The First Generation: A Response to the New Regulations

**Data Centric:**
- Data gathering, validation and categorization.
- Capital Modeling.
- Internal and Regulatory Reporting.
- Focus was on Compliance with a rapidly evolving Regulatory regime.

**The Crux:** Establishing Frequency and Severity by reporting category.

**Evolution of this theme**
- Key Operating Risks.
- Key Risks Indicators.
- Controls and Self Assessments.

**All these things are important foundational elements.**
- You must comply with the Regulation.
- A credible data base is the foundation of any risk discipline.
  - The question is: Now what do you do?
Question we all ask: Why aren’t OpRisk losses going down?

- Many organizations stopped here. They confused Compliance and Controls, with the discipline of Risk Management.
  - C+C are an effective tool, not a replacement for…

- Most of their efforts were proscriptive.
  - Determine process break points.
  - Establish controls, metrics and KRI s
  - Track losses to self assessments and losses to KRI s.

- Question: So why are we still seeing losses?

- Answer: Only 20 – 25% of OpRisk losses arise from process breaks.
  - Most product losses originate at the product inception stage.
  - Many losses result from management decisions, (e.g. target market waivers.)
  - Many losses manifest through litigation, (which is not tracked in the same way.)
  - Fraud.
  - Systemic.
What losses can we Control and which ones must we Prevent

The approach takes a time series of op risk losses and decomposes it into two elements:
– A frequency distribution: how many events occur on average each year?
– A severity distribution: when an event occurs, how likely is it to be over $100M, over $1MM, over $10MM, etc?

But this distribution can also be color coded to distinguish events by loss category or to distinguish breeches of proscriptive controls from other events.
Question: If the idea of a separate Operational Risk discipline had not been started by Basel and the National Banking Regulators, how would the banks have done it?

One possible answer: Begin with the existing definition and role of Risk Management.

- The Business owns the risk.
- The Chief Risk Officer is responsible for all risk.
- The core function of all the various risk management disciplines is:

  Anticipation, Mitigation and Recovery.
Data gathering and the reporting roles are sub-functions of the Risk discipline, they are not THE Risk discipline.

Controls are just one of the tools used by Risk Managers.
- They are very effective, but only address a minority of OpRisk losses.

Here is a thought: The science, the art, the tools, and the skill sets required to do Credit Risk, Market Risk and Operational Risk, are fundamentally the same.
- The focus may be different.
- The experiences required may be different.
- But the approach is basically the same.
The Core Function

- **Anticipation**
  - Predictive. (Given the following circumstances, this is the most likely outcome…)
  - Loss Norms. (The loss behavior you are most likely to see from BAU.)
  - Understanding the patterns of loss behavior.
  - Anomalies, Correlations, Similarities.

- **Mitigation**
  - Breaking the cycle of repeating patterns.
  - Controls and other proscriptive measures.
  - Inoculations. T+C, Dox, TM, and Hedges to reduce the predicted impact of losses.

- **Recovery**
  - Must begin with the premise that OpRisk is not ‘the cost of doing business.’
  - Some losses are not recoverable, but many are.
What ORMs Do.

- A classical risk methodology would segment the approach to OpRisk into two parts: Transactional and Portfolio.

- In the context of Operational Risk Management:
  - **The Transactional Approach** is fundamentally forensic risk management.
    - Begins with the assumption that most losses are repetitive in nature
    - Understanding the anatomy of a loss.
    - There are only a limited number of unique ways to lose money.
  
  - **The Portfolio Approach** views risk as a class
    - Begins with the premise that business owns its own risk.
    - Statistically analyzes classes of risk in order to inform decision making.
    - As an objective, seeks to price risk into the business model
The Mechanics of Risk Management

**Transactional:**
- Develop pattern recognition programs to identify repeating sources of losses.
- Forensically analyze a sample loss in order to understand the component attributes. (This is more than just root cause analysis.)
- Break the pattern.
- Use the expanding knowledge of attributes to predict emerging patterns, (i.e. emerging risks.)

**Portfolio:**
- Analyze behavior by risk class.
- With degrees of certainty, predict loss behavior.
- Understand the effect of individual attributes on predicted loss behavior.
- Use this knowledge to develop active scenario analysis tools.
In the case of Operational Risk, Regulators want us to compute Expected Losses and Unexpected Losses with a high degree of certainty, in order to ensure that banks have sufficient capital to cover their OpRisk losses.

