



ROLE OF INTERNAL AUDIT

- ❖ **In ORMF and ORMS**
- ❖ **Three lines of defence**
- ❖ **Evaluating effectiveness and placing reliance on ORM (2nd line of defence)**

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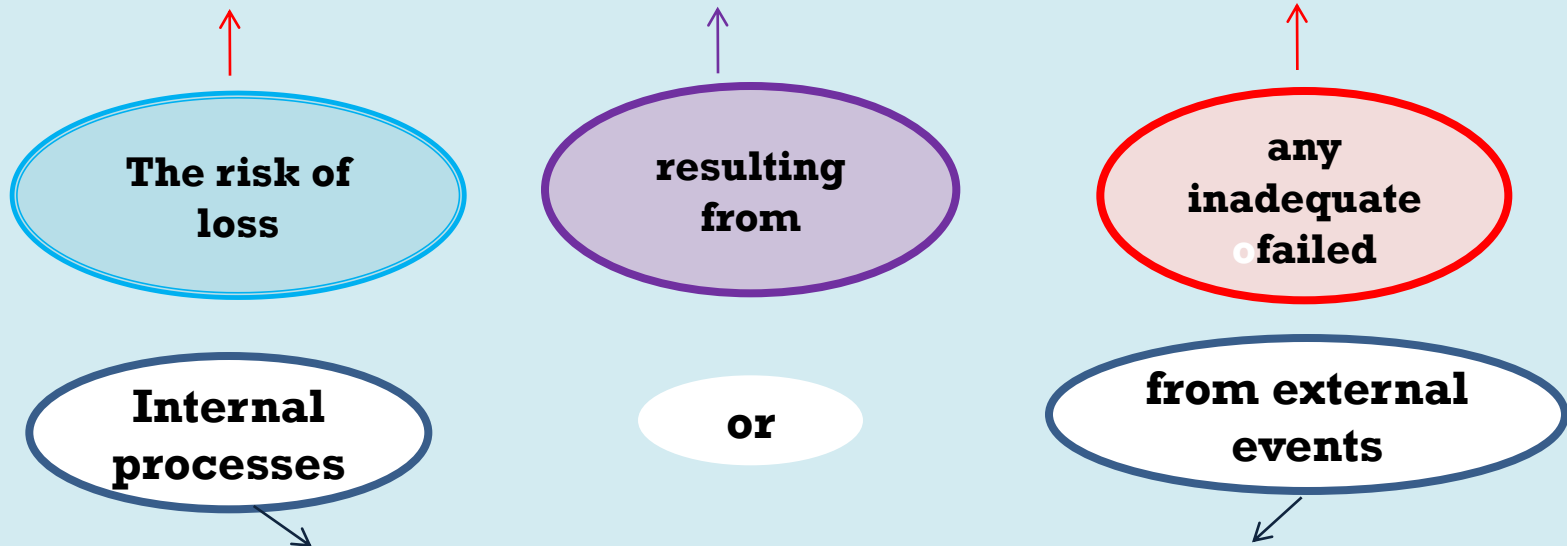
DEFINITION OF OPERATIONAL RISK

**Potential or
Forward looking**

Causal Categories:

- Employee Behaviour
- Corporate Behaviour
- Information Technology
- External Environment
- Force Majeure

- Inadequate collateral management
- Failed matching of cash & securities
- Missed option exercise date
- Unenforceable documentation
- Internal fraud



