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# A Study of Reinsurer Risk Strategies

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# Environments, Attitudes and Strategies

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| Risk Environment | BOOM | BUST | UNCERTAIN | MODERATE |
|---|---|---|---|---|
| Risk Attitude | Maximizer | Conservator | Pragmatist | Manager |
| Risk Management Strategy | Risk Trading | Loss Controlling | Diversification | Risk Steering |

Plural Rationality Theory suggests four environments, four attitudes and four strategies. This discussion will concentrate on the strategies.

# Risk Strategy: *Diversification*

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- Oldest type of risk management strategy
  - Spread exposures across different classes of risks
  - Avoid large risk concentrations
- Formal diversification programs set targets for the spread of risk
  - Maximums and minimums for various classes of risk
- Uneven growth

# Risk Strategy: *Loss controlling*

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- Most traditional form of risk management strategy
  - Identify and mitigate the most significant risks
- Commonly practiced by non-financial firms
  - Also applies to financial risk
    - Careful underwriting of loans / insurance policies
    - Claims management & credit workout
- Low growth

# Risk Strategy:
## *Risk trading*

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- Newer risk strategy
  - Arose from trading desks and the insurance industry
- Focus on getting the price of risk correct
  - Requires complicated models of risk, reward, and economic capital
- Can be applied on a transaction-by-transaction or other “siloed” basis
  - If these firms use Economic Capital, they allocate it to the case level
- Seek high growth

# Risk Strategy:
## *Risk steering*

- Applies the ideas of risk trading at a macro level to the major strategic decisions of the firm
  - Seeks the optimal risk / reward balance
  - Tries to steer the firm in that ideal direction
- Fundamentally an enterprise-wide approach
- Almost always tied to Economic Capital Model
- Some seem to think that only risk steering is “real” ERM
- Moderate growth – grow with market

# ERM looks different under different strategies…

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| | LOSS CONTROLLING | RISK TRADING | RISK STEERING | DIVERSIFICATION |
|---|---|---|---|---|
| Risk Management Systems | Strict limits<br>Strict authorities | Flexible<br>Opportunities | Formal policies and standards<br>CRO | Flexible<br>High communication |
| Risk Models | Stress testing | Pricing models<br>Rating agency | Economic capital & value | Simplified economic capital |
| Risk Management Reports | Limit breaches<br>Emerging risks<br>Extreme loss | Profit and risk weighted sales | ROE<br>Capital budget | Risk aggregates & concentrations |

# Audience Polling Results

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The predominant risk strategy of my firm is:

| Firm Strategy | Risk Managers | Single Insurer Employees | Actuaries |
|---|---|---|---|
| Diversification | 27% | 31% | 18% |
| Loss Controlling | 41% | 6% | 29% |
| Risk Trading | 8% | 12% | 27% |
| Risk Steering | 25% | 51% | 25% |

