

Profile

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Operational Risk Management

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By

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Operational Risk Management

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Operational Risk Management

BASEL II Operational risk definition/ framework.

- The risk of loss resulting from inadequate or failed internal process, systems, or from external events.
 - the above definition includes legal risk and excludes strategic & reputation risk.

Operational Risk Management

Why do banks need to quantify ops risk

- Customer and shareholder demands operational sophistication, speed, and flawless execution.
- Avoid financial losses due to operational flaws.
- To fulfill regulatory requirements and audit compliance, BASEL II
- Allows banks to identify sources of ops losses. (Casual factor analysis)
- Allows banks calculate exposure limits and mitigate against it.

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Key Operational risk areas in banking sector

- IT
- Personnel
- Policy

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IT Risk in Banking sector.

- Technological
- Procedural
- Transactional
- Infrastructural
- External threats like hacking & cyber crime.

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Technological Risk

- Compatibility with existing technology and infrastructure.
- **Data transfer and migration risk.** (Has it been planned, tested & controlled)
- **Hardware/Software supplier risk** (Are they new in business? are they going to stay in business? Several other vendor and licensing issues).
- **Hacking and other cyber crime**

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Technological Risk

example

- **Business disruption and failure**

a) Solomon Brothers suffered a substantial loss of \$303m due to unreconciled balances caused by system change over. (New York times – Feb 1992)

b) NBP made a loss of Rs.20million due to alleged cyber crime in Multan (Dawn – March 2008)

- **System change over and reconciliation losses.**

Several banks in Pakistan have suffered huge losses due to inadequate planning and control of the whole system migration. (class discussion)

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Procedural Risk:

Mainly occurs due to breaches in procedures while conducting the transactions and data input.

Example:

Incorrect date, invalid amount, inappropriate authorization.

No one should have access to front and back office system together. Booking and clearing systems should have separate access and authentication.

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Transactional risk

- Incorrect counterparty
- Incorrect amount
- Delay in clearing – interest charges
- Incorrect / invalid counterparty claims.

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Infrastructural Risk

- Is there supporting infrastructure in the country.

For Pakistan at present the main infrastructural problem is Electricity, law and order situation & IT.

- Security
- Govt undue influence and duress.

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Hacking and Cyber Crime

- Open discussion in class.
- Citi Group, BNP paribas, HSBC.

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Personnel:

- Detailed screening process.
- Check default history. (If a person has previous debts default be cautious)
- **Appropriate qualification & continues training.**
(several well established banks are suffering from under qualified & under trained staff mainly due to cost cuts)
- **Mandatory leave.** (If an employee is always working very long hours and not taking leave this need to be checked, recently one of the banks in Karachi has suffered losses in the region of PKR-20million due to fraud by a very hard working person – class discussion)

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Policy

- Commitment from the top to implement policies and procedures.
- Regular implementation checks and controls reviews.
- Provide framework for controls.
- Most important areas are HR hiring policy, IT system policy and control implementation policies.

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Risk Avoidance, Mitigation, & reduction

– Avoidance

- if the product/ instrument has a greater risk than bank's set limit, then highlight it to the management. (Instrument will not be placed in the market or the instrument structure to be evaluated again)
- Restructure instruments to avoid risk.

– Mitigation

- **Insurance** (insure certain type of operations, insure against data loss, transactional error)
- **Hedging instruments** (to mitigate FX losses or overseas funding losses)

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– Reduction

Ops Losses can be reduced by implementing control and monitoring methods such:

Risk Register:

keeping a loss register and record high frequency and high value losses.

Risk Register

Event No	Event Code 1	Event Code 2	Date	Cost Centre	Business Line	Loss	Recoveries	Insurance	Frequency	Event Description
1	IF	12	20-Jul-11	CC 12	RB	34000	0	34000	1	
2	EF	31	21-Jul-11	CC13	RB	50000	0	50000	1	
3	SY	22	22-Jul-11	CC 25	CF	12000	4500	12000	3	
4	IF	11	23-Jul-11	CC 16	CF	34576	0	34576	6	
5	EF	11	24-Jul-11	CC 30	AM	19051	13000	0	2	
6	EF	31	25-Jul-11	CC 40	TF	6500	0	0	13	

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Risk Matrix:

Distribute risk as per impact and frequency.

