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The evolution of insurance regulation in the EU since 2005

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An avalanche of regulatory texts since 2009

- Directive 2009/138/EC ‘Solvency 2’ (later S2)

+ Directive 2014/51/EU ‘Omnibus 2’

+ Commission Delegated Regulation 2015/35

= 1053 pages!

+ (PRIIPs) Regulation EU1286/2014

+ Insurance Mediation Directive (IMD2)

+ Capital markets union (securitization).

risis -> regulatory buildup

- Failed banks: Northern Rock, Lehman Brothers…
- Bank in need of government backstop: RBS, Fortis, Dexia, Bankia, etc.
- States on the verge of collapse because of banking crisis: Ireland, Iceland, Cyprus…

- Insurance?

Insurance ?

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Table 2: Fraction of total insurance sector's liabilities in default (Default rate of insurance companies that went into resolution) 2008–2012[6]

Percentage of world (2012) assets		2008	2009	2010	2011	2012	2008–2012
27%	United States	0.042%	0.006%	0.012%	0.013%	0.004%	0.0151%
24%	Japan	0.078%	0.000%	0.000%	0.000%	0.000%	0.0147%
12%	United Kingdom	0.000%	0.001%	0.000%	0.000%	0.001%	0.0002%
9%	Germany	0.000%	0.000%	0.000%	0.000%	0.333%	0.0075%
5%	France	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
3%	Netherlands	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
3%	Switzerland	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
3%	Sweden	0.355%	0.002%	0.034%	0.056%	0.004%	0.0820%
2%	Denmark	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
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1%	Spain	0.000%	0.005%	0.056%	0.000%	0.009%	0.0155%
0%	Belgium	0.000%	0.000%	0.000%	0.052%	0.000%	0.0102%
94%							
	Global default rate	0.038%	0.002%	0.020%	0.006%	0.005%	0.0139%

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Insurance ?

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What about AIG?

- AIG's problem were mostly caused by its London-based branch AIG Financial Products...
- Which practiced *Securities Lending* and market making on *Credit Default Swaps*…
- Moreover, AIG was regulated by the (now defunct) *Office for Thrift Supervision*…
- Is THIS insurance?

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Why then overhaul insurance regulation?

- To prevent *regulatory arbitrage*, cf. Allen-Gale 2007
- "there is evidence that risk has been transferred from the banking sector to the insurance sector. One argument is that this is desirable and simply reflects diversification opportunities. Another is that it represents regulatory arbitrage and the concentration of risk that may result from this could increase systemic risk" (p. 342).

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How?

(intro)

1. Consumer protection
2. Solvency II
3. Systemic risk regulation
4. Cost and consequences of regulation
5. Rationale and future agenda

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1. CONSUMER PROTECTION

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Price regulations

- in the 80's EU Member States could introduce "laws, regulations or administrative provisions concerning, in particular, approval of general and special policy conditions, of forms (…) of premiums…" (Dir. 1988/357/EC on non-life insurance art. 18, Dir. 1990/619/EC on life insurance art. 12).
- The 1992 Directives abolished prior approval of prices and forms (see especially art. 39 of Dir. 1992/49/EC on non-life and art. 29 of Dir. 1992/96/EC
- *inefficiency of prior approval* (Harrington

No price regulation?

- (marginal cases = bonus/malus systems)
- European Court of Justice ruling of 1 March 2011 in the Test-Achats case (C-236/09) = Article 21 of the Charter of Fundamental Rights of the European Union (2000/C 364/01): “Any discrimination based on any ground such as sex, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited.”
- July 2015: Elzbieta Bienkowska vs. Eurodisney [illegible]?

EU commissionner for internal market…

Competition -> Efficience?

Table 1 – Evolution of insurance prices 1996-2014 as % of CPI

average	dwelling	health	transport	other
104,26	91,07	164,43	99,58	186,86

Source

- Price convergence in the EU?
- Role of internet? (Brown and Goolsbee 2002 vs. recent research)

Competitive pressure

- … is such that no insurance company can over-charge its customers…
- … the main problem would be companies not charging enough to meet their duties…
- … hence working competition ->
- (as it seems to be the case in UE now)
- -> supervision must avoid under-charging and 'gambling for resurrection' (*cf. infra*)

Enhanced consumer protection

- PPI redress in the UK (>£20bn since 2011)

> Wheatley out

- French Conseil d'Etat decision n° 353885 (23 July 2012) on loan insurance ≈ FCA approach to PPI
- French and Belgian action in favour of *dormant life insurance contracts* modelled after the reparation of Nazi crimes against the Jews

> No one's out

- Spain?
- More to come: IMD, PRIIPS, etc.