# Preferred strategies for different risk types: sample spanning 23 companies

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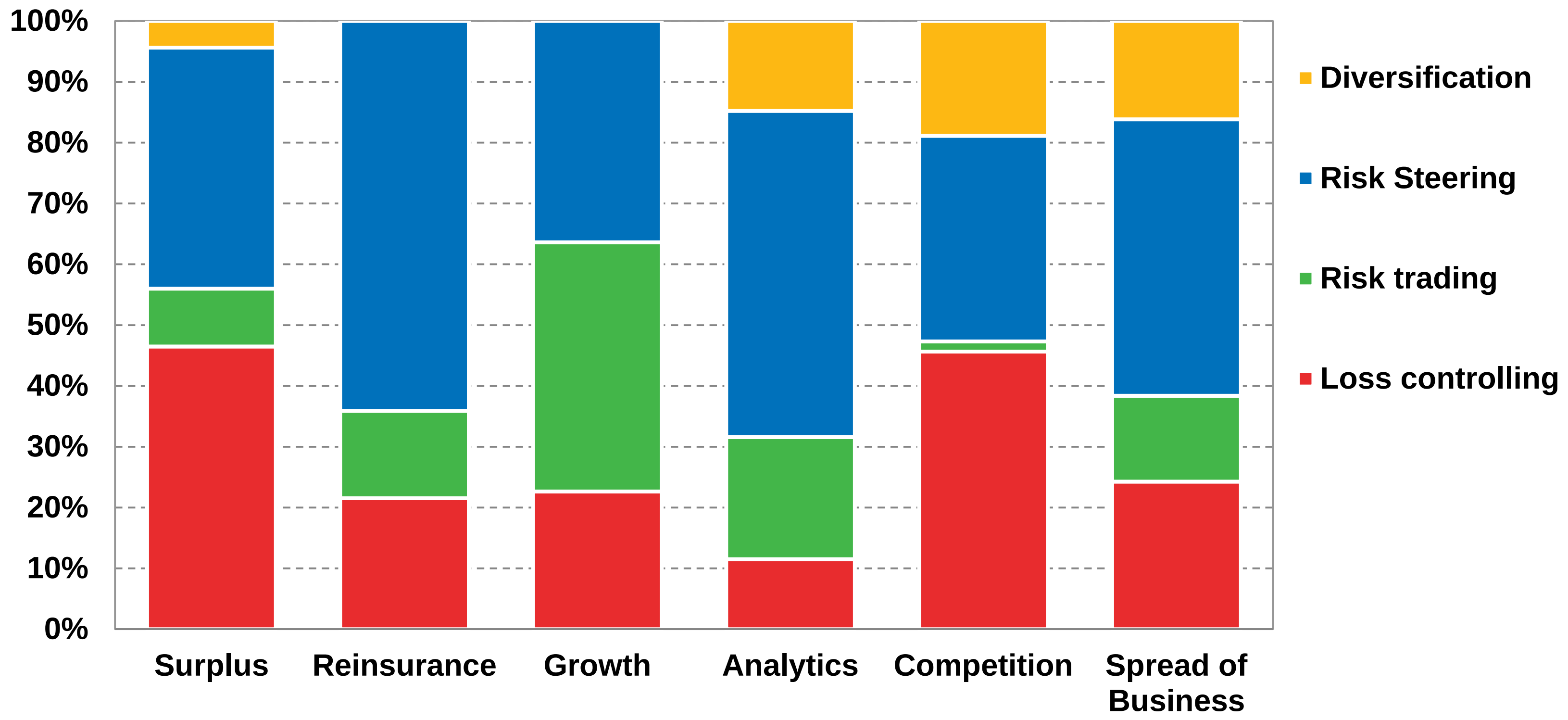

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# THE STUDY

# Study Objective

- Look across risks within companies
  – How are these risk strategies applied?
  – Are there any patterns?
  – Or are all risk strategies bespoke?

# Company risk approach: 8 case studies

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- Surveyed and interviewed senior officers at 8 insurers
  - Geographies: US, Canada, Australia, Peru, Korea, UK, Germany and Bermuda
  - Included life, non-life and combined insurers
  - Interviewed highest-ranking officer with primary responsibility for risk management
- Asked about key risks:
  - Insurance, reserves, investments, operations and enterprise-level coordination
- Goal: measure degree to which firms used one strategy for all risks, or different strategies for different risks

# Survey instrument

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- 43 items covering the 5 risk types (response = degree of agreement)
- Sample **insurance risk** statements
  - Risk models tend to understate risk, so therefore add a significant margin to model outputs before using. (Loss Controlling)
  - Diversification targets are an important part of risk management. But may not be specific. (Diversification)
  - Pricing controls are flexible and frequent exceptions are granted (Risk Trading)
  - Risk models are important. (Risk Steering)
  - Likely to expand risk appetite if there is good return for the additional risks that exceeds appetite. (Risk Trading)
  - Have strict limits for maximum loss exposure. (Loss Controlling)
  - Will be quick to decide to drop or add a new line of business or territory. (Diversification)
  - Underwriting policies and procedures are very clearly documented. (Risk Steering)

# Insurance risk findings: survey

- Insurance risk management goal
  - 4 firms:  achieve better return on risk (**risk steering**)
  - 1 firm: limit losses from insurance risk (**loss controlling**)
  - 1 firm: **risk steering** and **loss controlling**
  - 2 firm: **risk steering** and **risk trading**
- Detail of one firm's response to insurance risk items
  - Agreed / disagreed evenly with loss controlling statements
  - Disagreed or were neutral with all risk trading and diversification statements
  - Agreed or were neutral with all risk steering statements
  - Categorized as one of the 4 firms using **risk steering** strategy for insurance risk

# Insurance risk findings: from the interviews

- Insurers who favored **risk steering** for insurance risk:
  - "we set boundaries within our risk appetite as well as zero tolerance qualitative risks where we will not go"
  - "if warranted, the risk appetite could be revised, would require exec and board approval first"
  - "we consult models for all risk related decisions, but no longer rely solely on models"
  - "aspire to calculate and allocate capital by line of business for risk-reward decision making"
- Insurers with **loss controlling** approach to insurance risk:
  - "written risk appetite that we will not accept any risk that is not understood at senior exec level (regardless of potential return)"