•People and systems in the regulatory definition are captured

•External Fraud, Fire, Flood, Legal action, Tax, Regulations, • False money,



REAL LIFE OPERATIONAL RISK EVENTS

**CBS
SLOWDOWN ON
1ST OCT' 11**

**TECHNOLOGY /
PEOPLE**

**COBRA POST
REVELATIONS**

PEOPLE / PROCESSES

**UTTRAKHAND
FLOODS
IMPACT ON THE
BANK**

**INTERNAL
PROCESSES**



APPROACHES TO MINIMUM CAPITAL REQUIREMENT UNDER OR

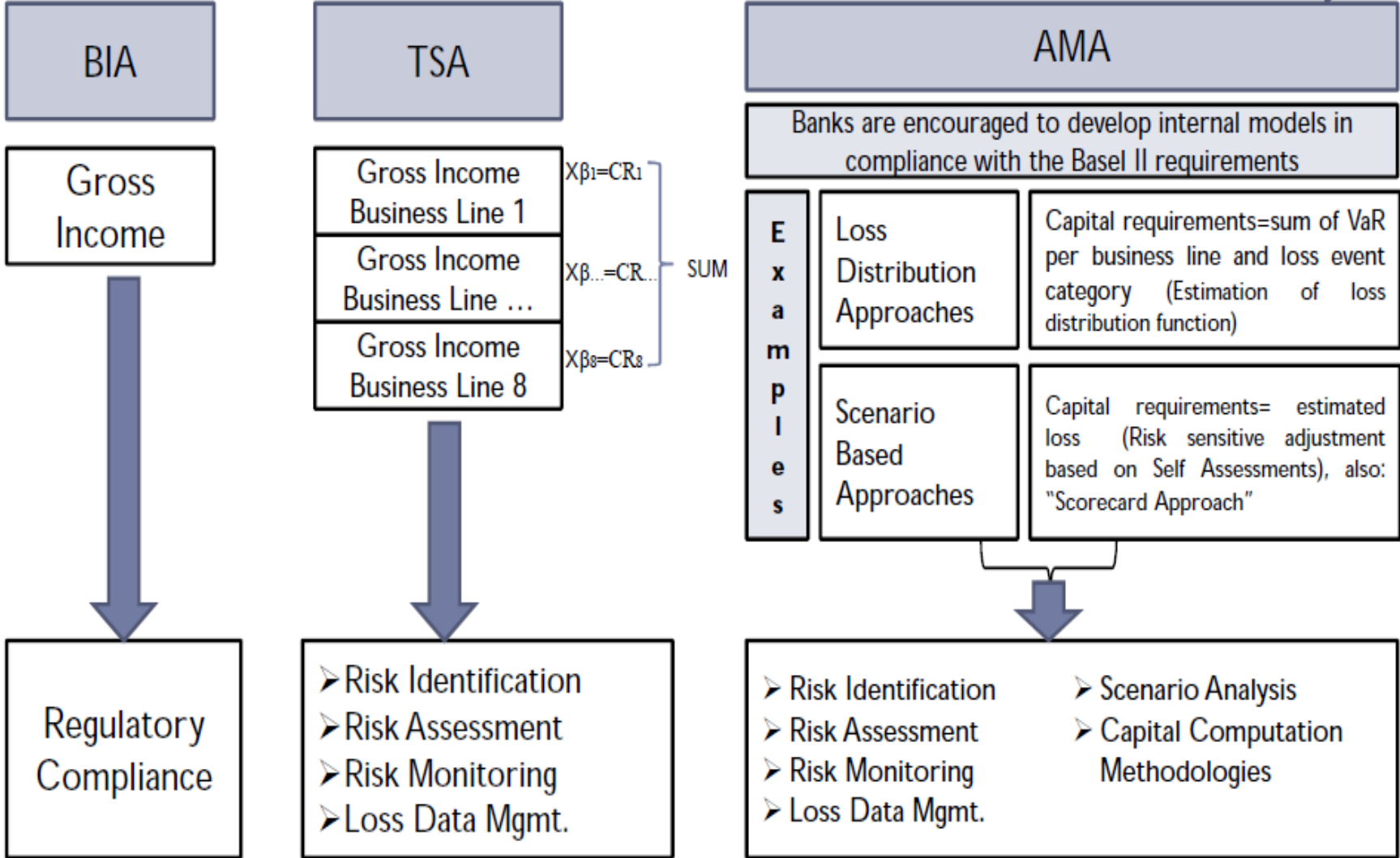


Basic Indicator Approach	Standardized Approach	Advanced Measurement Approach (AMA)
<p>1. Capital Charge = Gross Income * α</p> <p>2. KBIA = GI x α where: KBIA = Capital charge under Basic Indicator App. GI = average annual gross income last 3 yrs. $\alpha = 15\%$</p>	<p>1. Capital Charge = Business line gross income* β (summed across business lines) – 8 BLs defined by Basel</p> <p>2. KTSA = $\{\sum \text{years 1-3 max}[\sum(\text{GI}_{1-8} \times \beta_{1-8}), 0]\} / 3$ where KTSA = capital charge GI₁₋₈ = Gross Income β_{1-8} = multiplication factor</p>	<p>1. Capital Charge = the risk measure generated by the bank's internal op risk measurement system (significant flexibility)</p> <p>2. Used as transformational Initiative to achieve operational excellence</p>

