



# The Road to Re-regulation: Repainting the Center Line and Erecting More Guardrails

*Laura E. Kodres*

*Monetary and Capital Markets Department*

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# Outline

- Objectives of Regulation
  - “Micro” and “Macro” regulation
- What is “good” regulation
- The regulatory “conjuncture”
- Re-regulating institutions
  - Securitization
  - Systemic liquidity and insolvency risks
- Re-regulating markets and instruments

# Objectives of Micro Regulation

- Remove market failures
  - Usual economic assumptions not satisfied
    - Lack of transparency
    - Extreme asymmetric information
    - Lack of large numbers of buyers or sellers (unbalanced)
    - Principle agent difficulties
- Rectify “unfair” outcomes
  - Treat all investors according to their contractual rights
  - Maintain “rule of law”

# Objectives of Macro Regulation

- Mitigate systemic risks; establish financial stability
  - Multiple, simultaneous institutional failures
  - Destabilizing market reactions; excessive volatility
- Smooth cycles; remove procyclicality
  - Avoid exacerbating credit cycles
- Ultimately, maintain efficient intermediation to promote growth and low inflation.

# Successful Regulation ...

- Does not create unintended consequences.
- Provides incentives for individuals or institutions to contribute to the good for the “system,” not just themselves.
- Is not too difficult or complex for either regulatee or regulator to understand.
- Least-cost method - uses existing private sector information or business platforms as much as possible.

# The Regulatory “Conjunture”

- Bank regulation
- Non-bank regulation
- Credit rating agencies
- Accounting and disclosure
- Governance and compensation
- Central counterparties (CCPs)
- Market functioning

# The Regulatory Discussion: Where Do We Stand?

- Fine-tuning existing “micro” regulation (the “center line”, agreement)
  - Bank capital requirements
  - Market functioning
  - Non-bank regulation (mortgage brokers, hedge funds, credit rating agencies)
- New “macro” regulation (the “guardrails”, less agreement)
  - Procyclicality
  - Systemic risk regulation: liquidity and solvency

# Re-regulating: Securitization Markets

- Originators' incentives
  - Consumer protection
  - Compensation
- “Skin-in-the-game”
  - Holdings of underlying loans/securities
- Transparency of information and models
  - Remove of asymmetric information, more information
- Arrangers and credit rating agencies' relationships
- Consolidation and appropriate capital risk-weights

