Convergence, Interconnectedness, and Crises: Insurance and Banking

Is (re)insurance systemic?

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SCOR

The hangover: synopsis of a very bad trip

- A blowout Las Vegas bachelor party turns into a race against time when three hung-over groomsmen awaken after a night of drunken debauchery to find that the groom has gone missing, and attempt to get him to the alter in time for his wedding
- The next morning, the groomsmen come to their Palace suite to find a tiger in the bathroom and a six-month-old baby tucked away in the closet
- With no memory of the previous night's transgressions and precious little time to spare, the trio sets out in a hazy attempt to retrace their steps and discover exactly where things went wrong

➢ **<u>Where did things go wrong? What went wrong?</u>**

➢ **<u>Insurers and Reinsurers woke up one day, and were accused of being systemic… suspicious!</u>**

Setting the stage of a nightmare trial

- The Plaintiff: Mr. Financial Stability Board (« FSB »)
  - Fully backed by the Gang 20 (« G20 »)
  - Missioned to ensure global financial stability

- The Defendants: Mr. Insurance and Mrs Reinsurance
  - The Defendants plead not guilty

- The Judge states the offence
  - The Defendants are accused of being source of systemic risk to the detriment of financial stability, at the expense of policyholders, taxpayers and citizens

Would the accused please stand, and listen to the reading of the offence?

- The Attorney General may read the accusation act
- We, the FSB, take into consideration « systemic risk » defined in the following way:
  - "The risk of disruption to the flow of financial services that (i) is caused by an impairment of all or parts of the financial system; and (ii) has the potential to have serious negative consequences for the real economy."
  - Fundamental to this definition is the notion that systemic risk is associated with negative externalities and/or market failure and that a financial institution's failure or malfunction may impair the operation of the financial system and/or the real economy
- We, the FSB, accuse the Defendants of potentially creating a systemic risk, based on three charges:
  1. Size: "The volume of the financial services provided by the individual component of the financial system"
  2. Interconnectedness: "Linkages with other components of the system"
  3. Substitutability: "The extent to which other components of the system can provide the same services in the event of a failure"
- "Given their size, interconnectedness and low level of substitutability, Insurers and Reinsurers are accused of potentially creating systemic risk"

Defendants may speak

- "Your Honour, there is a horrible confusion and a terrible mistake:
  - We are insurers and reinsurers. We are neither bankers, nor hedge funds…
  - We are potential victims of systemic risk, not cause of systemic risk
  - The Plaintiff gets confused between "systemic risk" and "severe financial crisis", between individual failures and full system collapse"
  - The Plaintiff seems to ignore insurance and reinsurance activities' fundamentals

- "To answer the three counts of the accusation:
  1. Size: As compared to banks, the insurance and reinsurance sectors have a limited size (by balance sheet and exposures)
     - Contrary to what is affirmed, insurers and reinsurers' failure would not have a disruptive effect on financial markets and the system as a whole
  2. Interconnectedness: the low level of interaction does not create contagion. This is also true between insurers and reinsurers
  3. Substitutability: Competition is such that the failure of a player would easily be replaced by other players: there is no shortage risk"

- "Furthermore, please take into account timing: the speed of a failure is slow, allowing insurers to react by capital raise and/or orderly wind-up. Resolution is quasi always orderly"

