



SOCIETY OF ACTUARIES

**ERM Symposium
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4A - ERM and Regulatory Reform

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ERM and Regulatory Reform

SOA ERM Symposium

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Discussion Outline

- **Background**
 - Causes of the financial crisis
 - Lessons learned
 - Fundamental risk management principles
- **Principles of an effective regulatory framework**
- **Modernizing the US regulatory framework for financial services**
 - Issues to be considered in reforming insurance regulation
 - Challenges in modernizing the regulatory framework
- **What does the future hold? Some predictions....**



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Answers to the \$64,000 Question: What caused this financial crisis?

- Lack of institutional and personal responsibility
- Too much regulation OR too little?
 - Unregulated CDS market
 - Regulatory failure to monitor activities (e.g., Madoff, Stanford, AIG, FNMA/FHMC)
 - Patchwork of regulations governing complex financial institutions
 - Legislation or regulation designed to help or penalize one aspect of the market that does not consider the systemic implications on the larger market.
- Markets and transactions with a high degree of correlation or interdependence
- Misguided or misunderstood accounting rules
- High levels of leverage
- High or rapidly increasing levels of risk concentrations



Answers to the \$64,000 Question: What caused this financial crisis? (cont.)

- Mispriced risk
- No oversight of systemic risks
- Misalignment of incentive compensation with risk
- Failure of ERM in some institutions
 - Development of overly complex products with misunderstood risks
 - Over-reliance on poorly constructed models
 - Over-reliance on rating agencies – no independent review of ratings
 - Compliance and cultural issues



Lessons Learned

- There is **no single cause of the financial crisis**; blame must be shared by individuals, companies, legislators, and regulators.
- Big lesson learned for ERM practitioners is that **the value proposition of ERM has STILL not yet been proven.**
 - Many companies simply did not understand their risks OR were betting that the risks would not materialize. CROs struggled to be effective.
 - Rating agencies have probably done most to promote ERM.
 - A culture of risk awareness is essential to managing through business cycles.
 - Active involvement by company management and the Board of Directors is critical.
- **Conflicting objectives of stakeholders must be balanced** in managing a company and the broader economy (short term profits vs. long term viability, revenue generation vs. value creation, consumers vs. investors vs. employees).



Lessons Learned (cont.)

- A one-size fits all, transaction-based, and rule-based **regulatory framework is no longer sufficient given** the products and markets where companies operate. The influence of consumer demand, technology, global markets, and the desire for growth and profits has produced increasingly sophisticated products.
- **Both the company's risk management practices and the regulatory framework need to be modernized!**



Risk Management Principles to be applied by *any* Risk Manager

- The RM framework should help ensure profitable, sustainable business
- The evaluation framework should include all risks, on and off the balance sheet, and aggregate results across all legal entities
- Assessment should be based on fundamental risk analysis, supplementing analysis specific to particular accounting regimes.
- Evaluation of risk should be made relative to the risk appetite and the entity's ability to absorb the loss in a defined time frame.
- Risk reporting must be transparent and traceable from creation of the risk through each transaction where risk is transferred.



Similarities in Implementing ERM: Company vs. Regulation

- **When**
 - Successful ERM is not an audit process conducted after decisions are made, but part of strategic discussions and the cultural fabric of the organization.
 - Regulation needs to be based on a more cooperative model between companies and regulators.
- **How**
 - Effective regulations are not based on rules, but instead evaluate company stability based on company's risk profile, operating practices, and ERM practices.
 - Regulatory framework needs to discourage company practices of attempting to get around poorly designed rules that restrict competition and create incentives to mismanage risk.
 - Company ERM needs to discourage company practices that do not properly manage risk.
- **Who**
 - Company ERM functions need practitioners, dedicated to the ERM function and skilled in ERM principles, with sufficient resources & tools.
 - Regulators must be knowledgeable in ERM principles and trained to evaluate the effectiveness of company risk management programs.
 - Company management, risk professionals, Boards of Directors, and regulators acknowledge the change in their roles for more effective oversight.



Principles of an Effective Regulatory Framework

- **The public's interest is best served by establishing regulations that:**
 - provide adequate consumer protection
 - require transparency of information
 - provide early warnings to pre-empt or minimize failures
 - promote the ongoing viability and responsible growth of free enterprise
- **Regulatory authority works best with a system of checks and balances including transparency and accountability**
 - Regulators are accountable to perform ongoing assessments of regulatory framework and modify as appropriate.
 - Those involved with the reporting, management, and oversight of company operations must adhere to professional standards of practice.



Principles of an Effective Regulatory Framework (cont.)

