

Risk Based Analysis in IA



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- Risk Based Approach

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- Audit Areas Selection

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Topics Discussed

Traditional Approach

Risk Based Approach

Characteristics of Risk

Risk Based Management

RBIA – Indian Scenario

Risk Based Supervision by RBI

Responsibilities of IA

Risk mgt Process

Features of Risk Mgt Process & RBIA

Risk Based selection of audit areas

Audit – Earlier Approach for selection of Audit Areas



Audit – New Approach

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- Risk Based Audit Approach

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- Risks are rated:-
- High; Medium; Low

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- High Risk: High Priority
- Low Risk: Low Priority

What is Risk ?

Day-to-day Examples & Mitigation

1. Dress spoiled
2. Button falling/broken
3. Faculty absent suddenly
4. Road accident to others
5. Road accident to self

Enterprise Risks & Mitigation



1. Vendor unable to supply



2. Product recall



3. Accident Insurance Claims
often



4. Cash liquidity problem



5. Sales Returns as defectives

Characteristics of Risks

1. Uncertainty of occurrence

2. Can't Eliminate; but Mitigate

3. Down-side: Loss

4. Up-side: Opportunity / Gain

5. Certain Risks: Only Loss

Know about Risk

Know your friends close; and your enemies closer
– Chinese General

Know your opportunities well; and your risks very well

World famous Risk Management Guru Harold Skipper:

No universally accepted definition of risk exists

A situation is risky if a range of outcomes exists; and
The actual outcome is not known in advance

