



**PROJECT PROFILE – Operational Risk Model**

In compliance with BASEL Accord – Advanced Operational Risk Control, following illustrated how are the typical operational risk components and related risk factors should be measured with set of defined model parameters, metrics & simulation methodology:

Operational Risk Components					
<b>Risk Events</b>	Execution, Delivery & Process Management	Customers, Products & Business Practices	Employment Practices & Workplace Environment	Physical Asset & Infrastructure	Fraud, Theft, Security, & Unauthorized Activity
	Failed transaction processing or process management, from relations with trade counter parties and vendors, or from systems failures	Unintentional or negligent failure to meet a professional obligation to specific customers (including fiduciary & suitability requirements), or from the nature or design of a product.	Acts inconsistent with employment, health & safety rules, payment of injury claims, / diversity / discrimination events.	Loss / damage to physical / intangible assets (including data) due to external events which covered under Force Majeure clause	Acts intended to defraud, misappropriate property or circumvent regulations, the law or company policy.
<b>Risk Factors</b>	Deterministic			Stochastic	
	<b>Severity</b>	<b>Occurrence</b>	<b>Qualitative Analysis Factors</b>		<b>Detection</b>
<b>Measurement methodology</b>	Loss severity ranking by business line & by risk category	Freq. loss distribution by fitting 5 years of internal historical loss data wherever possible	Supplemented by relevant external data or scenario analysis, & consider the audit risk rating of each unit		Residual risk level & control rating from RCSA self assessment.
Metrics / Simulation					
<b>Model Parameters</b>	<ul style="list-style-type: none"> <li>• Sigma level of operational loss as % of outstanding assets / liabilities</li> <li>• # of non-conformance / outstanding business issues &amp; # of days past due for resolution</li> <li>• Internal / external threats, contingency issues that beyond existing internal controls</li> </ul>		<ul style="list-style-type: none"> <li>• Statistical parameters – principal components &amp; correlation of risk factors from historical time</li> <li>• Surveillance tests based on historical scenario / past risky events</li> <li>• Hypothetical scenarios to stress test, simulate &amp; determine VaR, anticipate future risky events</li> </ul>		

**Challenges:** (1) Ambiguity in itself of BASEL consideration of an Advance Risk Rating Model. (2) Urgency to roll out in avoidance of potential compliance issues / effects on capital adequacy ratio. (3) Divert opinions from different product groups while single measurement approach should be adopted to ensure consistency. (4) Collection of reliable data / scattered information from non-integrated back-end systems.

**Dealing with conflicts:** Thorough understanding of internal controls of different products & identified key touch points for pillars in building the architect of operational risk components. User oriented approach to earn support & respect by all level of organization. Set realistic targets to allow for quick launch & subsequent enrichment of the qualitative analysis factors to better fine tune the risk measurement model.

**Technical skills to accomplish the objective:** (1) Failure Mode & Effect Analysis – FMEA, to formulate a basic risk deterministic structure. (2) Hypothesis tests to fit sample data into simulation model for presentation & get senior management buy-in. (3) Axiomatic design to capture & convert user requests into functional requirements. (4) Database programming & SQL for data feed. (5) Incorporate audit assessment results & made use of the inherent / control / residual risk definitions as set of common agreed risk factors. (6) Design of Experiments to stress test & pilot run the model.

**Motivate & Influence of others:** Involve people to participate & make consensus decisions, always stay focus on key issues and be positive to overcome any challenge, set milestone targets & be flexible with shifting priorities, led by example & foster a continuous improvement culture.