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Some Further Thoughts on Systemic Risk - and How to Control it

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Introduction

- Warnings from 1999
- What caused the GFC?
- How much longer – are we there yet?
- Can we prevent future crises?
- Dynamic Capital Adequacy
- Control Theory & Systems Theory
- Product Regulation



Darwin 1999

- Some Thoughts on Systemic Risk
 - Growth of price-insensitive trades
 - Growth of leverage
 - Hidden optionality in products & regulation
 - Dilemma for regulators
 - A Threat to the survival of the financial system
 - a World Bank Holiday?



Were the Warnings Appropriate?

- Optionality
 - Sub Prime and its hidden “Put”
- Pro-cyclicality
 - the different issues of macro and micro regulation
- Leverage – massive expansion globally
- All contributed to the GFC

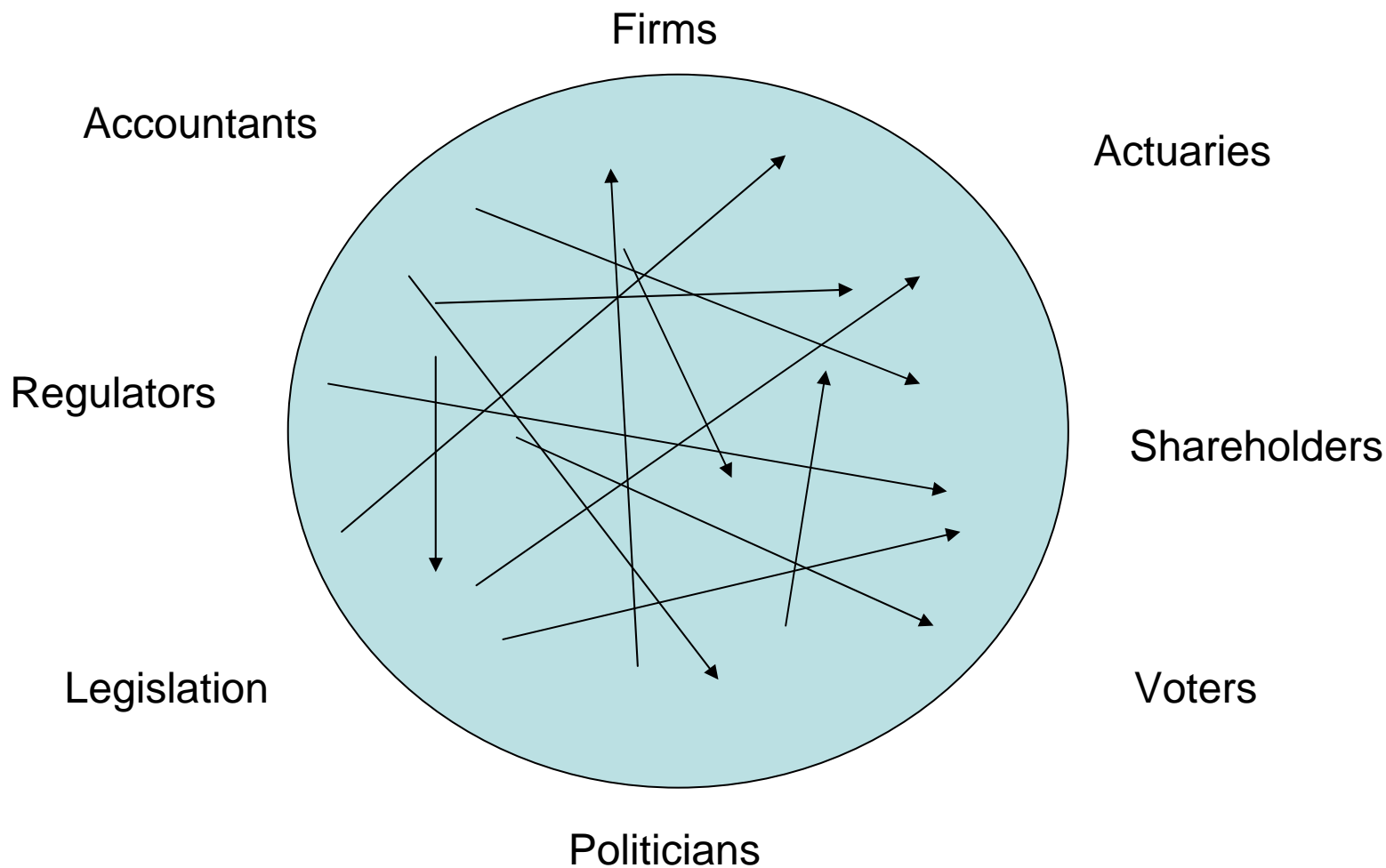


What Caused the GFC?

- When you don't like the result
 1. Blame the players
 2. Blame the referee
 3. Blame the rules of the game
 4. Blame the crowd
- A classic case of systemic failure?



Systemic Failure





How Much Longer?

- Hyman Minsky
 - Hedged, Speculative and Ponzi debt
 - Time for de-leveraging
- Peter Bernstein
 - Deflation or Inflation
 - The importance of starting conditions



Future Crisis Prevention

- A Systemic Risk Supervisor (or whatever)
- Dynamic Capital Adequacy
- Regulatory Triumvirate
 - Treasury Fiscal Policy & Econ. Activity
 - Cent. Bank Monetary Policy & Inflation
 - Syst. Reg. Capital Ratios & Leverage



Control Theory

- Look at Engineering Literature
 - The PID Controller
 - Proportionate, Integral, Derivative
 - $MV(t) = K(p)*E(t) + K(i)*I(t) + K(d)*D(t)$

(Not the Actuarial Control Cycle)



Systems Theory

- A Holistic Approach - “The Fundamental Interconnectedness of All Things” (Dirk Gently)
- Replace “Cause and Effect” by Feedback, Recursion, Thresholds, Tipping Points
- “Externalities” are really “Internal” to system
- Nothing is Constant – Learning Organisations



Systemic Risk Indicators

- **Suggestions for the Systemic Regulator**

- Leverage ratios – Institutional & Household

- Money supply

- Asset Market Levels and Volatility

- Real Interest Rates & Credit Spreads

- Real Estate & Commodity Prices

- Corporate Profitability & Incentive Payments

- Financial Innovation



Product Regulation

- Should the Systemic Regulator review “New” products for their systemic implications?
- Candidates
 - Products with embedded optionality
 - Products containing leverage
 - Products with Counterparty risk vs Fiduciary role (Principal vs Agent)
 - Structured Products generally
 - Anything purporting to provide a guarantee?
- How does this fit with ASIC Role?



Issues for Discussion

1. Dynamic Capital Adequacy
or Dynamic Provisioning?
2. Where does Systemic Regulation fit?
APRA? RBA? Other?
3. Global or Local?
Does Harmonisation add to systemic risk?
4. Product Regulation
Do we regulate systemic effects?