



Managing Insurance Risk

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Tools for Managing Insurance Risk

- Insurance Risk Management Inventory
- Product Financial Management Cycle



Scope of Insurance Risk Management

- What is risk?
- What is Insurance Risk?
- What should be excluded?



Types of Insurance Risk

- Pricing Risk – A systematic deviation stemming from an expectation formed incorrectly
- Volatility Risk – Random deviations; expectations are accurate but timing deviations may occur
- Concentration Risk – A material deviation that occurs infrequently



Organizing the Inventory

- Define objectives
- What are the key drivers of these objectives?
- Organize risk inventory to correspond with these drivers



Insurance Risk Management Inventory

- Mortality and Other Claim Risk Margins
- General Account Margin
- Separate Account Margin
- Capital/Equity Required
- Policyholder Behavior
- Producer Behavior
- FAS 97 Amortization
- Long Term Guarantees


Insurance Risk Management Inventory

- Severity/Likelihood
- Types of Risk
- Risk Evaluation and Management
- Risk Monitoring and Reporting
- Proposed Enhancements

Completing the inventory – Part 1

- Large group brainstorming
- Team representing finance, risk management and actuarial functions
- Sorting, organizing, debating, writing, revising





Example: Policyholder Behavior – Pricing Risk

- Misestimating future premium payment patterns
- Risk Management:
 - Sensitivity testing in pricing and forecasting to show a range of results
 - Minimum profit requirement in stress scenarios
- Risk Monitoring:
 - Experience analysis



Example: Mortality – Volatility Risk

- Quarterly fluctuations in experience
- Risk Management
 - Reinsurance, Retention Limits, Contractual Provisions
- Risk Monitoring
 - Weekly large claims report
 - Large policy exposure report
 - Monthly actual/expected mortality report
 - Volatility measure – “quarterly earnings at risk”



Example: Separate Account Margin – Volatility Risk

- Gain/loss on separate account transaction processing
- Risk management
 - Contractual terms on new products
 - Transfer funds out of equities when claims are reported
- Risk monitoring and reporting
 - Monthly gain/loss report



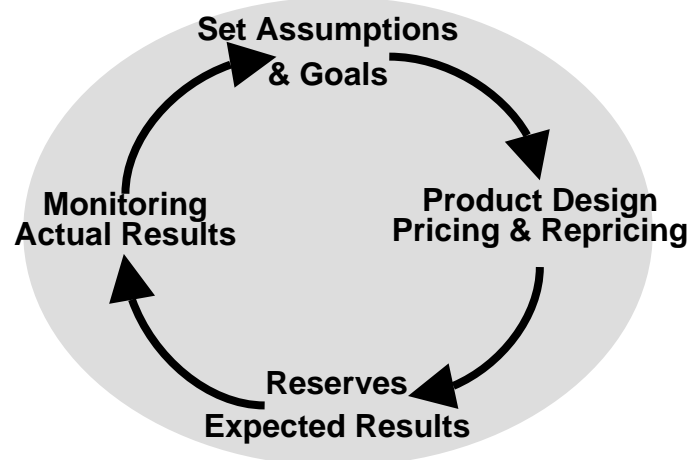
Example: Required Equity – Concentration Risk

- Loss of reinsurance reserve credits
 - Potential causes: reinsurer failure
- Risk management
 - Counter-party limits
- Risk monitoring and reporting
 - Annual counter-party review

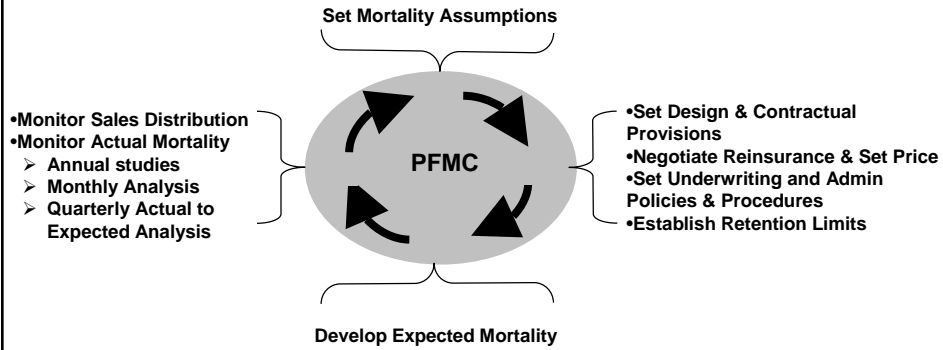
Completing the inventory – Part 2

- Review with senior management, risk committee, corporate functions
- Review policies and procedures
- Compare with inventory of management information reports
- Action plans
- Trial period
- Revisit