# Investment risk findings: survey

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- Investment risk management goal
  - 1 firm: **diversification**
  - 1 firm: **loss controlling**
  - 1 firm: **risk steering**
  - 1 firm: **risk trading**
  - 1 firm: **diversification** and **loss controlling**
  - 1 firm: **risk steering** and **loss controlling**
  - 2 firms: **diversification**, **loss controlling** and **risk steering**

# Investment risk findings: from the interviews

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- Insurers with **risk trading** approach to investments
  - "active management and trading"
  - "exploit opportunities in the market"
- Insurers with **risk steering** approach to investments
  - "low risk investment portfolio could actually increase total risk"
  - "very important to match liabilities"
- Insurers with **loss controlling** approach to investments
  - "we want a low risk investment portfolio"
  - "do not want to lose any money from taking investment risk"
- Insurers with **diversification** approach to investments
  - "high scrutiny of largest exposures"
  - "make sure we hit diversification targets"

# Insurance and investment risk: observations

- Insurers are quite comfortable talking about these risks
  - See themselves as having made conscious choices to exploit some risks, manage others, avoid a third group
  - Have a language for discussing these risk and reward choices
- Most did not have consistent approach for these two risks
  - 5 of the 8 had a mixed strategy

# Reserve and operational risks: survey

- Two major risks not directly associated with revenues: no upside
- Reserve risk
  - 3 firms: **loss controlling** (conservative reserves)
  - 3 firms: **risk steering** (use models to carefully predict reserves)
  - 2 firms: agreed / disagreed equally with these approaches
- Operational risk
  - 2 firms using a **risk steering** approach
  - 3 leaned heavily towards **loss controlling**
  - 3 did not answer survey questions about operational risk
    - Also were not willing to discuss during the interview
    - Possibly, officer not involved in operational risk management

# Reserve and operational risks: interviews

- Insurers with a **loss controlling** approach
  - "very proud of track record of few or no reserve strengthenings"
  - "zero tolerance for operational losses"
  - "take extra care to avoid losses from operational risks, even if it costs more and slows things down"
- Insurers with a **risk steering** approach
  - "our reserve process is highly technical"
  - "operational risk management based on limits and a control cycle"
  - "formal methodology to deal with reputation risk…we do periodic polling of the public, and are proactive about negative press"

# Enterprise level risk: survey

- Enterprise-level risk strategy
  - 3 firms: **risk steering**
  - 1 firm: **loss controlling**
  - 1 firm: **diversification**
  - 2 firms: **risk steering** and **loss controlling**
  - 1 firm: combination of **diversification**, **loss controlling** and **risk steering**

# Enterprise level risk: interviews

- Revealed that risk steering strategy was aspirational for 4 of the 6 firms that indicated using it (had not yet fully developed an economic capital model)
- Insurers with an enterprise level **risk steering** approach
  - "we have (or will soon have) a formal economic capital model and capital budgeting process"
  - "we use the regulatory risk factor formula to estimate aggregate risk and allocate capital"
  - "collaborating across risk silos to proactively mitigate effects of combinations of risk and interactions of risks is important"
- Insurers with a **loss controlling** approach at the enterprise level
  - "focus is on maximum loss and keeping a wide margin above that level"
- Insurers with an enterprise-level **diversification** approach
  - "ERM is not exclusively about economic capital"
  - "we do not have a strong belief in the accuracy of correlation assumptions"

# Single insurer's self-assessment

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- Senior risk officer divided up the firm's risks according to the variations in risk strategy
  - Nat cat: **diversification** by EQ vs. wind, etc; diversification of locations
  - Other insurance risks: **risk trading** strategy – work hard to ensure selling insurance at the right price, risk is low concern
  - Operational risk: purely **loss controlling**. Since not paid for taking these risks, did not want more risk than absolutely necessary.
  - Investment risk: **risk steering** efficient frontier approach to long term goals, with **risk trading** tactical variations based upon short-term view of markets

# Overall results: combinations of strategies

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- Only 1 firm had a single strategy (**loss controlling**) for all four risk types plus enterprise level
- 1 used an overall **diversification** strategy, incorporating multiple strategies for each type of risk
- 2 firms used **two** different risk management strategies
  - Both used **risk steering** for some risks, **diversification** for others
- 4 firms used **three** strategies
  - 2 using **risk steering**, **loss controlling** and **diversification**
  - 1 using **risk trading**, **risk steering**, and **diversification**
  - 1 using **risk trading**, **risk steering**, and **loss controlling**

# Conclusion

- This small study suggests that insurers do not adopt a single strategy towards all of their risk
- Supports the possibility of a conclusion that firms in the risk business consciously choose which risk strategy that they prefer for each major risk, varying that strategy risk by risk

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