

Financial regulation :
Stability versus Uniformity and
The role of capital for non-bank actors
A reinsurer view

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From the point of view of reinsurance, there are four trade-offs, not one :

- stability versus uniformity**
- stability versus regulatory fragmentation**
- stability versus growth**
- Stability of the banking system versus non-bank stability**

Stability versus uniformity : capital in reinsurance does not play the same role as capital in banking

- ❑ Insurance and reinsurance operations are genuinely different from banking operations
 - *reinsurance has a risk appetite for risk – banking doesn't -*
 - *reinsurance is a structurally positive cash flow business – very low risk of illiquidity –*
 - *reinsurance balance sheet is sticky – reinsurance liabilities are not deposits –*
 - *reinsurance risk is mainly on the liability side – less on the asset side -*
 - *reinsurance resolution is orderly by means of run off - no « reinsurancerupcy » –*
 - *reinsurance risks remain on its balance sheet – limited off balance sheet –*
 - *reinsurance is only slightly interconnected and ceding companies diversify their reinsurers*
 - *reinsurance operations are not by nature systemic - banking operations are –*

- ❑ The solvency of reinsurance companies should first assessed on their reserving policy
 - *risks underwritten by reinsurers are backed by the reserves (65-70% of the balance sheet)*
 - *reinsurance difficulties are due mostly to deficient reserves (very few cases due to assets)*
 - *reserves in reinsurance are split “case” reserves (55% at SCOR) and IBNR (45% at SCOR)*
 - *reserves are set above the best estimate and subject to annual releases and adding*

- ❑ Capital in reinsurance covers deviation beyond the best estimate of liabilities plus the risk margin
 - *because of the reserves, the role of capital is by nature very different from its role in banking*
 - *on average, the shareholders equity represents ~15% of reinsurance balance sheets*
 - *SCR is seldom a binding constraint in reinsurance (solvency ratio typically above 200%)*
 - *the level of capital of a reinsurer corresponds to its risk appetite and to the level of safety it wants to provide to its clients*

There are different metrics for capital in reinsurance

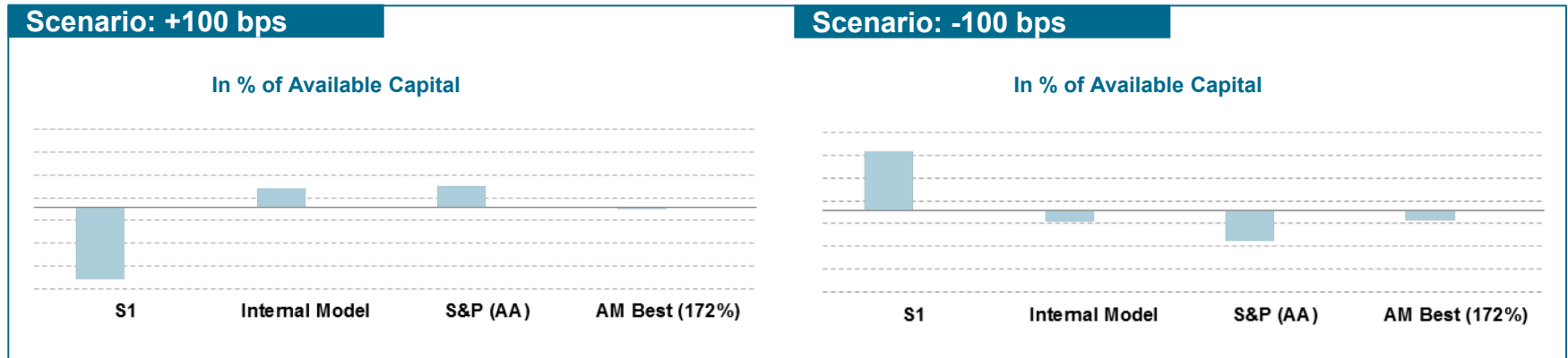
- Regulators (Solvency II, Risk-based Capital (RBC), Basic capital requirement (BCR), Chinese standard formula (C-ROSS)), Rating Agencies (S&P, Fitch, AM Best and Moody's), Auditors (IFRS) and Analysts (S&P, AM Best, Fitch, Moody's) all have different definitions of "Capital"

	IFRS	Solvency II	RBC (Risk based capital)	BCR (Basic capital requirement)	Standard method of the ICS	S&P model	AM Best (BCAR)
Catastrophe Risk Charge	n/a	1 in 200Y stress (internal model or standard formula)	Earthquake and hurricane catastrophe risk charge for Informational Purposes Only	Capital charge factors applied to sum at risk and premiums	Scenarios and natural catastrophe models	Capital Charge based on 1 in 250Y net PML	Reduction in surplus of max (100-year wind; net PML, a 250-year earthquake net PML, recent large loss)
Insurance Reserves in Available Capital	Locked in assumptions and PADs, DAC and VOBA assets	Best estimate insurance assumptions plus Allowance for cost of portfolio transfer (risk margin)	Implementation of Principles Based Reserving expected for 2017	Best estimate insurance assumptions	Best estimate insurance assumptions Options for prudence margin in test phase	Total Adjusted Capital based on IFRS plus adjustments	Based on IFRS plus adjustments
Diversification	n/a	Internal Model: Bespoke models capturing firm specific risk profiles Standard Formula: Covariance formula	Factor based formula including a covariance adjustment to account for diversification	Limited diversification (implicit in capital charge factors)	Covariance formula (similar to SII standard formula)	Covariance formula 50% haircut applied	Covariance formula