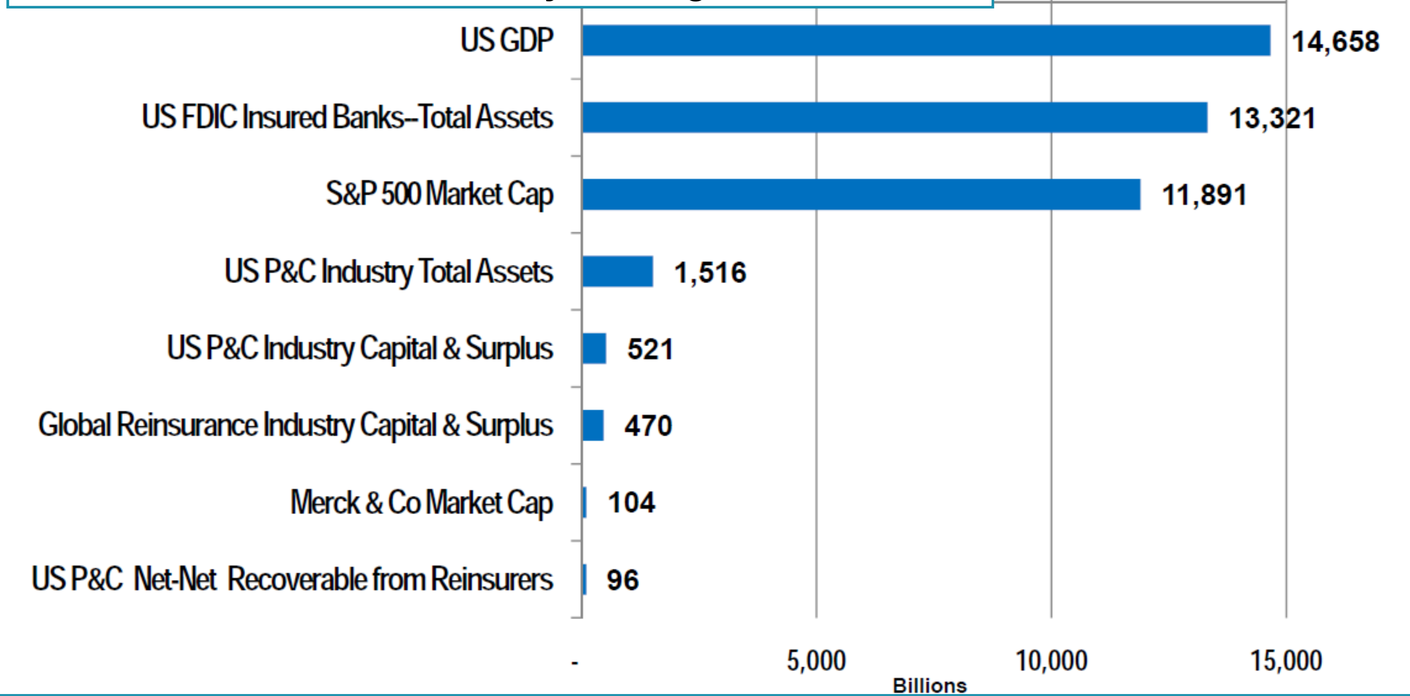
Defendants call experts to the bar: IAIS

- The IAIS (International Association of Insurance Supervisors) is called to the bar
- What do experts have to say about the systemic nature of insurance and reinsurance?
- The judge asks: “as you are experts in supervision and regulation, tell me frankly if insurance and reinsurance are causes of systemic risk, or not?”
- IAIS’ answer:
  - We are working on it…
  - … it is an ongoing work
  - … and we need data”
- The judge asks furthermore: “Does the IAIS share the FSB’s analysis of systemic nature of insurance and reinsurance?”
  - IAIS’ answer: “not yet decided, we need data…”

Other experts are called to the bar: Reinsurance Association of America

- The RAA has published a report on 23 June 2011, demonstrating reinsurers do not meet the Financial Stability Board criteria of size, interconnectedness, substitutability or time/liquidity being applied to determine which insurers might be deemed to contribute to systemic risk in the insurance universe

Size of reinsurance recoverables relative to U.S. Financial Markets or Economy is marginal

