

Integrating Risk Management: Managing the Interaction of Trading, Credit and Operational Risks in Complex Markets

**SIA Risk Management Conference
June 27, 2006**

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Common Risk Issues

- **What is Current State?**
- **How Can It Change (for the Worse)?**
- **What Can be Done to Mitigate the Bad Cases?**

- **Challenged by Complexity in Products, Clients, and Systems**

- **Issues of Concern to Creditors, Shareholders, Regulators and Ratings Agencies**

Interaction of Market, Credit and Operational Risk

- **Mitigating one risk can increase another**
 - Collateral mitigates credit risk but increases operational risk
 - Offsets to market risk can increase credit risk and/or concentration risk with liquidity providers
 - Buying insurance mitigates operational risk but creates exposure to insurance provider

- **Multi-disciplinary approach**
 - New Products Committee

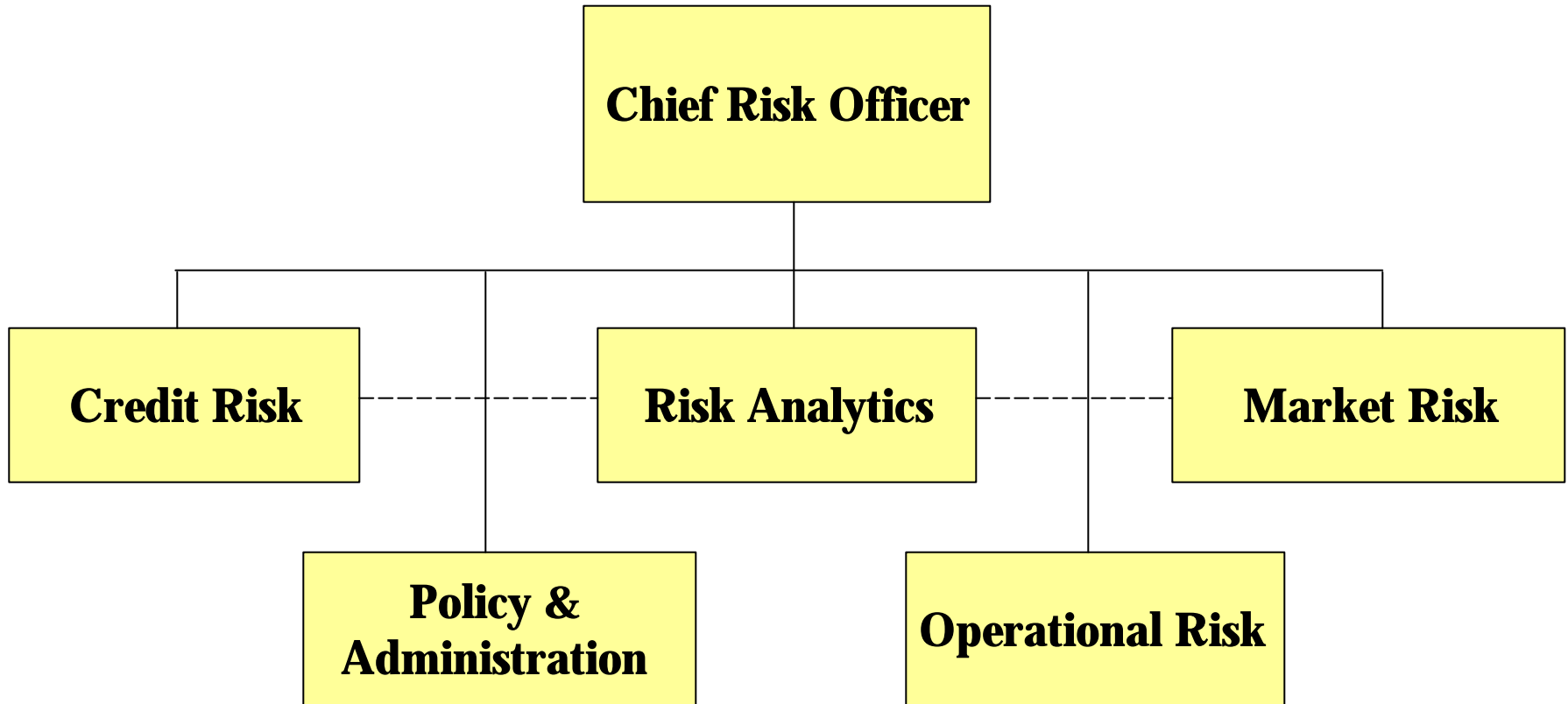
Global Risk Management Mission

- **Enhance Shareholder Value**
- **Ensure Firm Operates within Risk Appetite**
- **No Surprises**

How?

- **Policies and Processes to Promote Quality and Consistency**
- **Quantify Risks with Appropriate Models**
- **Monitor and Communicate “Texture” of Risks**

Functional Organization Chart



Risk Assessment

- **Data Quality and Consistency**
- **Ex ante vs. ex post review**
- **Challenges:**
 - Multiple platforms
 - Defining what should be collected and assessed
 - Time horizons

Risk Measurement

- **Quantify Risks with Appropriate Models**
 - Standard risk measures ignore the tails
 - Supplement with scenario analysis

- **Market, credit and operational risks occur across different time horizons**

- **Challenges:**
 - Technology
 - Integrating risk analytics
 - Applying consistent scenarios across risk disciplines

Communication

- **Monitoring and Reporting**
- **Communicating the “texture” of risk**
 - Risk is not one number
- **Challenges:**
 - Common language
 - Risk vs. reward
 - Properly pricing risk

Facilitating new initiatives

➤ **How should new initiatives be evaluated?**

- Going slow vs. going fast
- Operational risk
- Opportunity cost

➤ **Objectives for new initiatives:**

- Understand the strategy
- Understand the tactics for implementing the strategy
- Reconcile risk and credit policies
- Follow-up to check for/avoid strategy drift

Questions?