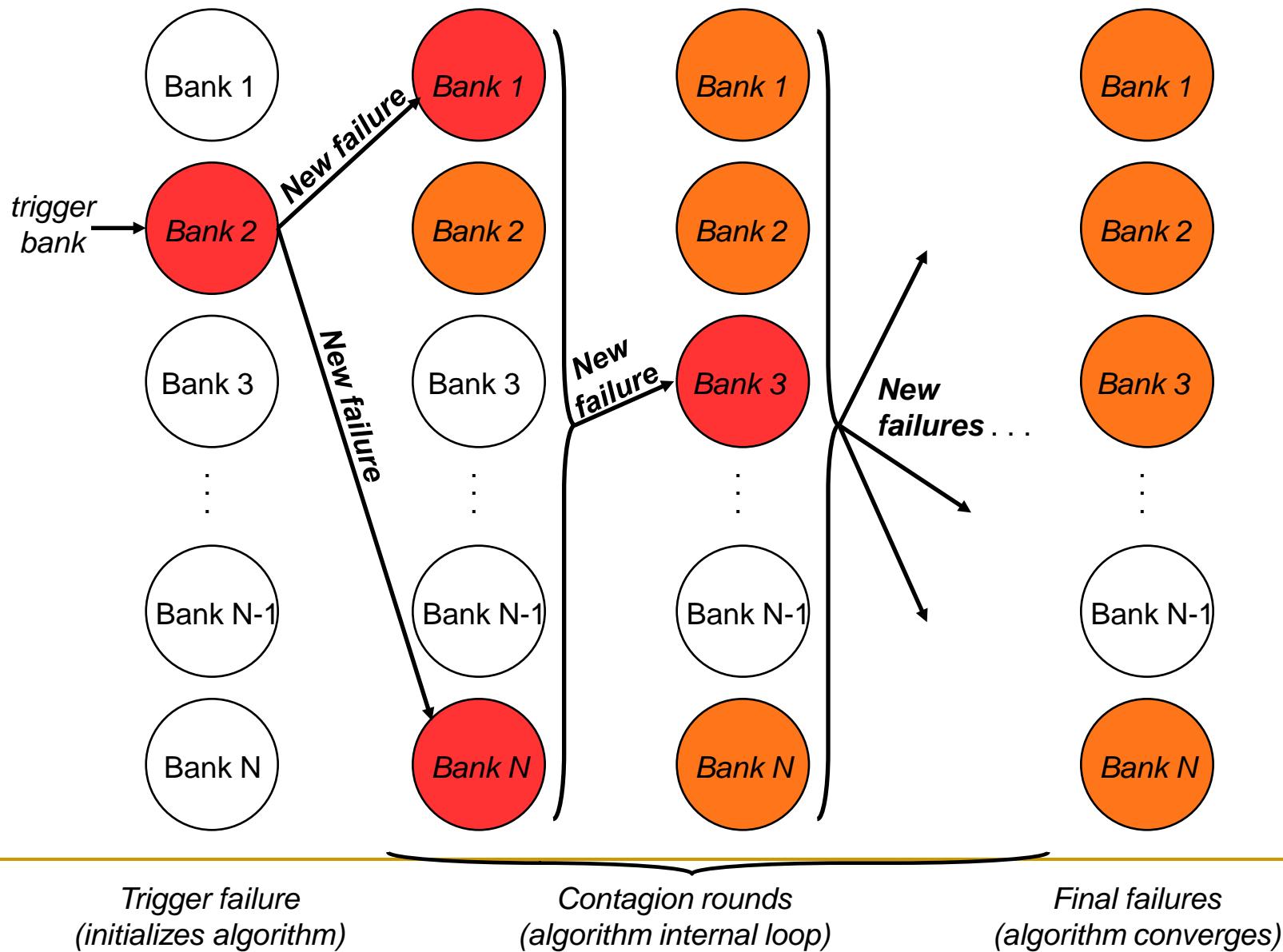
# Systemic Liquidity Management

- Traditional liquid asset ratios
- Asset/liability maturity mismatches
- Systemic liquidity risks
  - Capital “add-ons”
    - Within Basel II-like environment
  - Ex ante, risk-based insurance
    - Analogous to deposit insurance
    - Aligned to liquidity

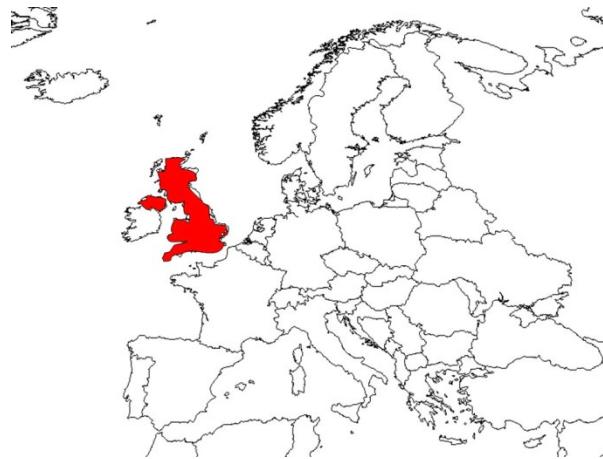
# Systemic Insolvency Risk

- Sequential insolvencies of financial institutions
  - Interlinkages important
  - Measurement of effects (capital losses) possible through network models
  - “CoVar” type measure could be helpful
  - Risk exposure measurement issues remain

