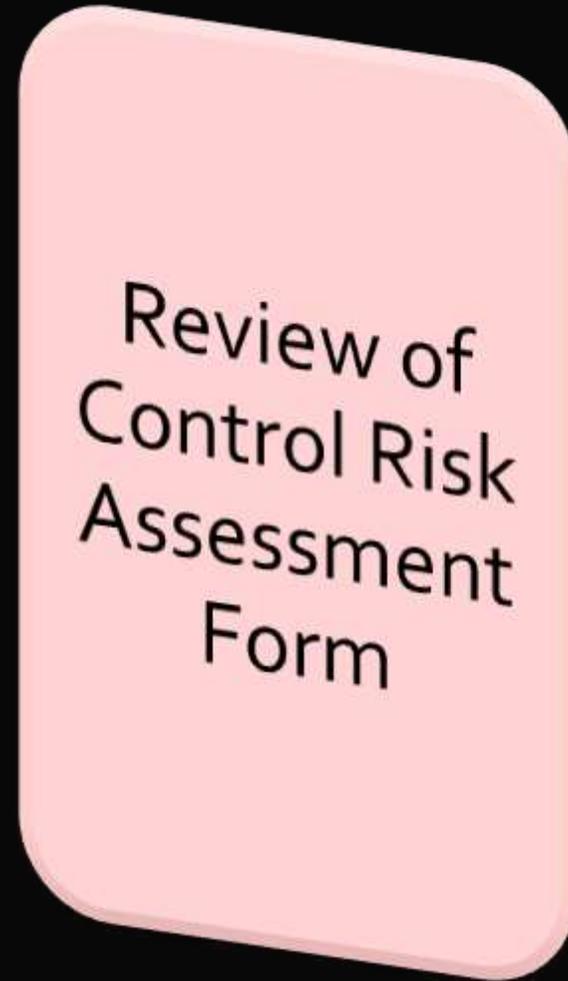
Control risk may differ by component and by specific audit objective and related compliance with authority objective.

- Entity may have devised very good controls over the payment process to ensure the validity and measurement of expenditures, but may have paid less attention to the completeness of those expenditures.

Control risk needs to be assessed throughout the audit.

- If control risk is assessed as “low” at the general planning phase but numerous internal control deviations (improperly approved supplier invoices, for example) are found during the fieldwork phase, then the assessment of control risk may need to be revised

# CR Estimation



Factor

H/M/L

**Control Environment:**

- A. *Control consciousness*
- B. *Organization*
- C. *Competence of personnel*
- D. *Management Policy & operating style*
- E. *Management override*
- F. *Reporting*
- G. *Protection of Assets & Functions*
- H. *Internal Audit Function*

Factor

H/M/L

## General Computer Controls

- A. *Organization & Management*
- B. *Physical Controls*
- C. *Data access*
- D. *EDP Safeguards*
- E. *System software*
- F. *Application Development & Maintenance*
- G. *Operations*
- H. *Contingency planning*

Factor	H/M/L
<u>Application Controls</u> <i>A. Organization &amp; Management</i> <i>B. Processing &amp; data</i> <i>C. Output</i> <i>D. Program changes</i> <i>E. Program maintenance</i>	

Factor	H/M/L
<u>Past Audit Experience</u>	

# CR Guidelines

Level of Control Risk	Risk	Resulting Assurance
High (poor internal controls)	80%	Up to 20%
Moderate (moderate internal controls)	50%	Up to 50%
Low (strong internal controls)	20%	Up to 80%

# Meaning of Phrase 'Upto'

The reason for presenting "Resulting Assurance" as an amount "up to" a percentage limit

auditor may conclude that the control risk over the validity and measurement of payroll are "moderate"(50%). This means that the auditor can place moderate reliance (50%) on the internal control structure

To place moderate reliance on the internal controls the auditor must do a fair amount of testing of internal controls

The auditor may decide that it is more efficient to place only limited reliance on the internal control structure and instead do detailed analytical procedures and use a large sample for substantive tests

In this case, even though the auditor may have been able to obtain a control assurance of 50%, the auditor decided to do only enough tests to support a 20% level of assurance

# Auditor's Objectives for Assessing Internal Controls

1.

To determine the extent of substantive audit procedures needed to support the required assurance.