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- Competitive market -> low prices
- Emphasis on consumer protection matches "anti-finance" stance of some EU governments [not the best auspices for reform…]
- The main issue seem to be vulnerability of companies in a competitive and changing environment

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2. SOLVENCY II

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S2=B2

- Increase *solvency* of insurance companies
- Pillar 1 – quantitative (capital) requirements – includes market-consistent valuation of the balance sheet leading to a **risk-sensitive assessment of capital requirements**.
- Pillar 2 – is relative to corporate and risk governance.
- Pillar 3 – is concerned with disclosure and transparency requirements.

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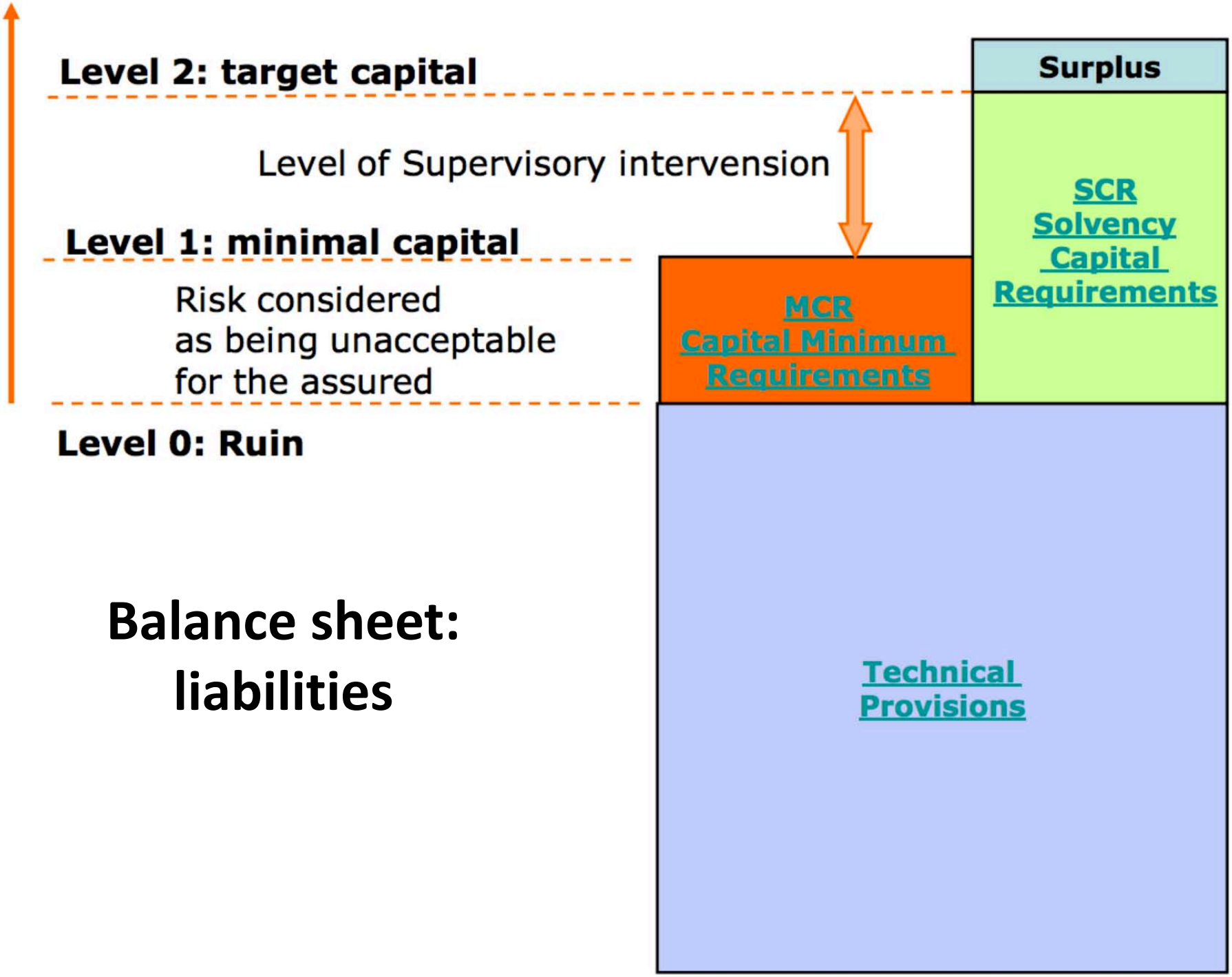
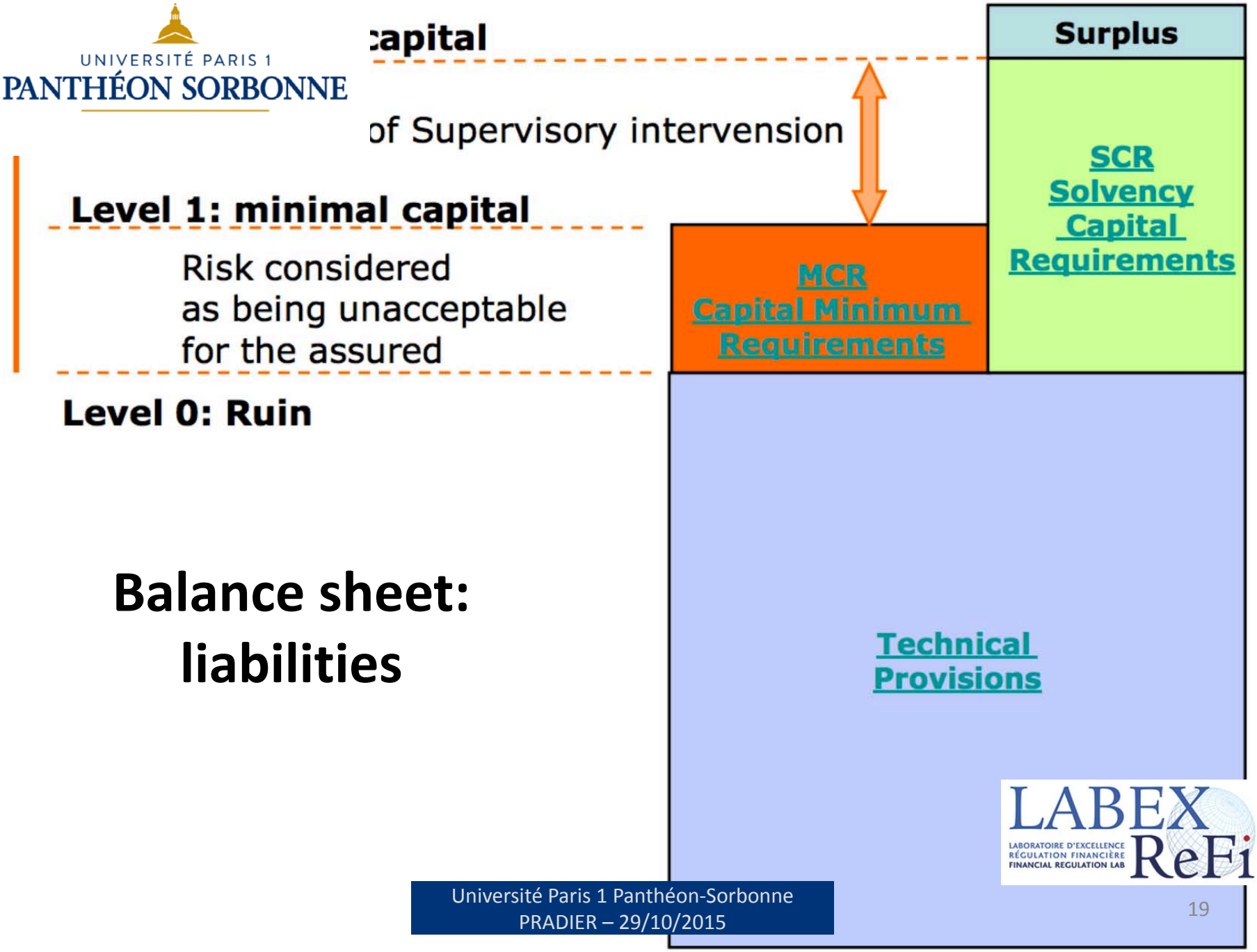