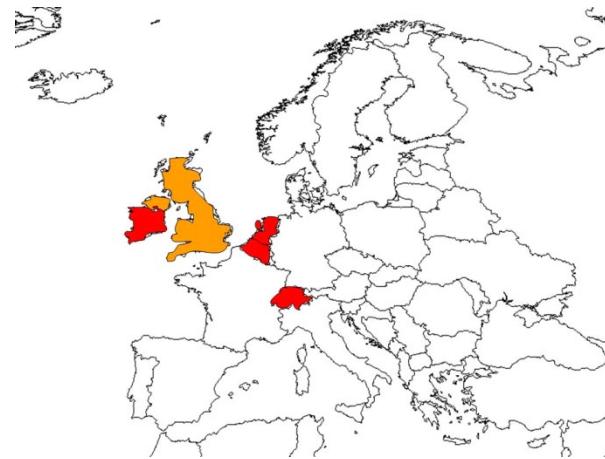
# Network Analysis



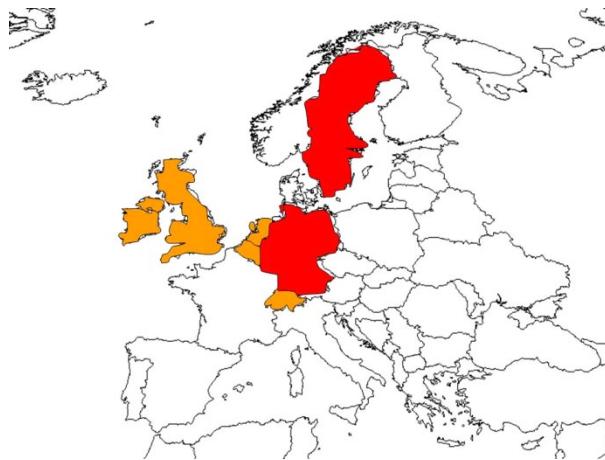
# Network Analysis: Contagion Path triggered by the UK failure



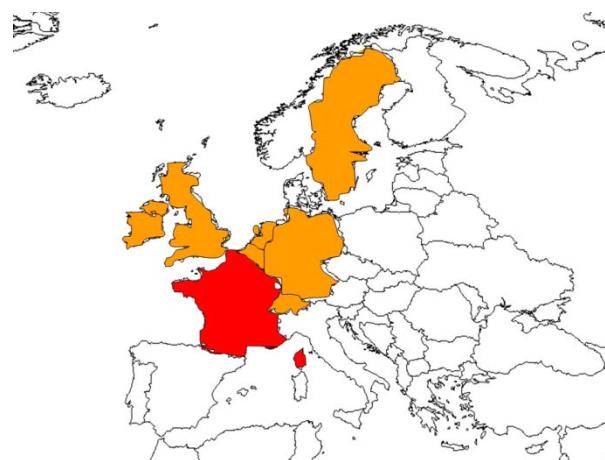
**Panel 1 (trigger failure)**  
Affected Countries: United Kingdom