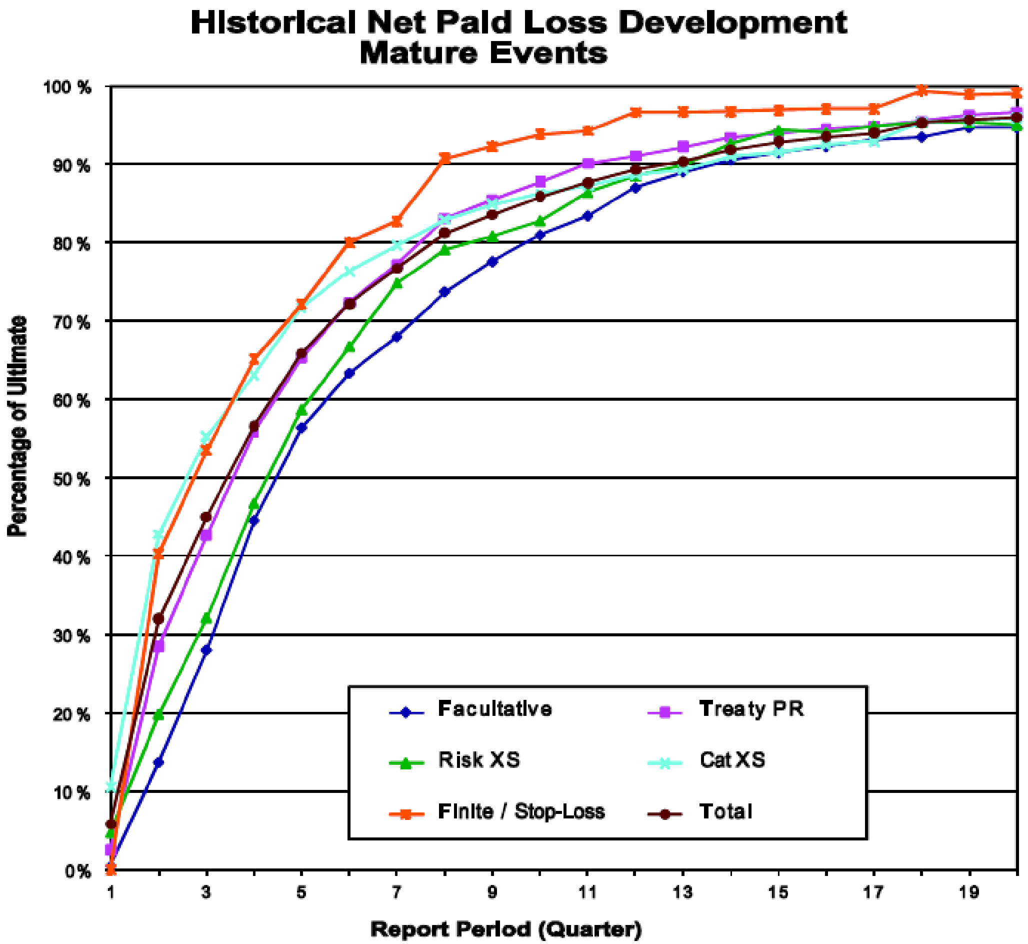


REINSURANCE ASSOCIATION OF AMERICA

Source: Reinsurance Association of America, June 2011

Further evidence from Reinsurance Association of America

- Data published by the RAA demonstrates that claims are paid over a long period



REINSURANCE ASSOCIATION OF AMERICA

Source: Reinsurance Association of America, June 2011

Other experts are called to the bar: Property Casualty Insurers of America

- *"Home, auto and business insurers do not pose a systemic risk. While the failure of such an insurer could have a short-term and limited impact on the availability and cost of insurance, it would not create systemic risk to other financial markets or the wider economy because of a unique combination of industry attributes, including:*

  1. *The nature of P&C products that insulate the insurance market from the risk of contagion;*
  2. *The highly competitive dynamics of the industry;*
  3. *The limited types and scope of P&C company investment risks; and*
  4. *The comprehensive regulatory and resolution systems governing P&C company activities that protects consumers"*

Property Casualty Insurers Association of America
June 1, 2011

PCI Property Casualty Insurers Association of America
Shaping the Future of American Insurance