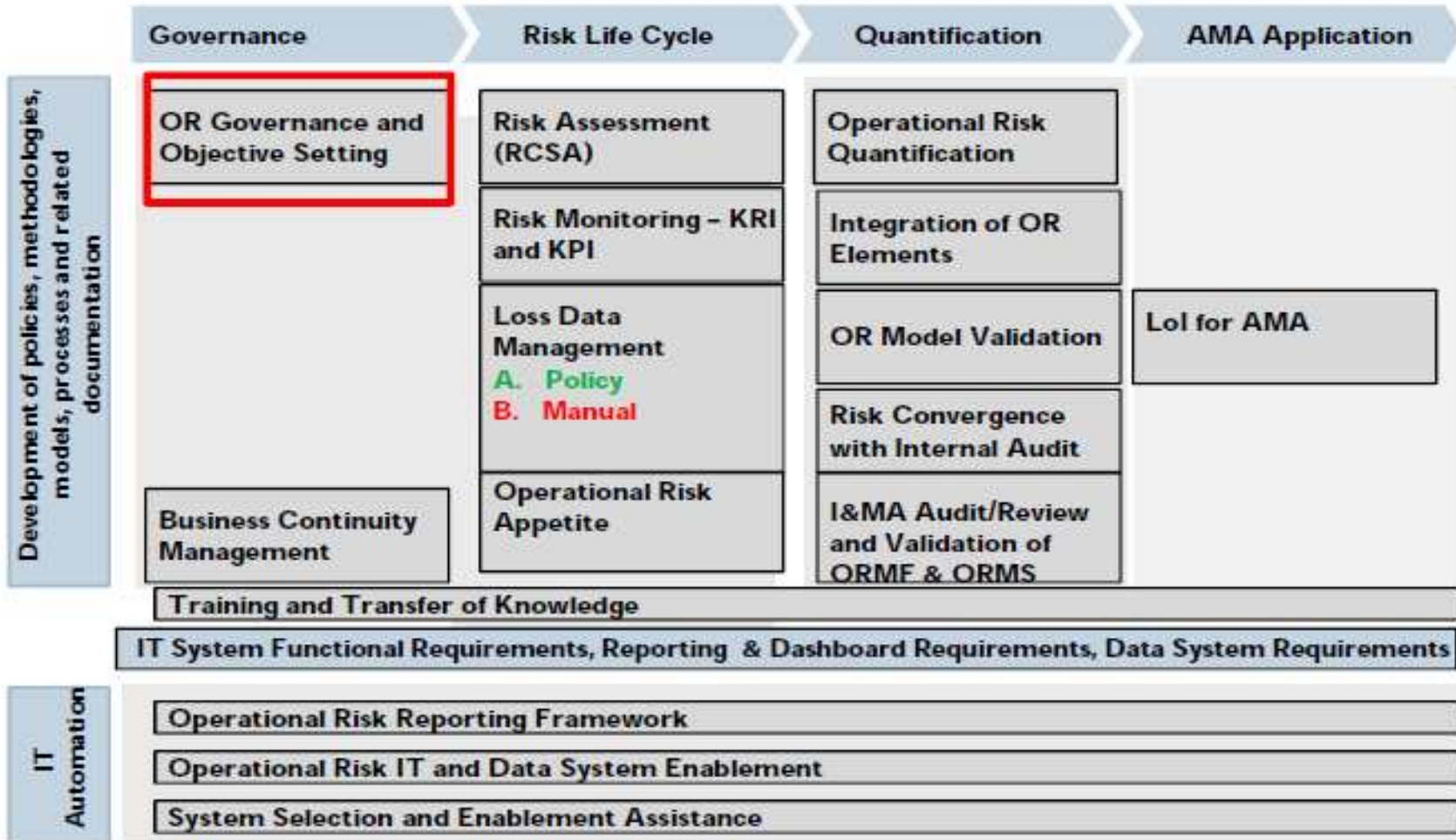




Increasing Requirements & Risk Sensitivity- Decreasing Capital Requirements (No Guarantee)



ELEMENTS OF OPERATIONAL RISK MANAGEMENT





RBI GUIDELINES

QUALITATIVE STANDARDS FOR THE RISK MANAGEMENT FRAMEWORK (ORMF)

- **Bank must have one of 'Internal audit' and one of 'Internal validation' or external validation to qualify for implementation of AMA.**
- **Internal Validation (annually) to cover both quantitative and qualitative estimates of the AMA elements**
- **In case internal validation is done by the bank's own staff, the external validation to be done within two years / in case of major changes to ORMS**





INTERNAL AUDIT AS THE THIRD LINE OF DEFENCE

- **Internal audit is dependent of both the business and risk functions and prepares independent testing of first and second line of defense for compliance against business and risk management policies and procedures**
- **Internal Audit should not confine itself to monitoring compliance of policies but serve as a challenge function to the other lines of defense**
- **Internal Audit should report annually to ORMC, RMCB and ACB on the bank's compliance of regulatory requirements under ORMF and ORMS.**



INTERNAL AUDIT / REVIEW OF ORMF

i. Efficiency of Governance Model

Conduct of BORMC of ORMC meetings - major loss events / RCSA findings / adverse NPAs

ii. Risk and Control self Assessments (RCSA)

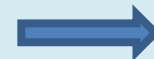
Adverse KRI's / loss data results during RCSA

Action points implementation



KEY RISK INDICATORS

- **Are all risk areas covered**
- **Are adverse KRI's tested**
- **Re-assessment of thresholds based on loss / change in business processes.**





LOSS DATA