Balance sheet: liabilities



Balance sheet: liabilities

Pillar 1

- 35 risk modules such as
  - Market risk featuring
    - Interest rate risk
    - Equity risk
    - Property risk…
- For each sub-module compute the probability distribution of future values
- And take the 99.5% VaR thereof

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Pillar 1

- Standard formula ?

$$BSCR = \sum_{i=1}^{35} SCR_i + \sum_{i=1}^{35} \sum_{\substack{j=1 \\ j \neq i}}^{35} \sqrt{\rho_{i,j} SCR_i SCR_j}$$

- Or

$$BSCR = \sum_{i=1}^{35} \sum_{j=1}^{35} \sqrt{\rho_{i,j} SCR_i SCR_j}$$

- Or internal model?
- (invest to save capital)

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S1/S2?

- S1 Regulatory capital = % of underwritten premiums *or* cost of claims
- S1: restrictions on asset side of balance sheet
- By comparison, S2 = much more freedom of asset/underwriting policy management
- Better risk measurement
- To avoid bankruptcy = antonym of solvency

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Standard formula vs. Internal models

Insurance company type	S1 Surplus	S2 Surplus / Standard formula	S2 Surplus / Internal model
Large	109,4	54,6	129,5
Medium	26,7	15,5	18,3
Small	64,3	43,6	49,5

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Pillar 2

- Governance and Reporting duties
- Governance: fit & proper administrators + 2 effective directors + 4 key functions + ORSA
- Supervisor can freely & instantly access relevant data
- COST OF REGULATION?

Pillar 3

- Accounting standards
- (Reporting: 21 yearly reports approved by the board before transmission to the supervisor)
- Information disclosure to shareholders & markets
- “market discipline” (→higher borrowing cost for poorly managed companies)

Side effects

- Feedback loop (procyclicality): : I need some cash therefore I sell assets, but doing so I increase the excess supply of assets.
- Asset concentration –> see next slide
- Low predictive power –> …

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Asset concentration

	2000	2005	2010	2011	2012
Land and buildings	5,24%	4,2%	3,1%	3,1%	3,1%
Participating interests	3,80%	4,4%	6,3%	6,2%	7,9%
Shares and variable yield	36,72%	37,5%	31,0%	30,9%	21,0%
Debt securities and fixed-income	30,98%	35,7%	41,6%	41,8%	50,4%
Loans, including mortgages	16,36%	10,6%	10,7%	10,3%	13,2%
Deposits	1,07%	2,4%	2,5%	2,4%	1,3%
Other investments	5,84%	5,3%	4,8%	5,5%	3,0%

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Low Predictive Power

- MCR: immediate and ultimate supervisory action.
- SCR: supervisory attention.

Low predictive power

exercise name	QIS4	QIS5	LTGA (S0)	2014 ST (base)
Year	**2008**	2010	2012	**2014**
% of participants do not meet MCR	**1.20**	**4.60**	**28**	**6-8**
% of participants do not meet SCR	**11**	15	46	**14-16**

Failure rate

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Low Predictive Power

- MCR: type II error
- (SCR: still type I error)
- MCR/SCR should be tuned so that:
  - SCR should minimize type I error so that no company goes insolvent without supervisory attention
  - MCR minimizes type II error for given level of type I error so that companies shutdown for prudential reason only experience a limited probability of wrong decision.

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3. SYSTEMIC RISK

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Systemic risk regulation

- Systemic risk when the failure of 1 company results into a crisis (AIG) / TBTF
- G-20 London 2008 -> Financial Stability Board must addess *systemic risk* -> framework designed with *Internation Association of Insurance Supervisors*
- AIG, Allianz, (Assicurazioni) Generali, Aviva, Axa, MetLife, Ping An insurance, Prudential, Prudential financial
- Enhanced supervision + effective resolution + Higher Loss Absorbency
- (legal framework?)

Solvency & systemic risk: interactions?

- Common idea: individual company solvency -> no systemic risk
- Asset concentration show there might be a problem
  - Sovereign solvency issues
  - (expected) interest rate rise
- Fixed costs -> concentration
- S2 -> polarization?