Source: PCI, Steptoe & Johnson LLP

Other experts are called to the bar: Geneva Association

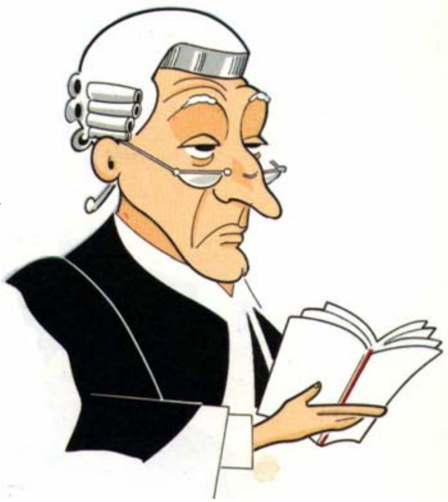
- *"Business models and roles in the economy of insurers and banks are different*
  - *Traditional insurance activities have an inverted cycle of production (pre-funding of liabilities)*
  - *Asset liability management as a key characteristic for insurance activities*
  - *Banks are traditionally involved in maturity transformation, while insurers typically do not take such risks*
- *Insurance companies have a proven and sound resolution mechanism that enables an orderly wind down over time*
- *No core insurance activity has ever triggered a systemic financial crisis"*

Systemic riskiness rejected for at least one of the following reasons

- **Size: Limited size of activities**
  - **No disruptive effects on financial markets**
- **Interconnectedness**
  - **Level / intensity of interaction does not create contagion**
- **Substitutability**
  - **Given ability of market to find a substitute**
- **Timing: Slow speed of impact**
  - **Allows insurers to absorb impact, through capital raising or orderly wind-up**

Source: Geneva Association, May 2011

Plaintiffs: Bankers, Hedge Funds, Insurers and Reinsurers, they are all usual suspects of financial difficulties

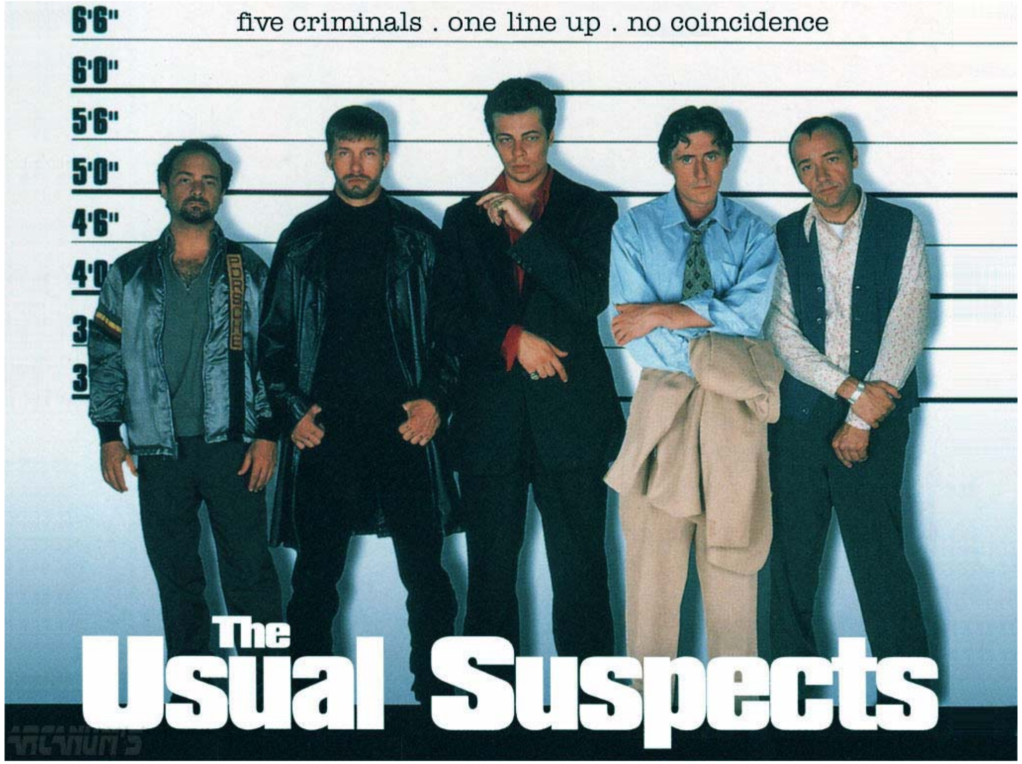


- "You are all "Financial Institutions""

- "Plaintiffs are acting for the Good Cause of "Stability", against all those financial institutions who create:
  - Disruptions
  - Discontinuities
  - Dislocations
  - Distress"

- "Insurers and Reinsurers are actors of potential massive destruction of the World of Stability"