- **Regulators must understand:**
 - confidence of consumers and investors is an essential component of the US financial system
 - over-reaching regulations can restrict growth and innovation
- **Legislators must understand:**
 - the impact of legislative mandates: FAIR vs RISK-BASED
 - the impact of public policy – not only in terms of the benefits inured to one sector of the market, but also in terms of the impact on the rest of the sector and the overall economy .
- **Investors and other market participants must understand:**
 - a shareholder perspective is value-based
 - the investor perspective will never be fully aligned with a regulatory regime designed to protect policyholders.



Modernizing the US Regulatory Framework for Financial Services

- **Build on a foundation of fundamental risk management principles**
 - Regulate products and transactions based on fundamental risk analysis, rather than the legal entity structure or accounting/reporting requirements.
 - Establish regulations consistent with the way companies operate; leverage company tools and risk management practices.
 - Regulate holistically, based on company's aggregate risk profile.
 - Regulate with an awareness of the impact individual company decisions have on the entire financial system.
- **Provide comprehensive oversight across all financial sectors to prevent regulatory arbitrage**
 - Uniformly regulate across regulatory/supervisory authorities.
 - Recognize the global marketplace.



Modernizing the US Regulatory Framework for Financial Services (cont.)

- **Focus regulators on the risks assumed by a company**
 - with support from a risk-focused audit process from the top down; shift focus away from transaction-based audits.
 - equipped with sophisticated tools and personnel trained to understand risks and complex business operations.
- **Allow flexibility**
 - Adapt to new products, markets, or other developments with a bearing on any party's ability to satisfy an obligation.
 - Adapt to new products, markets, or other developments with potential to destabilize financial system.
 - Adapt to new and emerging risks.



Issues to be Considered in Reforming Insurance Regulation

- **Scope:**
 - Should insurance be regulated along with other financial sectors (banking, brokerage, insurance, securities)?
 - To what extent should the reformed framework streamline the patchwork quilt of regulators?
 - How should reformed framework close gaps in the regulatory system (e.g., unregulated sectors, holding companies)?
 - Does proposed regulatory framework over-reach by creating regulation for sectors that were not a source of problems in recent economic crisis?
- **How much can and should regulation influence the effectiveness of ERM practices? Consider:**
 - Counter-cyclical capital requirements
 - Stricter regulation of systemically significant firms
 - Compensation guidelines that align risk and return over the long term
 - Impact of holding companies



Issues to be Considered in Reforming Insurance Regulation (cont.)

- **How will the federal government interact with the states?**
 - When should government intervene with failing or failed institutions? And which agency?
 - What is the role of the federal government in regulating systemic risks? Feasible? Does SRR decrease or increase risk?
 - Which agencies would have expanded insurance authority?
- **To what degree will framework converge with international practices?**
- **What are the costs of compliance?** How will additional capital requirements affect returns as both the level and cost of capital could be affected for some companies?
- **Will proposed regulatory framework stifle growth and innovation?**



Challenges in Modernizing the Regulatory Framework for Companies

- Articulation of risk appetite is challenging
- Translation of risk appetite into day-to-day operating guidelines is difficult
- The institutionalization of ERM can change how companies make decisions, shifting from cost/benefit to risk/return emphasis.
- Risk models and supporting system infrastructure are necessary, along with routine reporting and rigorous analysis of risk positions.
- Trained risk professionals are essential.
- Communication between risk professionals and business areas is key to unlocking the potential of ERM



Challenges in Modernizing the Regulatory Framework for Investors

- Enhanced risk information from a company's ERM program provides new information for investors to assimilate.
- Stock analysts may need training to manage and reflect risk in their analysis.
- Stock analysts may need to shift analysis from a focus on changes in share price to changes in firm value.
- Communication between company management and investors is key to unlocking the potential of ERM.



Challenges in Modernizing the Regulatory Framework for Regulators

- Principle-based regulation is a paradigm shift for regulators.
- New tools to monitor an individual company's risk profile are needed
- New tools to monitor shifting risks to the entire financial system are needed.
- Trained risk professionals are essential and in short supply.
- Communication between regulators, company management, and legislators is key to effective regulatory framework.



What does the future hold? Some predictions....



- The US and global economies will rebound.
- Some regulatory reform of the financial services industry will be passed by Congress.
- Some reform of US insurance regulations (e.g., principle-based reserves & capital, solvency modernization, convergence with international valuation & accounting) will be adopted by the NAIC and state regulators.
- Regulatory reform will be piecemeal, falling short of comprehensive modernization.
- Public policy makers will continue to pass legislation without full appreciation for its impact on all aspects of the economy.