- **Root cause analysis for all significant incidents**
- **Proper accounting of losses**
- **Mitigation of key risks based on the lessons learnt**



NEW PRODUCT / ACTIVITY REVIEW

- **Are all new products approved by ORMD**
- **Issues tracked to closure**
- **Audit / Review frequency of ORMF**
Annual preferably in the 4th quarter



VALIDATION OF OPERATIONAL MEASUREMENT SYSTEM (ORMS)

- **Bank should evolve a clear methodology for internal validation**
- **Internal validation to both quantitative and qualitative elements.**



VALIDATION OF INPUT DATA INTO AMA MODEL

- **Validate definition / comprehensiveness of operational risk data**
- **Validate treatment of boundary losses (credit and market) / credit and operational)**
- **Review mapping of data to business lines Basel 2 event type**
- **Review sources and methodology for external risk losses (used database, thresholds, implementation etc.)**
- **Review criteria for scenario analysis**



VALIDATION OF MODEL COMPONENTS

- **Review whether frequency and severity distribution is in line with RBI AMA guidelines.**
- **Review Co-relation approach and assumptions.**
- **Review aggregation principles**



CAPITAL ALLOCATION

➤ **Assess capital allocation approach as per the capital computation network.**

➤ **Insurance Impact**

Review the usage and impact of insurance on the capital



VALIDATION OF THE TEST PRINCIPLES

- **The purpose and use of AMA should not be limited to regulatory purposes.**
- **The AMA should evolve as the Bank gains experience with risk management techniques and solutions.**
- **AMA should support and enhance management of operational risk.**
- **Use of AMA should provide benefits to the Bank in the management and control of operational risk.**



