



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

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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
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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”
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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.
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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.
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The Regulatory “Conjuncture”

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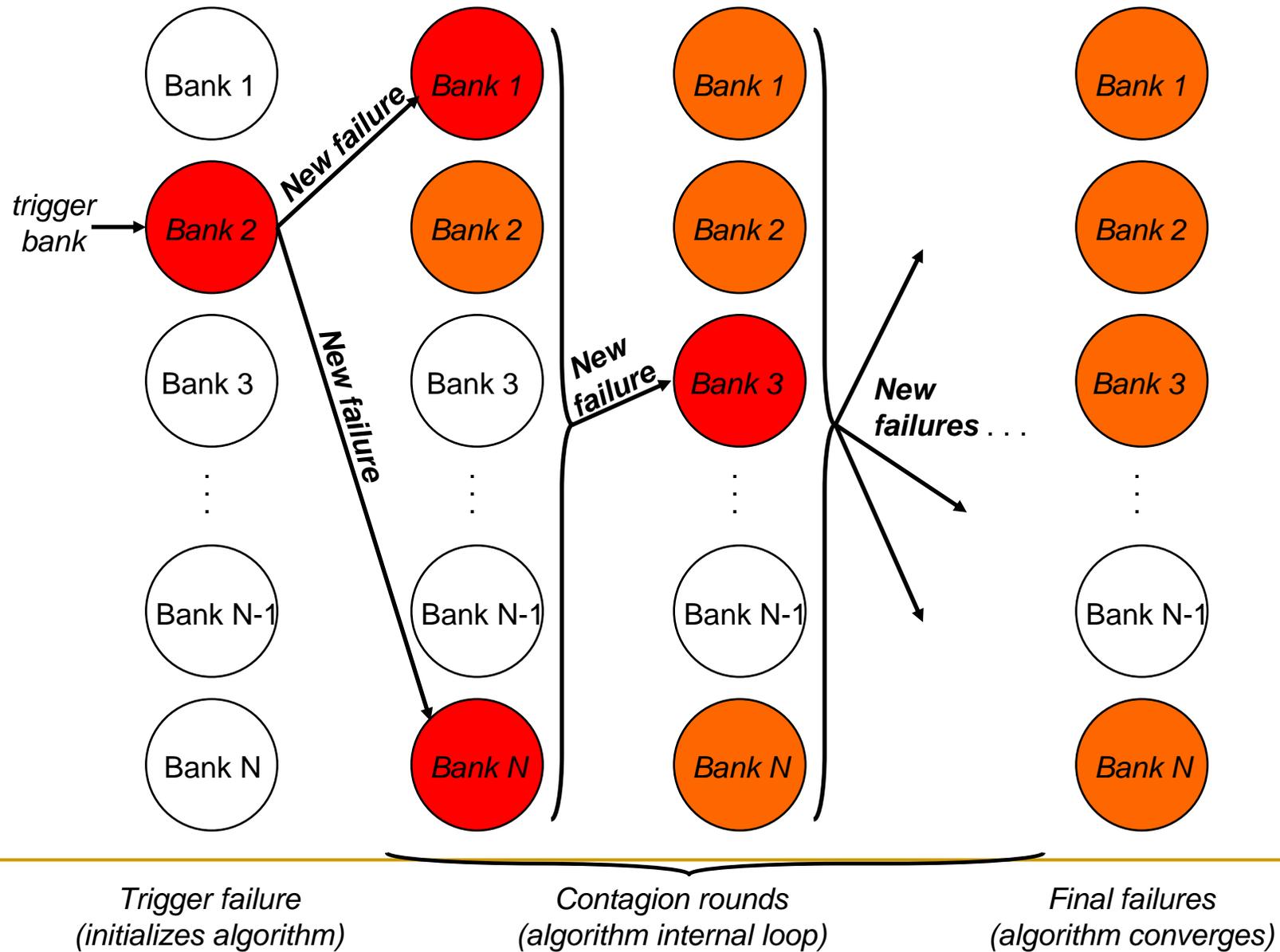
Systemic Liquidity Management