Risk Management is all about vulnerability and
taking steps to reduce it

Management by Risks

1940s

- Risk Mgmt began after 2nd World War in North America

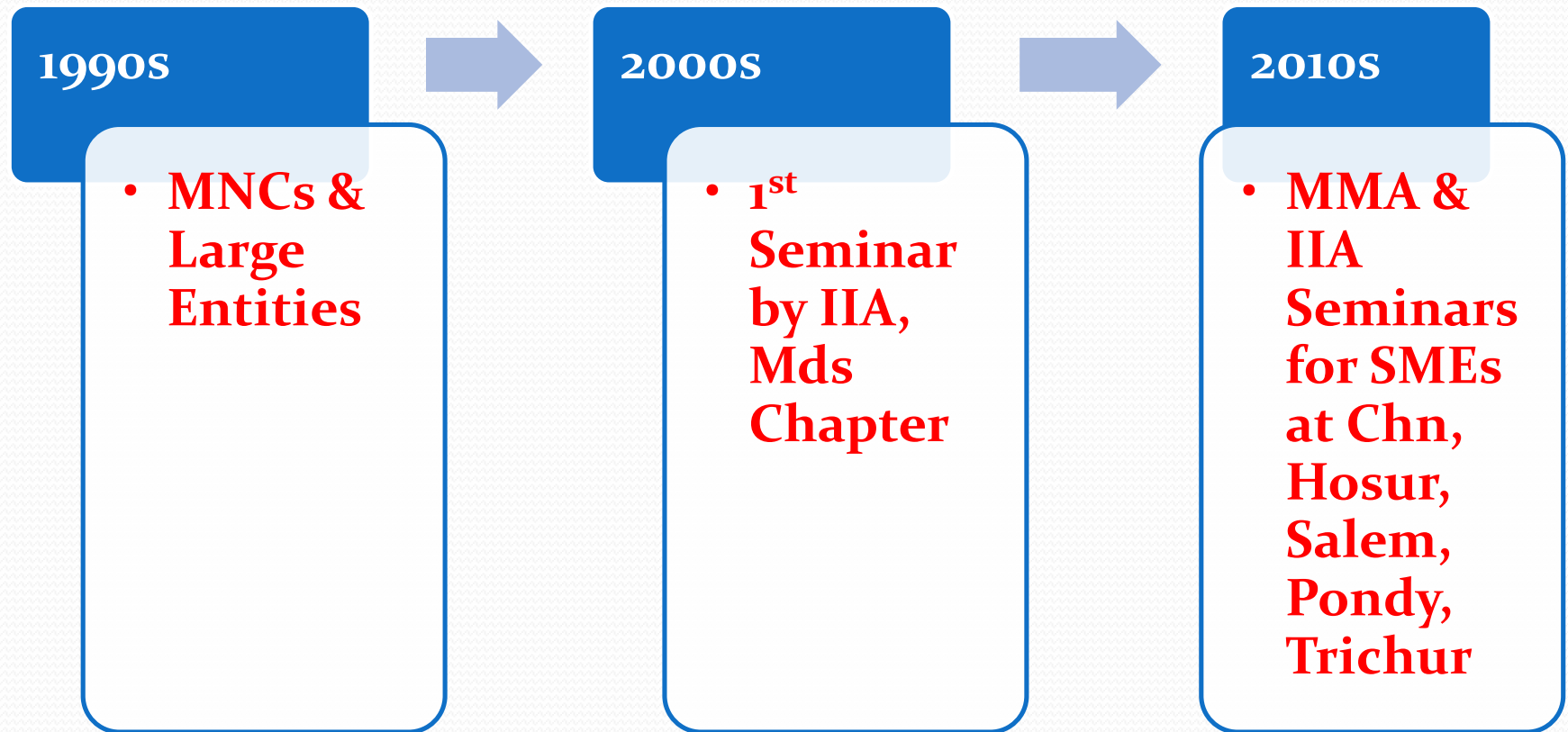
1940s-60s

- Only Risk Transfer through Insurance

**1970s &
Later**

- Strategies to Avoid, Mitigate & Transfer
- Insurance Manager to Risk Manager

RBIA - Indian Scenario



Risk Based Supervision by RBI

2003-04
Maiden
Attempt

- Stalled: (1) Low levels of Technology; (2) Unskilled HR; (3) Primitive Risk Mgt Systems; (4) Lack of patronage from Board & Top Mgmt

Re-
introduced
now

- Pre-requisites: Risk Mgt Sys; MIS; CBS; RBP; RBIA; Skilled & Trained HR
- To be noted: Risk Based Pricing of Products & Services and Risk Based Internal Audit

Responsibility of IA

Assurance

Consulting:-

Review of Control
Systems

Review of Risk Mgt
System

Review of
Governance System

Risk Mgt System / Process

Step – 1: Risk Identification

Step – 2: Risk Analysis

Step – 3: Risk Evaluation

Step – 4: Risk Treatment

Step – 5: Risk Reporting & Monitoring

1. Risk Identification

For each functional area or process or activity, there are risks.