Life Product Financial Management Cycle



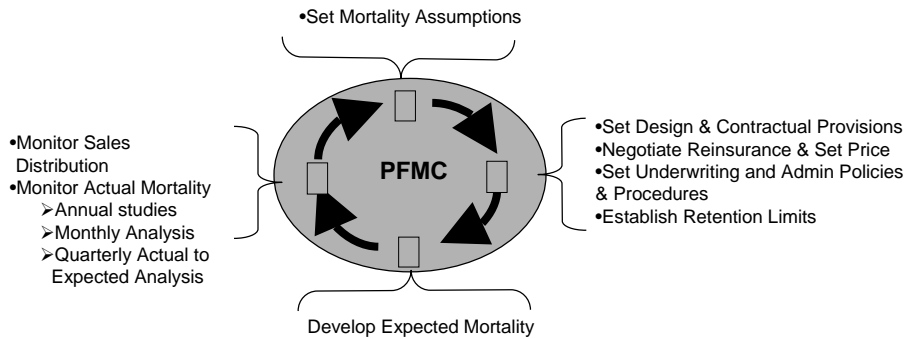
Mortality Pricing Risk - Control Points in PFMC



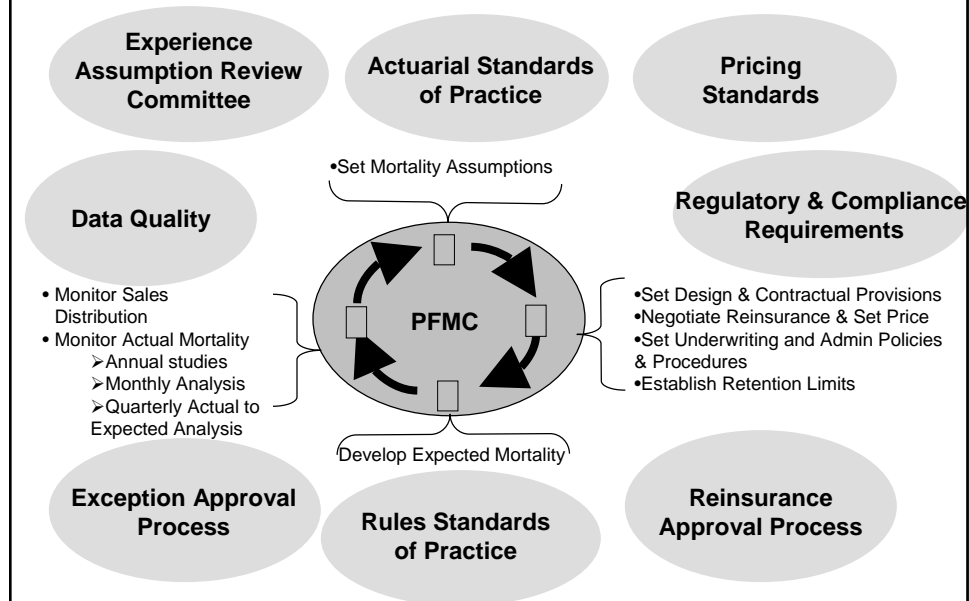
Mortality Pricing Risk - Inputs

Other Inputs

- | | |
|---|---|
| <ul style="list-style-type: none"> •Industry Data •Reinsurance Input •Data Credibility | <ul style="list-style-type: none"> •Market Practice •Target Market •Product Strategy |
|---|---|



Mortality Control Process



Benefits

- Better understanding of insurance risk and how it is managed and monitored in our organization
- Common vocabulary for communicating about risks in our organization
- Assures comprehensive monitoring of risks and appropriate escalation of risk issues
- Serves as a basis for economic capital analysis in the future

Appendix

Insurance Risk Management Inventory

Mortality & Other Claim Risk Margins				
Severity/ Likelihood	Types of Risk	Risk Management	Risk Monitoring & Reporting	Proposed Enhancements
	Pricing Risks - Misestimating Expected Mortality & Other Claim risks •	•	•	•
	Volatility Risks •	•	•	•
	Concentration Risks •	•	•	•