CONVERGENCE OF ACTIVITIES OF AUDIT OF ORMD

- **Audit assesses operational risk covering**
 - a) Adherence to S&P business line wise**
 - b) Back office operations**
 - c) Control systems**
 - d) Customer service**
 - e) General management**

- **ORMD carries out RCSA and quantifies operational risk by way of “ Health Index”.**

Need for convergence between Audit and ORM by developing a common Risk language



USE OF RCSA HEALTH INDEX IN SCHEDULING AUDITS

Scoring pattern (Audit Rating)	Periodicity y for conduct of I&M Audit		
	-----Period in months-----		
	GR I	GR II	GR III
Well Controlled (WC)	18 (B4)	21(B5)	21(B5)
Adequately Controlled (AC)	15(B3)	18(B4)	18(B5)
Moderately Controlled(MC)	12(B2)	12(B2)	12(B2)
Unsatisfactory Controlled (UC)	6-8(B1)	6-8(B1)	6-8(B1)

Buckets:

B1-6-8 months: B2-12 months: B3-15 months:B4=18 months;B5-21 months (this will facilitate convergence between I&MA and ORMD activities)



USING RCSA HEALTH INDEX FOR SCHEDULING AUDIT

Current Frequency	Health Index > 75%	Health Index >=50%<75%	Health Index >=25%<50%	Health Index <25%
B1	B1	B1	B1	B1
B2	B2	B2	B1	B1
B3	B3	B2	B1	B1
B4	B4	B3	B2	B1
B5	B5	B3	B2	B1



CONTROL OPERATING EFFECTIVENESS FOR RCSA

I&MA		ORMD		
Percentage of Deviations		Description	Control operating effectiveness score	Control Operating effectiveness level
From	To			
0	5	Very Low	1	Effective
>5	10	Few	2	Meets Requirements
>10	20	Some	4	Improvement Needed
>20		Many	5	Significant Improvement Needed



AUDIT INTERVENTIONS

- ✓ **Evaluate the quality of root cause analysis under RCSA**
- ✓ **Ensure correct quantification of losses**
- ✓ **Efficiency of ORM intervention to be judged by the future movement of losses**

Thank you!





INTERNAL AUDIT OF ORMF & ORMS FINDINGS

- Policy for Risk mitigation through Insurance to be framed.
- KRIs – Thresholds to be introduced / testing is recommended.
- ORMD to regularly interact with RMs
- External loss data policy – improvements needed.
- One major loss event – the vertical RMC didn't discuss it in detail



INTERNAL AUDIT OF ORMF & ORMS FINDINGS

- Root cause analysis being done only for high value frauds.
- RCSA exercise not leading to reduction/increase of Audit scores under ORM.
- Good work in grouping internal loss data in GL accounts.



AMA – ORMF AND ORMS

- ◉ **Governance** : RMCB, ORMC, RMCC – Circles and BORMC – Business & Support Groups)
- ◉ **Policies, Manuals and Framework Documents** : ORM Policy, Loss Data Management Policy, BCP Policy & Related Manuals and other Framework documents
- ◉ **Operational Risk Measurement System (ORMS) (Quantitative)**
- ◉ Mathematical & Statistical Model – Capital computation by integrating the following
- ◉ **Internal Loss Data** – Data in the Bank's existing or historical portfolio for 3 / 5 years





AMA – ORMF AND ORMS

- **External Loss Data (Quantitative) – Aggregate information across the industry**
- **Scenario Analysis (Quantitative) –high severity low frequency operational losses**
- **Business Environment & Internal Control Factors (Qualitative) – A current and forward looking assessment with the help of RCSA and KRI**