**Panel 2 (1st contagion round)**  
Affected Countries: United Kingdom, Belgium, Ireland, Netherlands, Switzerland

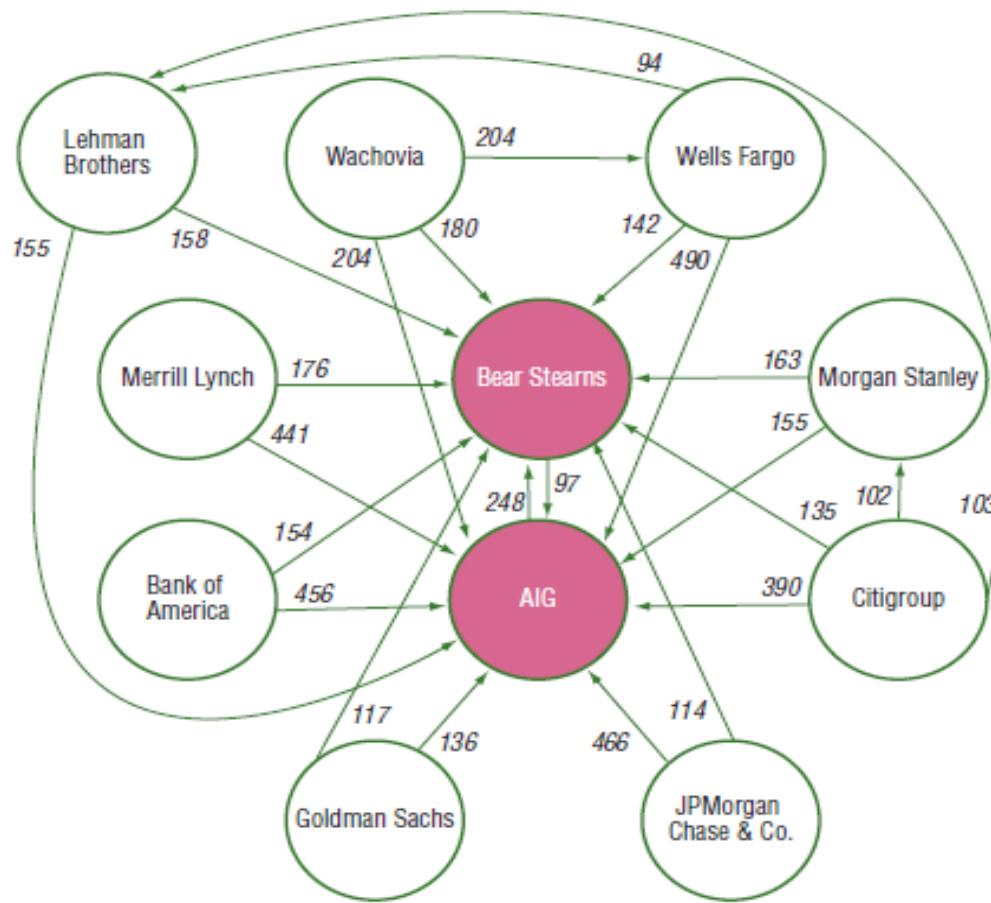


**Panel 3 (2nd contagion round)**  
Affected Countries: United Kingdom, Belgium, Ireland, Netherlands, Switzerland, Sweden, Germany



**Panel 4 (final round)**  
Affected Countries: United Kingdom, Belgium, Ireland, Netherlands, Switzerland, Sweden, Germany, France

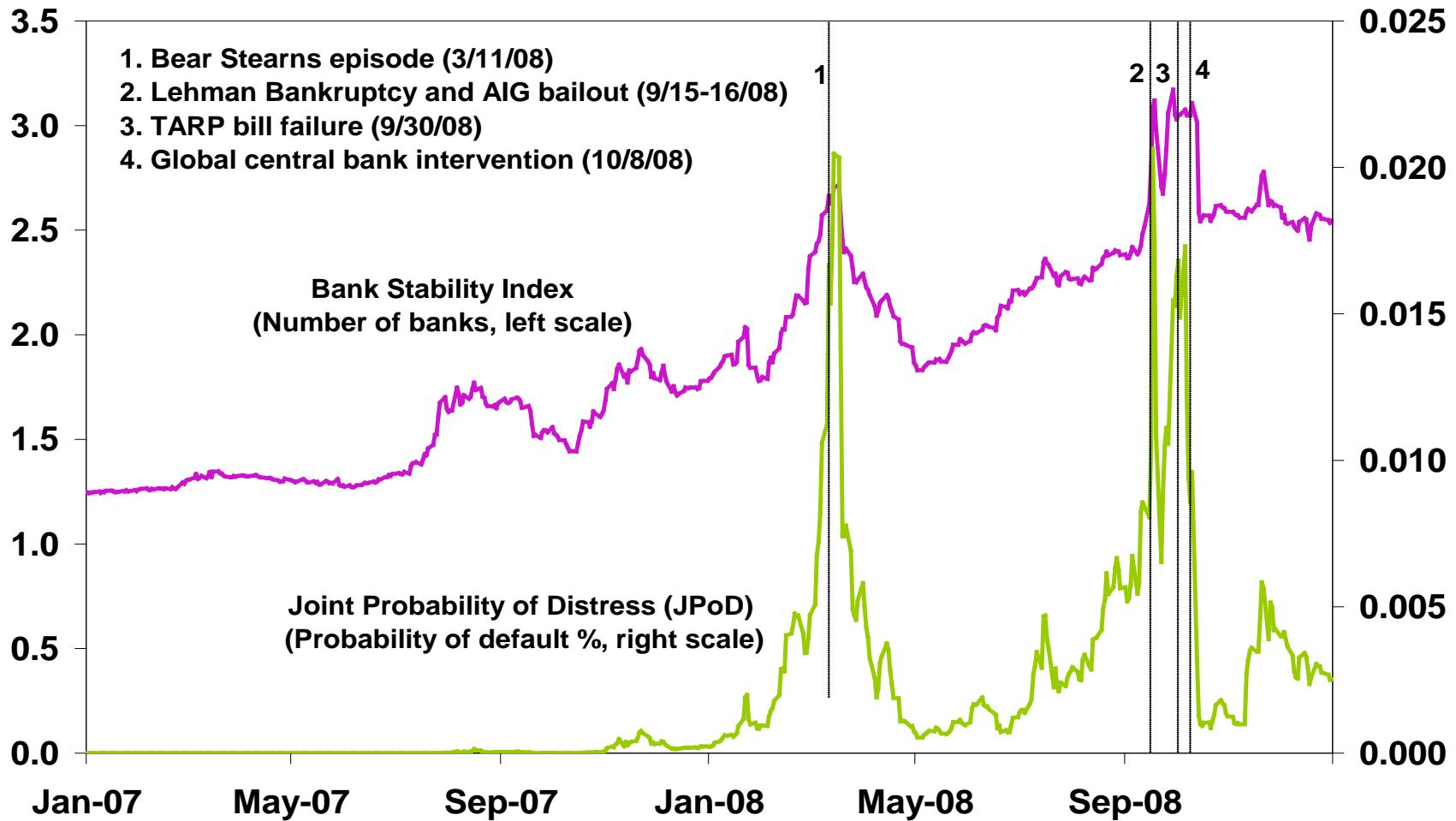
# Diagrammatic Depiction of Co-Risk Feedbacks



Sources: Bloomberg, L.P.; Primark Datastream; and IMF staff estimates.