- Plaintiffs ask for a very tight control of those delinquents



Could you give us facts? Defendants may speak

- The Defendants: “Your Honour, Mr Insurance and Mrs Reinsurance have always perfectly behaved in the past, they have always adopted a prudent behaviour:
  1. The failure of a (re)insurer is extremely rare and does not constitute a systemic event
  2. The essence of (re)insurance is to pulverize risk: there are no systemic domino effects in (re)insurance
  3. In (re)insurance, risks are kept on the balance sheet: there is no origination/distribution moral hazard and the associated issues
  4. (Re)insurance activities are self-funded : leverage is not part of core (re)insurance activities’ business model
  5. There is no liquidity mismatch in (re)insurance
  6. Thanks to the strengths of its traditional business model, (re)insurance weathered the last financial storm with more success than other financial institutions
  7. The current IAIS/FSB methodology for assessing systemic risk in the (re)insurance sector fails to apprehend the specificities of the traditional (re)insurance business model

1. The failure of a (re)insurer is extremely rare and does not constitute a systemic event

- Bankruptcies and bank runs are commonplace in the landscape of financial crises. No (re)insurer has ever caused a systemic crisis. There is no such a word as “insurance-ruptcy”
  - AIG was a “hedge fund practicing sometimes insurance operations” (Bernanke)

- The failure of an insurer is an orderly process that cannot generate systemic risk:
  - The company does not interrupt its contracts overnight but continues settling the claims:
    - Most often, the portfolio is sold to another (re)insurer : multiple buyers are usually found
    - The company might be placed in run-off, requiring several years for a full wind-up
    - Supervisors intervene early in the process, protecting the policyholder
  - The settlement of claims is guaranteed by (re)insurer’s assets backing reserves
  - The long maturity of liabilities ensures the payment of claims:
    - Liabilities are not redeemable on demand like bank deposits but require a triggering event
    - Once the triggering event has occurred, the corresponding claims are paid over many years
    - (Re)insurers match assets and liabilities’ duration

- Life savings products are not exposed to a bank run phenomenon :
  - Life contracts are often long-term savings, held over several economic and financial cycles
  - Surrender charges/ tax system, discourage early redemption
  - Liquidity covenants enable the insurer to suspend surrenders in cases of distress
  - Life Insurance guarantee funds provide further protection to the policyholder

2. The essence of (re)insurance is to pulverize risk: there are no systemic domino effects in (re)insurance

- In the interbank market, risk is strongly concentrated because of a network of very short-term, bilateral exposures, which are large compared to bank equity[1]. Hence, the failure of a single bank can generate multiple bankruptcies.

- In the insurance market, risk is pulverized through several mechanisms:
  - Mutualisation, risk diversification, moral hazard mitigation (contract design, active monitoring)
  - Reinsurance and retrocession:
    - The largest risks are cut in tranches and ceded to several different reinsurers, which are strongly diversified geographically and by type of risks
    - Solvency II further encourages ceding to multiple (re)insurers, thus limiting the concentration of reinsurance recoverables
    - Reinsurance spirals are a deviant practice, not standard in reinsurance: strictly forbidden by regulation, only a few historical occurrences
  - Cat bonds are widely used by (re)insurers as a protection against large catastrophic events:
    - Losses are spread over multiple bond-holders
    - Bonds are fully collateralized: proceeds from bond sales are invested in safe assets, that can be readily liquidated to pay the claims
  - Insurance pools cover exceptional risks (nuclear, terrorist, environmental liability pools):
    - Claims are shared by all participants to the pool
    - Governments often provide guarantees above certain thresholds

[1] *Source: C. Upper, 2011*

3. In (re)insurance, risks are kept on the balance sheet: there is no origination/distribution moral hazard

- In the run-up to the crisis, some large US banks engaged into off-balance activities like mortgage securitization. This is a considerable source of moral hazard since originators of the risk do not have incentives to correctly screen and monitor the risks since they are not their ultimate holders