# Auditor's Objectives for Internal Controls

**2.**

Generally, reliance on internal control is the most efficient method of obtaining evidence in support of the completeness assertion (for example, verifying sales for the period).

However, it should be remembered that substantive testing must always be done.

# SuAuditor's Objectives for Internal Controls

**3.**

To determine reliance on accounting records for “roll-forward” periods. When substantive procedures are performed at an interim date, such as verifying accounts receivable or counting inventories before year-end, considerable reliance will have to be placed on internal control for the “roll-forward” period (i.e. intervening period) to provide evidence of the continuing accuracy of the accounting records.

# Excerice

**Question 1: If the controls in one department are not reliable, should it affect the auditors view of the overall control environment?**

- **Answer: the auditor can assess control risk as "high" where controls are not reliable, and "low" in the other departments.**
- **The auditor should not attempt to come up with an aggregate risk assessment.**

# Exercise

**Question 2:  
How would the  
auditor's  
assessment be  
affected if the  
authorization  
controls are  
working and  
the accounting  
controls fail  
more often  
than not?**

- **Answer:** The auditor may decide to rely on the authorization controls, but cannot rely on the accounting controls.
- Since the auditor would need to take a substantive approach because of the poor accounting controls, relying on the authorisation controls would not likely reduce the amount of the required substantive testing. Therefore, the most cost effective approach would likely be to assess control risk for the particular transaction cycle as high and audit accordingly.

# Exercises

**Question 3: What aggregation and consolidation mechanism should be used to develop an overall assessment of the control environment prevailing in the Government.**

- Answer: Because the Government is made up of many sub-entities, each of which has its own risk profile, it is not appropriate to try to derive an aggregate risk assessment.
- Separate control risk assessments are made for each financial audit and compliance with authority audit objective for each component, within each sub-entity.

# DETECTION RISK

Detection Risk is the risk that the auditor's procedures will **not detect an error** that exists in the component and that could be material.

# DETECTION RISK

Detection Risk  
corresponds to the  
assurance required  
from the  
substantive  
procedures of the  
auditor

# AUDIT RISK MODEL

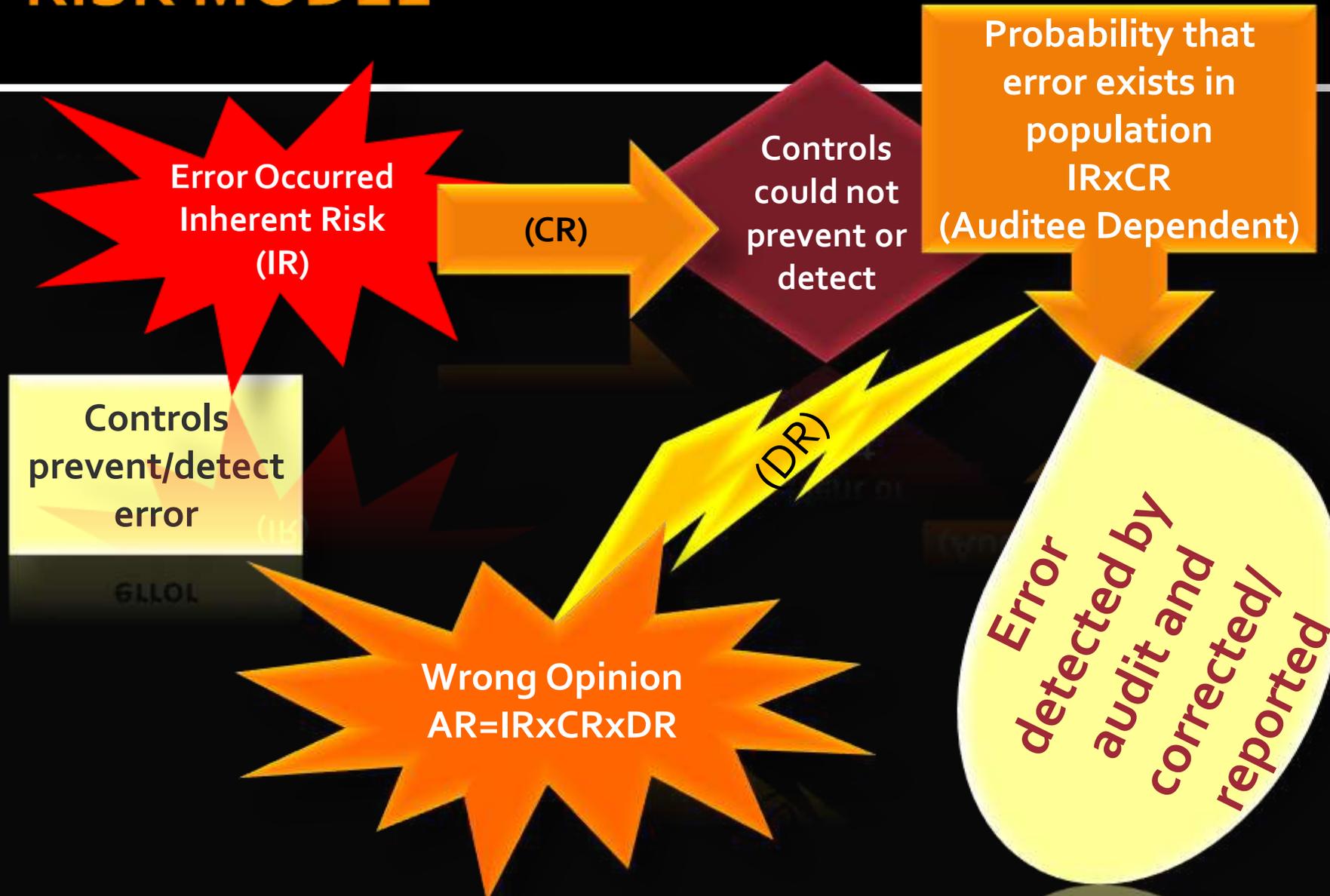
The basic theory- for errors adding up to more than materiality to remain in the accounts at the end of the audit (audit risk - AR), all of the following must have happened:

The errors must have occurred in first place (inherent risk - IR);

The internal controls must have failed to prevent or detect the errors (control risk - CR); and

The auditor's substantive procedures (analytical procedures and substantive tests of details) must have failed to detect the errors (detection risk - DR).

# AUDIT RISK MODEL



# AUDIT RISK MODEL

The risk model can be expressed by the equation:

$$\text{OAR} = \text{IR} \times \text{CR} \times \text{DR}$$

where:

OAR	= overall audit risk ;
IR	= inherent risk;
CR	= internal control risk; and
DR	= detection risk.

# AUDIT RISK MODEL

There is an inverse relationship between the auditor's assessments of inherent and control risks on the one hand and the extent of reliance on substantive testing on the other.

$$DR = \frac{AR}{IR \times CR}$$

$$\text{Assurance} = 1 - DR$$

If inherent risk is low and internal control risk is low, the auditor can reduce the amount of assurance from substantive procedures.

# AUDIT RISK MODEL

Inherent risk and Internal Control Risk differ from Detection Risk as they are beyond the control of the auditor.

Risk relates to audit procedures. In developing an audit strategy the auditor designs sufficient substantive procedures to reduce detection risk to a level that, in the auditor's judgment, results in an appropriately low level of audit risk

Different combinations of risk are possible while keeping the audit risk constant. This suggests that different audit strategies may be adopted to obtain sufficient audit assurance

The focus of the risk model is on controlling the maximum audit risk level for an audit.

# SPLITTING DETECTION RISK



**Detection Risk is actually a combination of two risks:**

***Analytical procedures risk (AP)***

is the probability that analytical procedures will fail to detect material errors, and

***Tests of detail risk (TD)***

is the probability that test-of-detail procedures will fail to detect material errors.

**The two types of procedures are considered independent, so detection risk is:  $DR = AP \times TD$ ,**

**The expanded risk model is:**

$$OAR = IR \times CR \times AP \times TD$$

# Summary

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Audit risk consists of three components

The inherent risk and control risk components are beyond the auditor's control and are merely assessed by the auditor

Detection risk is controlled by audit procedures

Detection risk is inversely related to the other two components

# Summary



The risk assessment model is critical for planning purposes

- in deciding how much evidence is required from each source of the three sources of assurance

# INSIGHT

*Auditors cannot rely entirely on an estimate of zero inherent risk to the exclusion of other audit procedures. Thus, you cannot have the condition:*

$$\text{OAR} = \text{IR} (=0) \times \text{CR} \times \text{DR} = 0$$

# INSIGHT

**Auditors cannot place complete reliance on internal control to the exclusion of other audit procedures. Thus, you cannot have the condition:**

$$\text{OAR} = \text{IR} \times \text{CR} (=0) \times \text{DR} = 0$$

# INSIGHT

**Auditors would not seem to exhibit due audit care if the risk of failure to detect material errors and irregularities was too high, for example:**

$$\text{OAR} = \text{IR} (=0.80) \times \text{CR} (=0.80) \times \text{DR} (=0.50) = 0.32$$