What does the future hold? Some more predictions....



- More companies will embrace ERM.
- More CRO positions will be created and more aspiring risk professionals will also be created.
- More public watchdogs (e.g., professional groups, media) will step up and voice concerns more often and more forcefully.
- A new financial crisis, not related to the subprime mortgage market, will befall the US and global economies.

-and the cycle starts all over again with smarter, albeit older, players.






ERM Symposium
Should we CARE about Systemic Risk?
Dave Sandberg, FSA, MAAA
April 13, 2010
Allianz Life Insurance Company of North America

Allianz 

Our Mission: Allianz Life is the leading innovator of financial solutions for consumers who want protection, income, and the guidance of a trusted financial professional.
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OUTLINE OF TOPICS

- 1 WHAT IS SYSTEMIC RISK?
- 2 WHAT IS A RISK SYSTEM AND WHY IS THIS CONCEPT IMPORTANT?
- 3 HOW DO RISK SYSTEMS FAIL?
- 4 WHAT TOOLS ARE NEEDED TO PREVENT FAILURE?

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WHAT'S MISSING?

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What's Missing In Accounting?

- Tail risk “disappears” when not shown in accounting (Must often be Probable)
- Accounting lags (and may always lag) in being able to measure tail risk
- Accounting Focus is on Past Results
 - Risk is About the Future
- Accounting Focus is to “Follow the Money/Cash” via Debits & credits

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Results of “Missing” the Tail

▪ LEVERAGING & CONCENTRATIONS

- Tragedy of the Commons
- Risk that “disappears” means mispricing of risk in the market
- Leads to perceived arbitrage spreads promising a “free lunch”
- Ability to leverage “free lunches”
- Above sequences can create system crashing concentrations in unregulated sectors

▪ INCENTIVE COMP PROGRAMS

- Based on sales, short term profits (which are not charged for continuing risk exposure)

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What's Missing In Economics?

- **Invisible Hand** assumes Buyer & Seller can settle at a point time for goods and services and walk away from each other, continuing to trade all assets and liabilities in the market.
- **Actuary** mediates the fundamental insurance dynamic and potential risks in the conflict between the desire to sell lots of promises and the financial reality of meeting those promises.

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Barriers to Solutions

- **Need More Data – But of What? Continue to look under the street lamp**
 - Data needs to tie to actions related to objectives
 - What are the objectives?

Topic I What is Systemic Risk?

“In **finance**, systemic risk is the risk of collapse of an entire financial system or entire market, as opposed to risk associated with any one individual entity, group or component of a system.^{[1][2]} It can be defined as “financial *system* instability, potentially catastrophic, caused or exacerbated by idiosyncratic events or conditions in financial intermediaries”.^[3] It refers to the risks imposed by *interlinkages* and *interdependencies* in a system or market, where the failure of a single entity or cluster of entities can cause a **cascading failure**, which could potentially bankrupt or bring down the entire system or market.^[4]”

Impact of Street Lamp Approach

- Defines the problem incorrectly.
- Thus, proposed solutions or concepts may even aggravate systemic risk in the future.
- The definitions have defined systemic risk in a reactive, retrospective view. And so the solutions can only prevent that specific breakdown from happening again.
- Definition needs to be generalized enough so it will illuminate a new way of “seeing risk” and point to potential future breakdowns that can be seen and prepared for ahead of time, instead of being taken by surprise once again. It should clarify the needed goals and objectives of a systemic risk regulator

What is Missing Here?

- Definitions written based on past events will be incomplete.
- What if we move beyond an entity focus and instead focus on *interlinkages* and *interdependencies* in a system

Topic II

WHAT IS A RISK SYSTEM?

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Approach

- **Processes to transfer, exchange and/or pool risk via the market perform essential roles in our society**
- **Individuals and entities participate for varied reasons - to either pool, mitigate or transfer risk and can be motivated by the desire for gains or the desire to avoid loss.**

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Approach (Cont.)