- (Re)insurers always retain a portion of the risks they originate:
  - Core insurance activities usually stay on the balance sheet:
    - Reinsurance/retrocession always is a partial cession of risk: more than 90% of the risks stays on average on an insurer's balance sheet
    - As a result, (re)insurers carefully and thoroughly screen every risk before accepting it. Once accepted, the risk is monitored and considerable efforts are deployed to mitigate post-contractual moral hazard

  - Insurers who had material off-balance exposures were actually undertaking banking activities, like CDS writing that led to the demise of AIG:
    - (Re)insurers are allowed to use derivatives for hedging purposes only. These are traded and cleared through exchanges, contrary to OTC derivatives which can create a significant counterparty exposure
    - OTC derivatives traded by (re)insurers are limited by regulators in range and quantity. Hence they do not represent a material exposure

4. (Re)insurance activities are self-funded : leverage is not part of core (re)insurance activities' business model

- Banks are highly leveraged institutions: they finance their assets by borrowing from the markets (investment banks) or depositors (commercial banks)

- (Re)insurance is a largely self-funded activity where core activities are not financed by leverage but by positive cash-flow:
  - Typical leverage in the (re)insurance industry is in the 15-20% range
  - M&A and capital structure management entail some leverage, but not core insurance activities which are funded through premium and investment income inflow
  - (Re)insurers do not resort to wholesale market funding to meet claims and redemptions
  - Long-term capital fully backs the risks accepted by (re)insurers

5. There is no liquidity mismatch in (re)insurance

- Banks are involved in maturity transformation: they borrow short-term and lend long term. Hence they are extremely vulnerable to market liquidity suddenly drying up:
  - Deposits are redeemable on demand. In a fractional deposit banking system, reserves fall short of the total value of deposits
  - Loans are overwhelmingly long-term, illiquid assets
  - Banks engage in the trading of highly leveraged securities that can generate substantial margin calls in times of distress

- The maturity of (re)insurers' assets closely matches that of their liabilities: (re)insurers have a long-liquidity position.
  - Future claims can be estimated with high accuracy through actuarial techniques that determine the amount of reserves to be held
  - (Re)insurers engage in asset-liability management
  - Asset-liability management and positive cash-flows ensure that claims can be met without resorting to wholesale market liquidity: (re)insurers are net liquidity creators and in positive cash flow position
  - (Re)insurers hold highly diversified asset portfolios and have a relatively limited risk appetite:
    - The proportion of equities in (re)insurers' asset portfolios has dropped during the last decade and is now very low

6. (Re)insurers weathered the last financial storm with more success than other financial institutions

- During the crisis, overall insurance losses were several times smaller than that of banks:
  - Banks had to rise 9 times more capital than insurers: $1,470bn vs. $170bn. In relative terms, this is 58% of shareholders' equity (banks) vs. 16% (insurers)
  - Only 3 insurers had taken Tarp funds vs. 600 banks: $44bn ($4bn without AIG) vs. $245bn[1]

- Insurers that suffered, had business models different from traditional insurance:
  - AIG had a significant investment banking activity
  - More than 90% of public rescue funds given to the US insurance sector were channeled to insurers with material bank activity
  - Monoliners insured undiversified and highly leveraged portfolios of credit risk, concentrated on structured products, miles away from the traditional (re)insurance business model

- (Re)insurers with traditional business model incurred limited losses and had a stabilizing role:
  - Excluding AIG, insurers had to raise 20 times less capital than banks, or 7% of their shareholders' equity compared to 58% for banks
  - (Re)insurers' stable cash flows from their diversified operations enabled them to maintain net positive investments, stabilizing the markets, while banks and other financial institutions had to engage in massive fire-sales of securities

[1] *Source: Source: Harrington (2009) The Financial Crisis, Systemic Risk and the future of Insurance Regulation. JRI vol. 76*

7. Current IAIS/FSB methodology for assessing systemic risk in (re)insurance is not adequate

The current IAIS/FSB methodology for assessing systemic risk in the (re)insurance sector fails to apprehend the specificities of the traditional (re)insurance business model:

- Too much emphasis is placed on the absolute size of institutions:
  - What generates systemic risk is not size itself but undiversified size
  - Crude size measures ignore (re)insurance specificities (diversification, effective risk pulverization mechanisms) – which are best factored-in by internal models