However, Risk Managers need to compute Expected Losses and Unexpected Losses with a high degree of certainty, in order to ensure that the business has sufficient revenue to cover all but the most extreme losses.
**Scenario Analysis**

- **The Regulator’s Perspective:** The function of scenario analysis from a Regulatory perspective is the use of internal and external data to inform the capital computation.

- **A 2G ORM perspective:** The purpose of scenario analysis is to inform product design, NCPA, and product pricing.

- What it entails:
  - Determining your Expected Loss Norms for a product, vehicle or geography.
  - Understanding the attributes (variables) that drive ELN.
  - Answer the question: What happens when you change any one of those attributes.

- What do you do with Scenario Analysis?
  - Product Design and New and Complex Product Approvals
  - Drive OR capital efficiency
  - Ensure that OR risk is adequately priced in.
OpRisk Limits versus OpRisk Risk Appetite Risk Tolerance

- Regulators in the USA and abroad have recently been asking us to establish OR limits for products, vehicles and geographies.
  - This doesn’t make sense. In Risk Management “limits” are hard stops with consequences if you violate them.

- However in Operational Risk:
  - A loss event can have monetary consequences long after the event date.
  - A significant portion of losses derive from litigation, some of which are settled below par.
  - You can “limit” clients from taking credit risk, but you cannot “limit” them from accessing their own money.
  - You have limited classical ‘Levers of Control’

- A more rationale approach is to use **Risk Appetite and Risk Tolerance** which are fundamentally predictive, and establish the ability of a business model to absorb its own losses.
Risk Appetite

- Risk Appetite as a methodology seeks to ensure that:
  - A business can cover its Expected Losses from EBT.
  - (A business can cover stressed losses from a (e.g.) 1 in 10 scenario from EBT.)
  - A business has sufficient headroom to accommodate shortfalls in planned revenues or excesses in planned expenses, or excesses in losses from other categories (e.g. Credit.)
  - A business can cover the truly unexpected losses from EBT and Capital.

- Ways to express Risk Appetite:
  - Risk Appetite Coverage Ratio.
    - Also allows for comparison of unrelated businesses.
  - Risk Appetite Headroom.
Risk Tolerance

- Risk Tolerance is how we partially address the absence of effective Levers of Control for Operational Risk. If we can’t sell the risk, or buy a hedge for it, then we must predict the direction of the risk, and alter the business model in anticipation.

- Risk Tolerance plots actual YTD OpRisk losses and dynamically updates projected losses from this new starting point.
  - Concerned when dynamic projection exceed ELN.
  - Concerned when dynamic projection exceed Risk Appetite.
Question: How do we measure results?
- Reduction in loss frequency.
- Reduction in dollars lost.
- Reduction in capital deployed.

Question: Do we get better results from Transactional (i.e. Forensic) or Portfolio approach to Operational Risk management?
- Wrong question, you can’t do one without the other.
  - Unless you have done the forensics and understood the attributes of Operational Risk Management you can’t do scenario analysis.
  - Without scenario analysis, you can’t price the portfolio.

Question: How does this relate to 1G Operational Risk?
- 1G is ‘oxygen’. You can’t do anything until you have
  - Met the Regulatory requirements.
  - Established a valid database
The Role of 2G ORMs

- Product Strategy
- Geographic Strategy
- ‘Total’ Risk Assessments
- Pricing Strategy
- Product design and New and Complex Product Approvals.
- Capital computation, capital allocation, capital efficiency.
Closing Thoughts

The difference between the disciplines of Compliance and Risk Management:

- For Compliance Managers, zero tolerance in compliance means exactly that.
  - There is no permissible leeway when it comes to violating laws.

- For Risk Managers, zero loss is rarely a realistic goal.
  - Banks are in the risk business, and therefore our goal is to manage the risk, not to zero it out.

Rote implementation of Basel Rules or national guidelines is only the first step in building an OpRisk function.

- Establishing a proscriptive regime of controls is only one element in Operational Risk and will not address the lion’s share of your losses.

Risk Managers Anticipate, Mitigate and Recover

- Transactional risk managers use forensic skills to break patterns.
- Portfolio risk Managers use quant skills to predict and to price risk.