Technology Support System





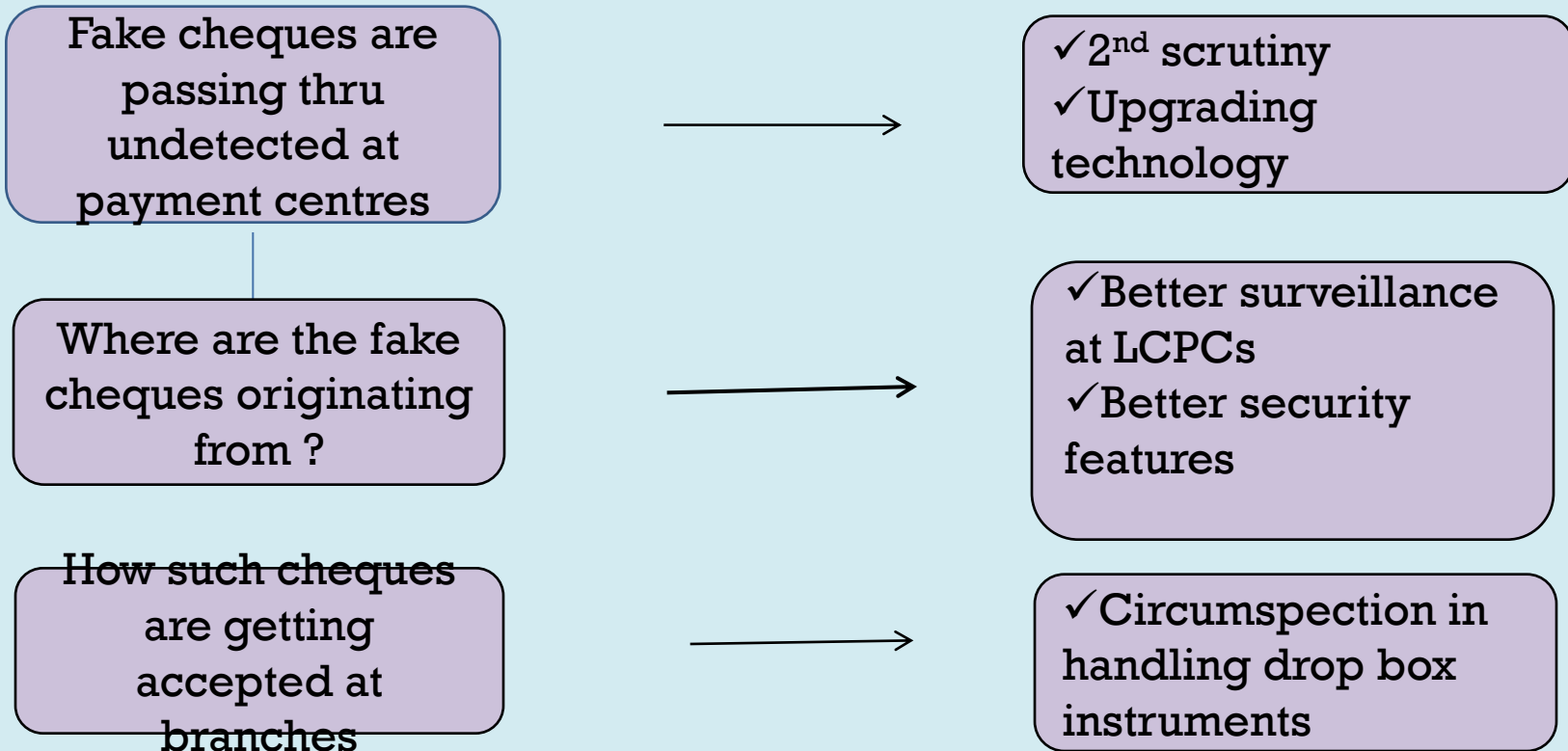
SHARP INCREASE IN THE NUMBER OF FAKE CHEQUES GETTING PAID

- ❖ **The amount of coming up to nearly 1% of Risk capital for OR**
- ❖ **The number in terms of % of frauds doubling to 40%**
- ❖ **Single highest OP related fraud loss**





ROOT CAUSE ANALYSIS





SHARP INCREASE IN THE NUMBER OF FAKE CHEQUES GETTING PAID

- ***Amount Of Cheques***
- ***Loss of accounts from which cheques were paid***
- ***Reputation loss***