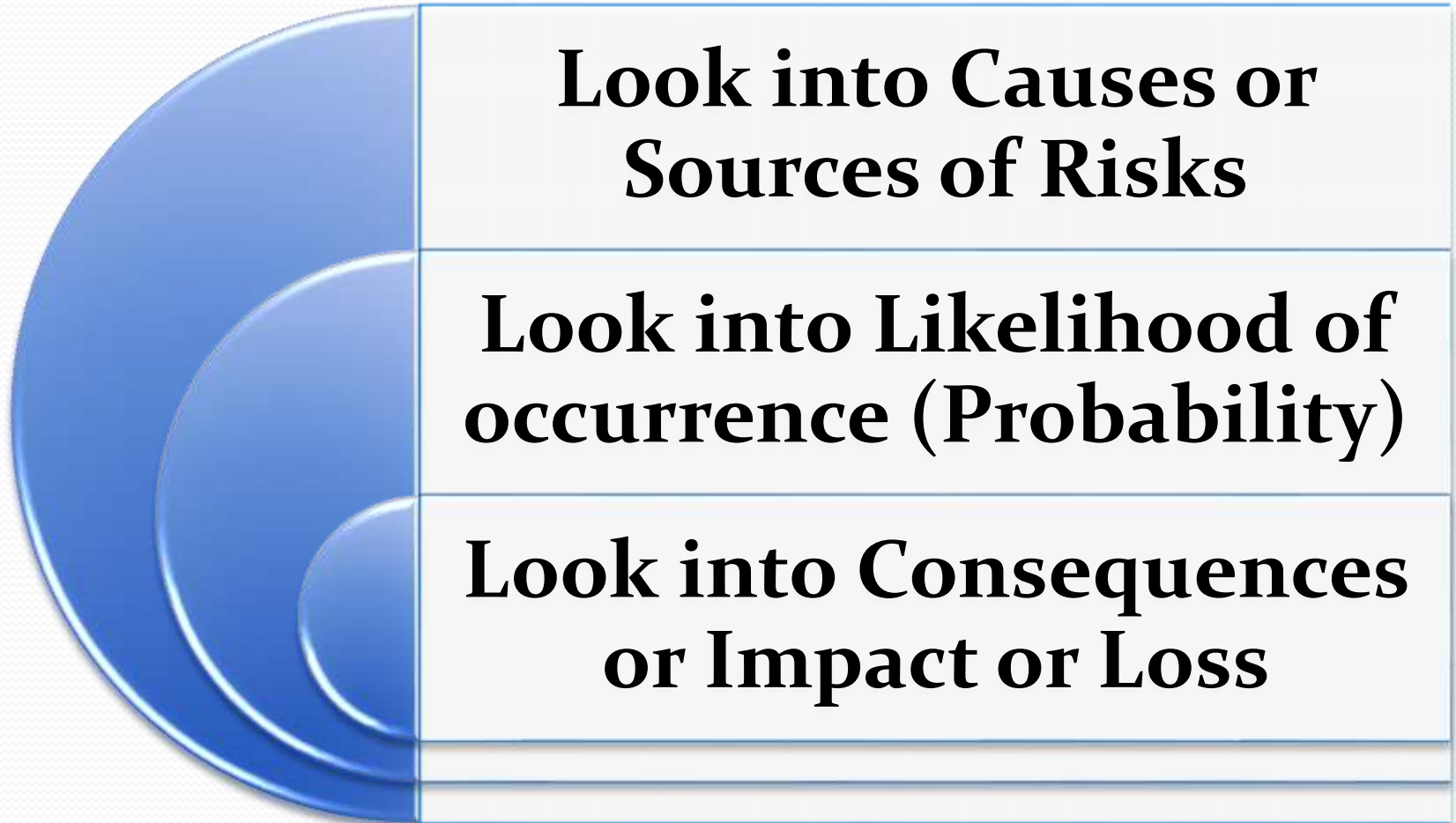
What may happen is the question to be answered: Identify Risks

Risk identification is a joint effort:
Risk Mgt / Functional Mgt / IA

To identify Risks: Identify Internal Control Weaknesses thru

- Interviewing & Questionnaire method
- Data Analytics
- MIS Reports (Insurance Claims)
- Comparative data (Sales Returns of a particular Product)
- Variance Analysis (Salary & Incentives)

2. Risk Analysis



Examples of Risks & their Causes

- Project cost overrun (Due to flooding of project area)
- Failure of equipment causing leakage of harmful gases
- Fire detection system ineffective leading to huge damages
- Cash crunch (Working Capital mis-management)
- Misappropriation of funds due to weakness in IC
- Frequent sales returns due to faulty QC

2. Risk Analysis (Contd)

To find out CAUSES, LIKELIHOOD & IMPACT, refer:-

- Past records with similar circumstances/incidents
- Experiences of persons participating in Risk Assessment Process,
- (Risk Mgt Team; Oprtg Mgt; IA; Consultants
- Published data: Newspapers, Magazines, Internet

Once CAUSE is established, LIKELIHOOD is to be thought through:-

- Cause & Likelihood would depend upon:-

- High volume of transactions;
- High value of total transactions;
- No segregation of duties
- More dependence on IT
- Liquidity of assets handled
- Geographically remote
- Weak Internal Control
- Poor monitoring & supervision
- High work pressure

Likelihood Scale & Scenario

LIKELIHOOD SCALE

- 5. Certain to happen –
- 4. Likely to happen –
- 3. Moderate possibility –
- 2. Unlikely to happen –
- 1. Rare to happen –

LIKELIHOOD SCENARIO

- Happens several times in a year in the same location/process
- Happens several times in a year in the Orgn in different location etc
- Has occurred in the Orgn
- Has occurred in another group Co
- Has occurred in the Industry but not in group Company