Costs of regulation

- Direct cost of regulation
- Indirect costs:
  - Administrative costs
  - Cost of regulatory capital
  - Cost of asset concentration
  - Legal uncertainties / competition among authorities
- Social costs

Fixed costs

- Administrative costs:
  - Staffing 4 key functions
  - Reporting
  - (training & insuring administrators' liability)
- CEIOPS 2007 = 40k€ per company in 2007, CEA = twice as much, 2011 EY+FSA = 5x as much
- (with protracted QIS… even more implementation cost)

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Fixed costs/2

- Regulatory capital: should be proportional to risk
- But **internal models are an element of fixed cost**
- Legal uncertainty / competing authorities
- All these fixed costs mean increasing returns hence favour **concentration**
- **Concentration= larger firms->more systemic risk!**

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AM standardization

- S1: asset management = mainly concentration limits -> every firm had its own asset management idiosyncrasies
- S2: complex rules (risk modules) -> costly AM -> [fixed costs, staff training + internal models] OR STANDARDIZED AM RULES
- (example: concentration on sovereign bonds which carry low regulatory capital penalties)

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Standardization -> polarization

- ECB 2007 wrote about “herding behavior” of AM
- Since Keynes’ 1936 “beauty contest”, large literature about composition effect, notably:
  - De Long J. B., Shleifer A., Summers L. H., Waldmann R. J. Noise Trader Risk in Financial Markets. *Journal of Political Economy*, 1990.
  - Lévy-Véhel J. 2015. A simple isochore model evidencing regulation risk. Mimeo.

De Long et al.

- Overconfident speculators can benefit from self-fulfilling returns, at the cost of augmented risk.
- The model by De Long could describe the behaviour of insurers under S2, not because the insurers overestimate the return on risky assets, but because the insurers' metric is different from the other players' on the market (cost of regulatory capital)
- Concentration on sovereign debt exposes the companies to capital shortfall when the interest rates will rise to their long-term average.
- Without the current QE, interest rate risk would be a major risk for insurance companies.

Lévy-Vehel

- Lévy-Vehel, who shows that under the (false) assumption of continuous prices, while they make jumps then trying to minimize VaR under a constraint of activity in fact lead to maximize the value-at-risk of the decision portfolio. Hence, improper implementation of a rational management rule turns out to produce adverse effects.

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- Solvency framework focuses on individual firm solvency (even amended (LTGA) with much care in order to avoid procyclicality as seen in Basel II) nevertheless *lead to systemic risk through concentration + polarization of decisions*.
- Scholes 2000 argues that this unexpected result stems from the kind of systemic risk that arose in 1929 (a chain-reaction of bankruptcies triggering other failures), which still dictates our conception of systemic risk prevention as *prevention of individual failures*.
- Resilience of markets also rests on INDEPENDENCE among participants' decisions -> 'biodiversity' is useful

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5. RATIONALE FOR REGULATION + FUTURE AGENDA

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Problems

- Cost of regulation should be addressed via *simplification* – a matter of political priority dropped in 2009 (“Best idea for Red Tape reduction award”)
- Unified EU supervision?
- More focused supervision

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More focused supervision

- 2015: all-encompassing supervision ('finance is evil')
- Usefulness?
  - No insolvent companies
  - No major competitive / consumer protection issue
- Insurance is not banking (systemic risk, money = public good management)
- Administrative Authorities struggling to get more resources -> try to break through media attention
- ¿FOCUS?

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What is the supervision for?

- [with the competitive pressure regulating the insurers price policy]
- the main concern with insurance companies is solvency (i. e. bargain prices to attract consumers that would lead to failures)
- Hence the supervisor should be focused on solvency ONLY
- Minimizing type I (SCR) / type II (MCR) errors
- Intervening so as to maximize SOCIAL welfare in case of bankruptcy
- (while shareholders / managers tend to max their private benefits in case of trouble now)
- This is what S2 should have done, and S2 hasn't delivered so far…

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Original paper

Chneiweiss, Pradier. **The evolution of insurance regulation in the EU since 2005. LabEx RéFi position paper, 10-2015.**

… is available on demand

THANK YOU FOR YOUR ATTENTION