Note: This figure presents the conditional co-risk estimates between pairs of selected financial institutions. Only co-risk estimates above or equal to 90 percent are depicted. See Table 2.6 for further information.

# Joint Probability of Distress and Banking Stability Index: Core 2 Group



Sources: Bloomberg L.P.; and IMF staff estimates.

# Distress Dependence Matrix

## (Pairwise conditional probability of distress)

<b>July 1, 2007</b>	Citigroup	Bank of America	Goldman Sachs	Lehman Brothers	AIG	Other	Row Average
Citigroup	1.00	0.09	0.06	0.06	0.05		<b>0.25</b>
Bank of America	0.08	1.00	0.08	0.07	0.11		<b>0.27</b>
Goldman Sachs	0.13	0.20	1.00	0.27	0.13		<b>0.34</b>
Lehman Brothers	0.16	0.24	0.35	1.00	0.14		<b>0.38</b>
Merrill Lynch	0.15	0.26	0.28	0.26	0.15		<b>0.22</b>
Morgan Stanley	0.15	0.25	0.30	0.23	0.12		<b>0.21</b>
AIG	0.05	0.11	0.05	0.04	1.00		<b>0.25</b>
Other							
<i>Column average</i>	<b>0.24</b>	<b>0.31</b>	<b>0.30</b>	<b>0.28</b>	<b>0.24</b>		<b>0.27</b>

<b>August 15, 2008</b>	Citigroup	Bank of America	Goldman Sachs	Lehman Brothers	AIG	Other	Row Average
Citigroup	1.00	0.32	0.28	0.23	0.21		<b>0.41</b>
Bank of America	0.20	1.00	0.24	0.17	0.19		<b>0.36</b>
Goldman Sachs	0.21	0.28	1.00	0.28	0.18		<b>0.39</b>
Lehman Brothers	0.42	0.51	0.69	1.00	0.35		<b>0.59</b>
AIG	0.36	0.52	0.41	0.32	1.00		<b>0.52</b>
Other							
<i>Column average</i>	<b>0.44</b>	<b>0.53</b>	<b>0.52</b>	<b>0.40</b>	<b>0.39</b>		<b>0.45</b>

Sources: Bloomberg L.P.; and IMF staff estimates.

# Measurement of Systemic Risk

- Actual exposure data
  - Not publicly available, impedes market discipline
  - Not recorded for all assets/derivatives (e.g. OTC markets incomplete)
  - Not collected to be able to see knock-on effects
- Market-based data
  - CDS/equity options price tail risks; multivariate distributions and marginal distributions possible
  - CoVar type measurements
  - Assumes markets are “right.”

# Regulating Systemic Risks Through Markets

- Minimize counterparty risks
  - CCPs
  - Capital charges for large counterparty exposures
- Improve market dynamics
  - Improve ex post price and quantity transparency
  - Exchange-traded vs. OTC—remove asymmetric information, encourage liquidity

# Regulating Systemic Risk through Instruments

- Trade-off with innovation
- Economic purpose
  - Old approval process for futures contracts
- Complex instruments restricted
  - To whom? Who is a “sophisticated” investor?
  - Suitability criteria

# Other topics

- Who will oversee systemic risk regulation?
- Competition policy vs. systemic stability?
  - Too big to fail, too complex to close, too interconnected to let go?
- Global, cross-border regulation
  - What does consistency mean?
  - One size fits all?
  - Principles vs. rules-based? (e.g. use of Pillar 2)

# Conclusion

- Regulate only that which can “fix” the identified market failure
  - Some human behavior will be difficult to influence, even if incentives are in place.
- Current system of regulation viable
  - Marginal changes to get the “center line” correct
- Need to extend to cover systemic risk
  - Hard in practice, but the set up general guardrails will help
- Challenge is to mitigate systemic risks without damaging innovation and risk transfer
  - Incentive-based, but need to internalize externalities



## *The Road to Re-regulation*

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