Impact of Risk incident

- After Cause & Likelihood are determined, IMPACT is to be estimated

Impact Scale

5- Catastrophic

4-Major

3-Moderate

2-Minor

1-Insignificant

Evaluation Criteria

Production delay/disruption
for 9 to 10 Days

For 7 to 8 Days

For 5 to 6 Days

For 3 to 4 Days

For 1 to 2 Days

Impact Scale- SHE Audit area

Catastrophic	- May result in fatalities; Extensive Environ Impairment requiring very costly clean up
Major	- Fatality; Serious impairment, significant clean up
Moderate	- Multiple injuries; Enviro impairment containable
Minor	- Minor injuries; Limited enviro impairment
Insignificant	- Some enviro impairment; contained in days

Impact – Fin Audit area

Catastrophic	- May result in extreme loss of revenue or escalation in costs; say $>$ Rs 10 Lac
Major	- Say Rs 5 to 10 Lac
Moderate	- Say Rs 3 to 5 Lac
Minor	- Say Rs 1 to 3 Lac
Insignificant	- Say $<$ Rs 1 Lac

Controls & Risk Incidents

Next stage in Risk Assessment: Considering status of
CONTROLS

And its interrelationship with RISK INCIDENTS:-

- Whether Controls are EXISTING
- Whether ADEQUATE to cover risks
- Whether PREVENTIVE or DETECTIVE
 - Whether MANUAL or AUTOMATED
- Whether WORKING EFFECTIVELY &
CONSISTENTLY



**After LIKELIHOOD &
IMPACT are done,
EVALUATION to start:-**



**RISK EVALUATION /
RATING / PROFILING**

3. Risk Rating / Profiling

Categorizing RISKS into :-

EXTREME

HIGH

MEDIUM

LOW

Indicates Degree / Intensity of Impact

Composite Risk Matrix

Likelihood	←-----Consequence-----→				
	1. Insignificant	2. Minor	3. Moderate	4. Major	5. Catastrophic
5-Certain	HIGH	HIGH	EXTREME	EXTREME	EXTREME
4-Likely	MODERATE	HIGH	HIGH	EXTREME	EXTREME
3-Moderate	LOW	MODERATE	HIGH	EXTREME	EXTREME
2-Unlikely	LOW	LOW	MODERATE	HIGH	EXTREME
1- Rare	LOW	LOW	MODERATE	HIGH	HIGH

This Categorisation is based on the OPINION of the Management
Which is dictated by the RISK APPETITE

4. RESIDUAL RISK & TREATMENT

- After CONTROLS are matched with RISK INCIDENTS, The Risks which are NOT addressed are **“RESIDUAL RISKS”**
- Mgt need to take a call whether they will live with these risks or They want to IMPROVE THE CONTROLS so that risks are further MITIGATED
This is called **“RISK TREATMENT”**

For RISK TREATMENT, COST DIMENSION is considered.

RISK TREATMENT takes any one of the FORMS or MODES:-

- 1. AVOIDANCE** : Not taking up that activity
- 2. MITIGATION** : By improving Controls, reduce the likelihood / impact
- 3. TRANSFER** : Spread between different parties
(Sub-contract, JV, Insure)
TRANSFER may bring in NEW RISKS

Treatment Implementation Plan

- Define the Plan
- Assign responsibilities
- Draw up time schedule
- Define Performance Measures
- Review the Implementation Plan

Risk Register

Comprehensive record of risks:-

Risks identified

Sources or causes

Likelihood / Probability of occurrence

Consequences / impacts

Risk rating / profiling

Residual risks

Mitigation measures / treatment

5. Risk Reporting & Monitoring

Risk Mgt is On-going process as the environmental dynamics
Constantly evolving / changing: Update Skills thru Training

Reporting on Risk Mgt to be periodic: Say monthly to CEO & Audit
Committee,

Report on Risk Incidents, Impact, Mitigation measures, Residual risks,

Residual Risks to be kept on RISK WATCH

Risk Framework to be reviewed on an Annual basis

Features of Risk Mgt & RBIA

- Risk Mgt is an art & not science
- Opinions / judgments in risk rating
- Expert knowledge on IC is needed
- Thorough knowledge of business is needed
- Availability of past data for deciding likelihood / impact
- Risk assessment can be outsourced
but not Treatment Implementation