- 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
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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
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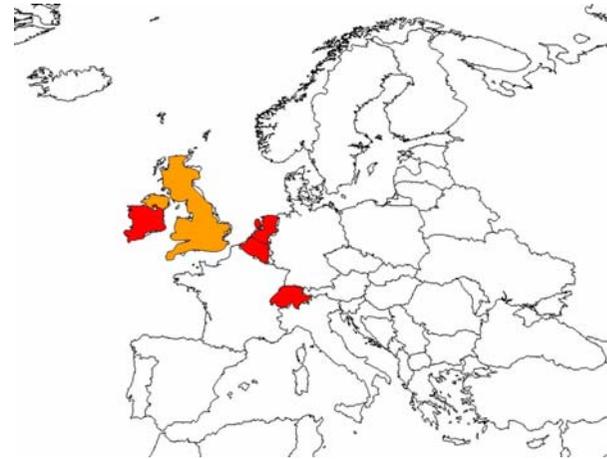
Network Analysis



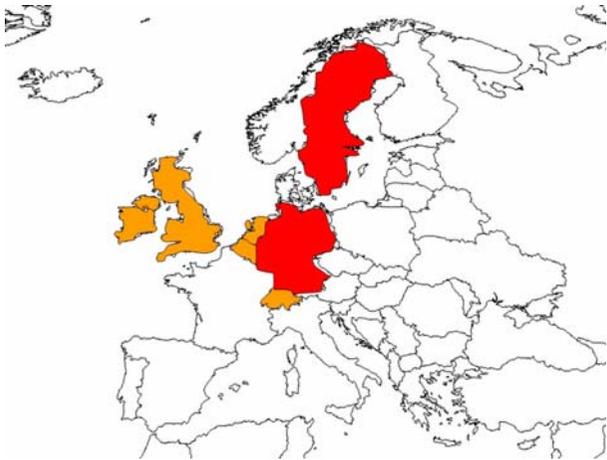
Network Analysis: Contagion Path triggered by the UK failure



Panel 1 (trigger failure)
Affected Countries: United Kingdom



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

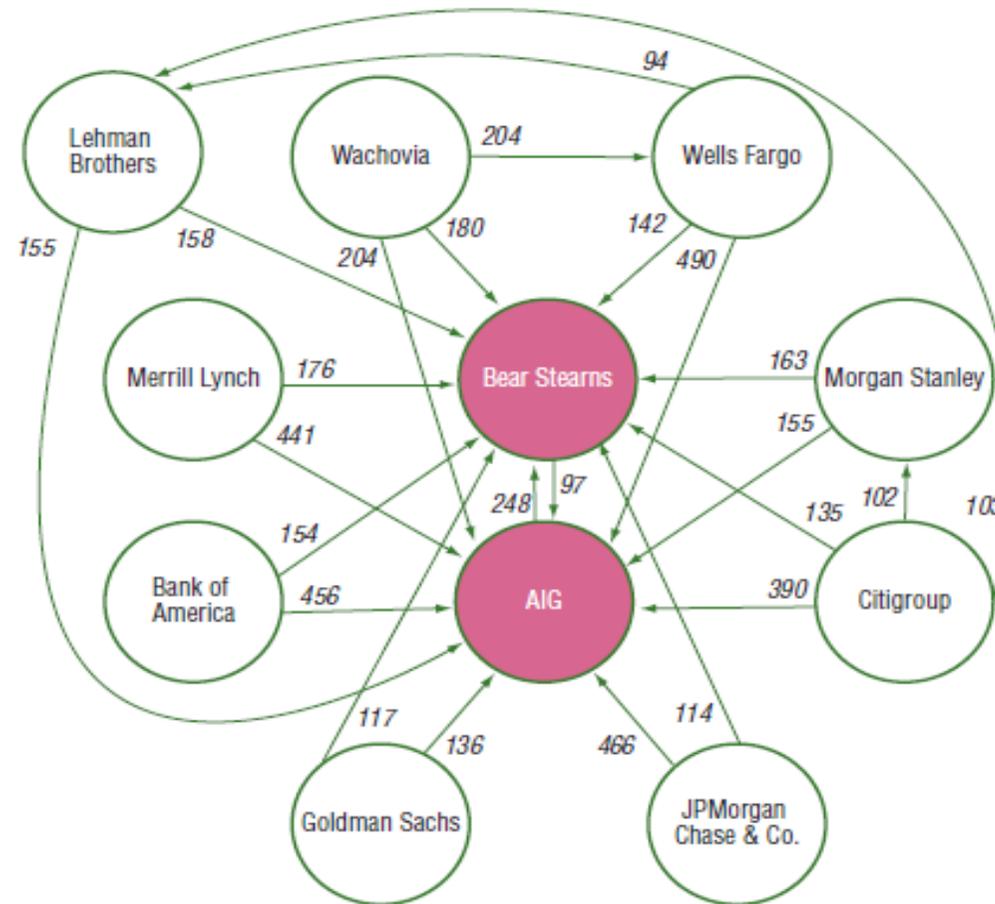


Panel 3 (2nd contagion round)
Affected Countries: United Kingdom, Belgium, Ireland, Netherlands, Switzerland, Sweden, Germany