High Impact : Low Frequency	High Impact : High Frequency
Low Impact : Low Frequency	Low Impact : High Frequency

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BASEL II Loss Distribution Approach:

- Standard statistical techniques are available
 - which techniques are most appropriate?
 - what are appropriate for modeling the “tail” of the distribution?

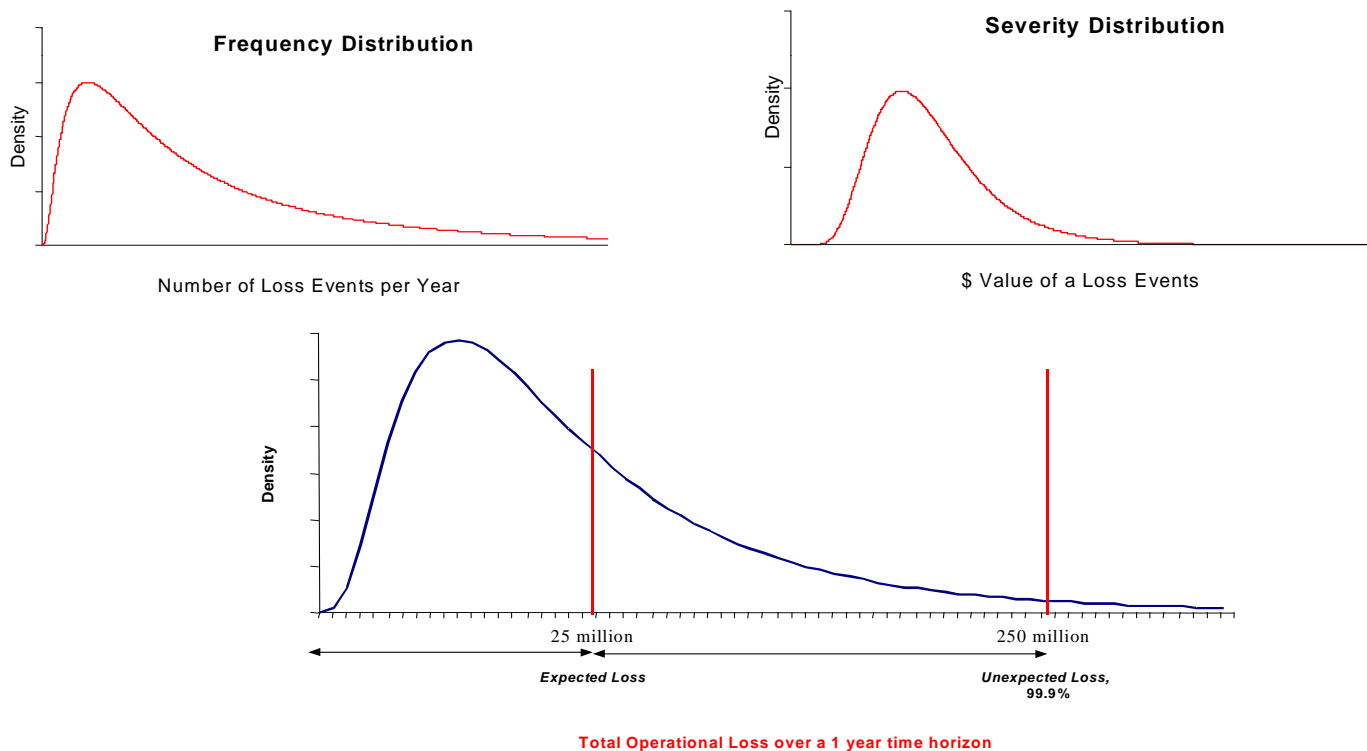
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Generally, estimation of an operational loss distribution involves 3 steps:

1. Estimating a frequency distribution
2. Estimating a severity distribution
3. Running a statistical simulation to produce a loss distribution

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Operational loss distribution graph



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Discussion on BASEL II AMA (Advance Measurement Approach).

Key Elements of a Basle II AMA

1. Internal Data
 2. External Data
 3. Scenario Analysis
 4. Internal Control and Business Environment Factors
 5. Insurance/Mitigation Techniques
- Flexible, and robust framework that builds on banks' internal methodologies and allows for evolution of practice over time.

Operational Risk Management

Review:

It is evident that Risk is inherent part of Banking industry. Risk Management can only point in the correct direction to resolve problems, mitigate and reduce losses.

However it is dependent on the risk appetite of the institution, industry, and the allowance provided by the regulatory bodies in a given environment.