- **Systems consist of social institutions, laws, processes and products designed to facilitate the transfer, sharing, distribution and mitigation or hedging of risk between various buyers and sellers**
- **Expand the idea of failure (bankruptcy) from a specific participant in the market to a broader question of what causes a Risk System to “fail”**

Risk Transfer Mechanisms

- **Insurance – The pooling of risk for individuals or groups, with protection related to life, property, health, longevity, etc.**
- **Banking - The exchange of risk between savers and borrowers.**
- **Capital Markets - Raising capital (equity and/or debt) for corporations to share risk and reward with investors**
- **Exchanges - Used to set prices for future delivery of a commodity or asset**
- **Government programs for retirement and health risks**
- **Private programs for retirement and health risks**

Objective Now is Not Profits, But Promises

- **Maintaining an orderly and viable market for the ongoing transfer, exchange and/or pooling of risk is essential to fulfilling the promises or guarantees agreed to by its participants.**
- **It is the “promises” behind each Risk System which create confidence and trust among its participants, but which also introduce the risk of systemic failure if the promises cannot be carried out.**

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Markets in Which to Exchange Risk

- **Insurance – Promise from today into the future**
 - Uses Reserves/Capital
 - Control Cycle
 - Risk Sharing
 - VALUE = For Risk Averse to Control Risk of Loss
- **Banks – Utilize Savers Funds to Lend to Borrowers**
 - Allows (and sets) leverage limits, capital
 - Uses government guarantee as a backstop
 - VALUE = Risk medium for Borrowers & Lenders

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Markets in Which to Exchange Risk

- **Investor Capital Raising Processes for Corporations (Equity and Debt)**
 - **A hope for the future**
 - Based on Transparency
 - VALUE = Encourage and Share in Risk Taking by Others
- **Exchanges – Future Agreement to Exchange**
 - Uses Margins/Collateral to Ensure Trust
 - VALUE = Market for Speculators to meet Risk Averse People

Topic III

HOW CAN THE SYSTEM FAIL?

Challenge for Insurance

- Based on current “retrospective” definition, insurance does not instigate systemic (credit) risk, but is a recipient of risk.
- BUT, the actuarial experience and expertise is to review the soundness of risk systems which have diverse participants with competing objectives. This is the precise skill set needed to establish a proactive definition and approach to managing systemic risk.

How Can The “System” Fail?

- **Insurance – The inability to get access to a promise (insurance).**
 - After 9/11, until the US federal government agreed to be a backstop for terrorism, there was a real possibility that businesses would be unable to get commercial coverages.
 - Is lack of access to health coverage a systemic failure? Or is it the inability to control costs?
- **Banking**
 - Depositors can’t get money
 - Drying up of credit for borrowers

How Can The “System” Fail?

▪ **Capital Markets**

- Liquidity crisis where investors are unwilling to buy debt or equity.
- Fear that business segments cannot report on or explain to investors, the value drivers of a company, or that that value might be removed via government actions.

▪ **Exchanges**

- Margin calls that cannot be met. This almost occurred for the Chicago Board of Trade during the 1987 crash. They were within 20 minutes of opening and unable to clear the previous day’s position.

How Can The “System” Fail?

▪ **Government programs for retirement, health risks and other social spending**

- Lack of political will to fund appropriately or to limit commitments whether for specific social programs or for total national debt

How Can Oversight of Systemic Risk Fail?

- **Incomplete definition leads to incorrect criteria for success.**
- **Wrong focus on too big to fail. (Even if we had had only small companies, we still had systemic risk buildup).**
- **Uniform oversight may amplify systemic risk (Bank problem)**
- **Over reliance on capital and bailout funds creates wrong incentives for participants**

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Sources of Confusion

- **Each Market Has Its Own (or Several) Regulators & Objectives**
- **Each participant (Firm owner, regulator, buyer, management) within a market has their own self interested view**
- **Lack of trust amongst participants due to a lack of information about key elements of the transactions**
- **Historical focus has been on failure of individual, atomized units**

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Topic IV – What Tools Are Needed?

- Insurance has been an institution selling promises via a pooled approach to risk, but many of the tools used in this arena are useful, even where the risk motivation may be to accept risk instead of to avoid it.
- Use emerging skill set of Enterprise Risk Management to Risk Systems and the use of a foundational ERM Process

Core Question

- Is there a way to impose a required discipline of risk identification, acceptance and transfer for all companies?
- For example, double entry accounting discipline credited for rise in commerce in Middle Ages that led to the Renaissance.

Could We Care To:

- **Identify risk exposures?**
- **Measure/Assess at what level of risk exposure will the system be deemed to fail?**
- **Identify actions/options needed to manage or mitigate the risks given the accepted constraints?**

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Continued Care Results in

- **Use of Risk Control Cycle to:**
 - Evaluate What Could Break The System?
 - Proactive Way to Illuminate Causes of Risks That Grow in the Dark
- **Allow Risk Controlling, Trading & Steering to Occur in a Managed Fashion**

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Additional Care Concepts

- **Strengthen Market Principles so They Flourish Productively**
- **Start Seeing Asset Bubbles**
- **Manage both Measurable (Known) and Unmeasurable (Unknown) Risks**
- **Develop an analytical framework to assess the impact of political actions and programs on systemic risk**

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