# INSIGHT

*Auditors can choose to rely almost exclusively on evidence produced by substantive procedures, even if they think inherent risk is high and internal control is not very good. For example, this combination is acceptable (provided OAR = 0.02 is acceptable):*

$$\mathbf{OAR = IR(=1.00) \times CR (=1.00) \times DR (=0.02) = 0.02}$$

# Exercise

Whether the auditor's conclusion is appropriate?

- Mr. Ibrahim has participated in the audit of department of customs for five years, first as an assistant auditor and the last two years as the senior auditor. He has never seen an accounting adjustment recommended. He believes the inherent risk must be zero.

# Exercise

Whether the  
auditor's  
conclusion is  
appropriate?

- Mr. Zaka has just (November 30) completed an exhaustive study and evaluation of the internal accounting control system of department of customs (fiscal year ending December 31). He believes the internal control risk must be zero because no material errors could possibly slip through the elaborated error-checking procedures and review

# Exercise

Whether the auditor's conclusion is appropriate?

- The field Auditor Mr. Ahmad have reviewed the operations exhaustively and developed complete understanding of the operations of the entity based on his five years audit experience of the entity. Last year he pointed many accounting errors and irregularities. There is no evidence that the entity has made improvements. So he decided to rely mainly on substantive testing so he used DR as 2% while starting this year's audit.
- Planned DR was 10%

# Determining Mix of Tests

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# Assurance Distribution

Total Population

AR = 5%

Assurance Required = 95%

# Assurance Distribution

IR = 40%

Assurance obtained = 60%

Further Assurance Required = 35%

Correct Population Corresponding to IR  
60%

# Assurance Distribution

Correct Population corresponding to CR  
= 8% of total population

CR = 80%

Assurance obtained =

20 % of remaining 40% = 8%

Further Assurance Required =

40% - 8% = 32%

Correct Population Corresponding to IR  
60%

# Assurance Distribution

Correct Population corresponding  
to CR  
= 8% of total population

DR = 15.625%  
Assurance obtained =  
84.375 % of remaining 32%  
= 27% of Total Population

Total Assurance obtained =  
 $60\% + 8\% + 27\% = 95\%$

Correct Population Corresponding to IR  
= 60% of Total Population

# EXAMPLE (Direct Substantive Approach)

## RISKS

- AR = 1%
- IR = 40%
- CR = 100%
- DR =  $(0.01) / (0.4 \times 1)$   
= .025 = 2.5 %

## ASSURANCE

- 99% Overall Assurance Required
- 60%
- 0%
- 97.5% of 40% IR = 39%
- Total attained assurance = 60 + 39  
= 99%

# EXERCISE

20 min

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**Problem 1:** Assume that OAR is taken as 1% and IR =40%. Control risk assessment resulted in CR-20%. Calculate;

- Detection Risk (DR) from Audit Risk Model
- Assurance Distribution.

**Problem 2:** Assume that OAR is taken as 2% and IR =40%. Control risk assessment resulted in CR-20%. Calculate;

- Detection Risk (DR) from Audit Risk Model
- Assurance Distribution.

# Solution 1:

## RISKS

- AR = 1%
- IR = 40%
- CR = 20%
- DR =  $(0.01) / (0.4 \times 0.2)$   
= 0.125 = 12.5 %

## ASSURANCE

- 99% Overall Assurance Required
- 60%
- 80% of 40% error picked = 32%
- 87.5% of remaining 8% errors = 7%
- Total attained assurance = 60 + 32 + 7  
= 99%

# Solution 2:

## RISKS

- AR = 2%
- IR = 40%
- CR = 20%
- DR =  $(0.02) / (0.4 \times 0.2)$   
= 0.25 = 25 %

## ASSURANCE

- 98% Overall Assurance Required
- **60%**
- 80% of 40% error picked = **32%**
- 75% of remaining 8% errors = **6%**
- Total attained assurance = 60 + 32 + 6

= 98%

**THANK YOU**

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