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

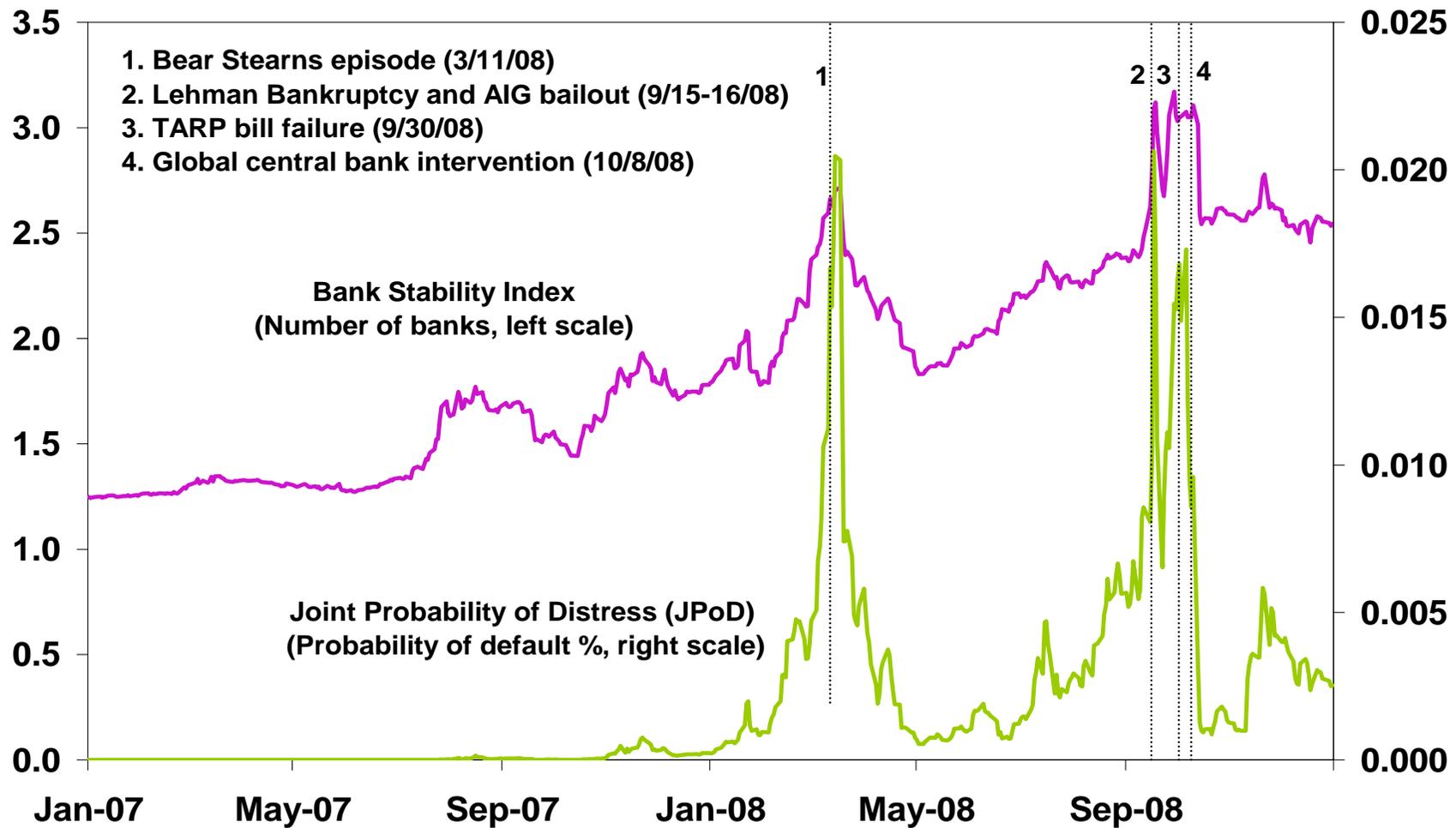
Diagrammatic Depiction of Co-Risk Feedbacks



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)

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

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

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.”
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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
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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 investors?”
 - Suitability criteria
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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)
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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
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The Road to Re-regulation

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