Risk Based selection of audit areas

- Prepare List of Audit Areas
- Estimate Risk Exposure for these areas
- Criteria for estimating Risk Exposures
- Risk Level defined for each Criteria
- Weights attached to each Criteria
- Total Risk Score = Weight X Risk Level
- Sort Audit areas in descending order of Risk Score
- Top Scoring areas selected for audit Plan

List of Audit areas

Prepare list by referring to:-

- ☐ P & L
- ☐ Balance Sheet
- ☐ Previous Audit Reports
- ☐ Auditee Request
- ☐ Audit Committee recommendations

List of audit areas

- Materials Procurement
- Scrap disposal
- Bought outs / Sub contracted items
- A/c Receivable
- Export Sales
- Capex
- Cash Operations
- VAT Compliance
- Transportation of employees
- Pay roll – Incentives
- CARO Compliance

Criteria for estimating Risk Exposure

1. Size of yearly income / expenditure
2. Liquidity of assets controlled
3. Outside / employee contact
4. Volume of transactions
5. Statutory compliance
6. Segregation of duties
7. Previous audit history

Risk Level assigned for each criteria

1. Size of yearly income / expenditure

Risk Level	Yearly Income / Exp
1	Upto Rs 5 Lac
2	5 – 50 Lac
3	50 Lac to 1 Cr
4	1 Cr to 10 Cr
5	> 10 Cr

Risk Level

2. Liquidity of assets controlled

RL-1 : Difficult to transport or convert into cash

RL-2 : Moderately easy to transport

RL-3 : Moderately easy to convert into cash

RL-4 : Easy to transport or convert into cash

RL-5 : Cash

Risk Level

3. Outside / employee contact: Exposure in the form of Personal gains / granting favours due to nature of work And extent of contact with outsiders.

RL-1 : Difficult to obtain

RL-2 : Upto Rs 10 Lac

RL-3 : 10 – 50 Lac

RL-4 : 50 Lac to 1 Cr

RL-5 : > 1 Cr

Risk Level

4. Volume of transactions

RL-1 : Low volume; enough time to recheck the work done

RL-2 : Moderate volume; enough time to recheck

RL-3 : Moderate volume; less time to recheck

RL-4 : High volume; less time to recheck

RL-5 : High volume; no time to recheck

Risk Level

5. Compliance with regulations

RL-1 : Few regulations; little risk of non-compliance

RL-2 : Moderate regulations; moderate penalties

RL-3 : More regulations; high penalties

RL-4 : Substantial Regulations; subs penalties

RL-5 : Heavy regulations with serious consequences

Risk Level

6. Segregation of duties

RL-1 : Detection of errors easy & Controls available

RL-2 : Responsibilities divided & strict controls

RL-3 : Collusion will weaken controls

RL-4 : No segregation but monitoring mechanism

RL-5 : No segregation

Risk Level

7. Previous audit history

RL-1 : No adverse comments

RL-2 : Minor adverse observations

RL-3 : Poor controls; adverse observations

RL-4 : Poor controls; several observations

RL-5 : Absence of controls; serious observations

Weights attached to each criteria

Only Risk Level is similar to Arithmetic Average
With weights attached it becomes Weighted Average

Weights given based on judgement of auditor
And inputs from auditee mgt and Audit Committee

<u>Risk Criteria</u>	<u>Weight</u>
Value of Inc/exp	3.0
Liquidity of assets	0.5
Outside/emp contact	1.5
Volume of transactions	1.0
Statutory compliance	1.0
Segregation of duties	1.5
Pre. Audit history	1.5
Total	10.0

Total Risk Score for one audit area

Criteria	Assessment	RL	Wt	Score
1.	> Rs 2500 Lac	5	3	15.0
2.	Moderately easy to transport	3	0.5	1.5
3.	Moderately easy	4	1.5	6.0
4.	High Vol;less time	4	1.0	4.0
5.	Subs regu;high penalty	4	1.0	4.0
6.	Responsibility divided	3	1.5	4.5
7.	Several observation	4	1.5	6.0
TOTAL :				41.0

Selection of audit areas

- Total Risk Score for each audit area to be arrived
- Sort audit areas in descending order
- Top scoring areas selected for annual audit plan



Thank You

Questions ?

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