- Not enough emphasis is placed on the timing factor:
  - The speed of propagation is key in generating systemic risk
  - Ignores the long term nature of (re)insurance activities

- The consequences of designating SIFIs in insurance will be counterproductive:
  - Publishing a list of SIFIs could constitute an obvious source of moral hazard: institutions declared as SIFIs would receive a “certificate of bail-out”, an incentive to take unreasonable amounts of risk
  - Focusing on institutions is misguided, since core insurance activities are not generators of systemic risk. Regulators’ focus should be shifted towards considering specific activities lying outside the scope of traditional insurance
  - Imposing a capital surcharge would be impractical: a typical (re)insurer already holds capital well above the minimum requirement, and there is no single and global capital benchmark for insurers: standard formula vs. internal model, RBC vs. Solvency 2...

What will the judge decide?

The story is still on-going

Two potential outcomes for the on-going trial

Outcome 1: Mr. Insurance and Mrs. Reinsurance are guilty

- Mr Judge comes up with a list of 50 systematically relevant insurers, of which 10 reinsurers

- Some of the insurers and reinsurers are considered as potentially "dangerous", and likely to create a systemic risk endangering the whole financial stability

- They will be called "SIFI", clearly flagged and will have to carry an electronic tag, wear an orange jump suit, they will be under permanent surveillance and monitoring

- They will wear heavy "capital chains", they will have to write a living will, undergo legal restructuring and pay heavy fines to contribute to bail out funds to compensate their victims

Outcome 1: The introduction of SIFIs has still some opened consequences

? How to carry out the excess capital punishment in practice?
- A typical (re)insurer already holds capital well above the minimum requirement
- There is no single and global capital benchmark for (re)insurers: standard formula vs. internal model, RBC vs. Solvency 2...

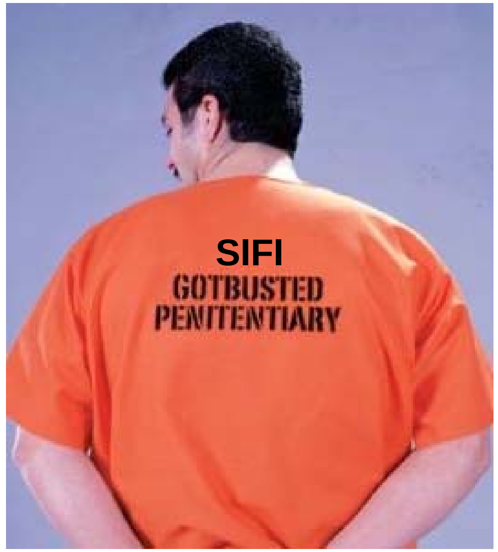
? Could we assist to a “flight to SIFI”?
- Insureds wishing to benefit from the potential implicit government guarantee and backing. This would be an adverse effect, detrimental to non-SIFI entities

? Will rating agencies upgrade SIFIs, fuelling further the flight to SIFI?
- In its 28 June 2011 report, S&P wrote: “*We believe the rating consequences for insurers that are designated as SIFIs could be either negative or positive*”

? Will (re)insurers be granted access to central bank liquidity?
- Because of their systemicness, banks have a lender of last resort: the central bank
- What about (re)insurers? If declared “systemic”, then pure logic requires they too have access to central bank liquidity

Outcome 1: Mr. Insurance and Mrs. Reinsurance are guilty

- Astonishment on all benches…
- … except on the bankers' bench where we perceive a sigh of relief and discrete smiles
- The FSB triumphs!
- We enter the World of Regulator II



Outcome 2: Mr. Insurance and Mrs. Reinsurance are declared innocent

- The judge understands key issues at stake:
  1. Neither insurance nor reinsurance companies create systemic risk
  2. On-going improvements of insurance and reinsurance regulation (Solvency II) will add further stability
  3. The judge considers that creating SIFIs would generate competition distortions and reduce insurers and reinsurers' profitability at the expense of solvency
  4. The judge considers that increased cooperation between regulators is the optimal path to follow

- Applauses on Mr. Insurance and Mrs. Reinsurance benches