- For reinsurance, Internal models appear nowadays to correctly measure the capital according to the risk profile of the company

Managing capital under these different metrics has become a real challenge for reinsurance companies

- ❑ CEOs are lost in interpretation of these different metrics and diverging signals
 - ❑ Diverging signals on the best balance to be targeted: in terms of nature of capital, for example, hybrid debt is accounted for differently in Solvency 1 and in Solvency 2, not fully by AM best and entirely by S&P.
 - ❑ Diverging signals on the impact of identical shocks : for example, increasing interest rates have diverging effects on the available capital according to the metric (cf table below)
 - ❑ Even when converging in one direction, they diverge by the size of their impact



- ❑ In this example, an increase by 100 bp in the interest rate leads to:
 - An improvement in the capital situation in the SnP model and in the Internal model;
 - A deterioration in the capital situation in the AM Best Model as well as in Solvency 1
- ❑ A decrease by 100 bp in the interest rate leads to:
 - An improvement in the capital situation in Solvency 1;
 - A deterioration in the capital situation in the AM Best Model, the Internal Model as well as in the SnP Model

Managing capital is all the more difficult as current prudential standards appear pro-cyclical

- ❑ For example, in solvency 2, pro-cyclicality comes from the standard that reinsurance companies should maintain sufficient capital *at any time*, with limited flexibility to be below 100% of the SCr, even in time of market distress
- ❑ It's like the pilot of an airplane in distress calling the control tower for being authorized to use the reserves and getting the answer that this is impossible because reserves cannot be depleted
- ❑ In that case, capital is no more playing its role:
 - *It's no more loss absorbing in case of distress*
 - *It becomes useless for reinsurance where reserves are backing risks in normal time*

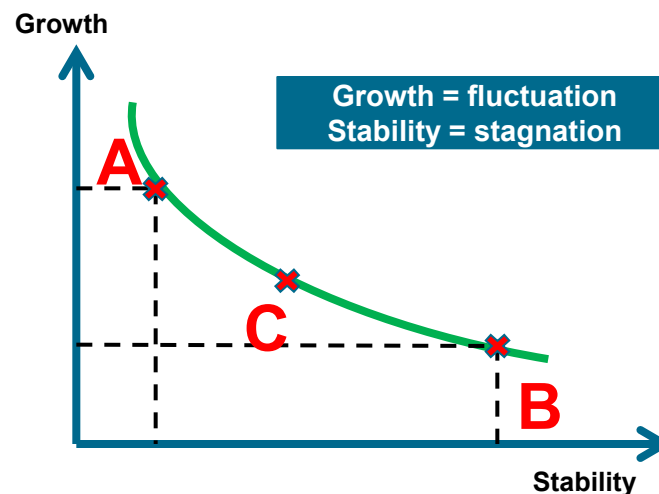


- ❑ A loss-absorbing standard would define capital requirements that are conditional to the current economic and financial situation, higher in times of boom and lower in times of recession
- ❑ For example, Var could be fixed at 99,5% “throughout the cycle” but falling to 99% when financial market volatility is twice its long term average, a situation which happened only twice since 1870: in 1929 and in 2008... a more favorable Var could be chosen for reducing further pro-cyclicality

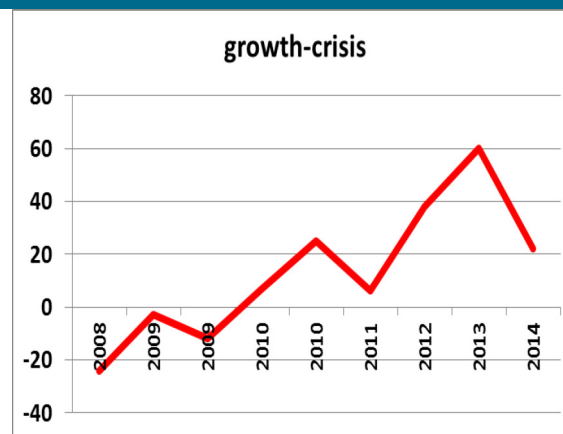
There is a trade-off between stability and growth

- ❑ Prudential authorities and regulators have reacted to the financial crisis by reinforcing regulation towards more stability : shifting from point A to pt B
- ❑ In year 2008, the words « disruption », « distress », « discontinuity » were over represented in G20 discussions and « stability » became the new collective preference due to high risk aversion
- ❑ But there is a trade-off between stability and growth: unfortunately it is impossible to reach both targets at the same time
- ❑ Now growth is a concern again, the collective utility function is shifting. We may need a « new deal »: shifting from point t B to point C ?

- ❑ Will Basel III enable a sizeable credit recovery?
- ❑ Will Solvency II enable infrastructure and long term financing as well as investment in equity?
- ❑ What is the optimal level of capital requirement in order not to impair profitability and therefore capital accumulation?



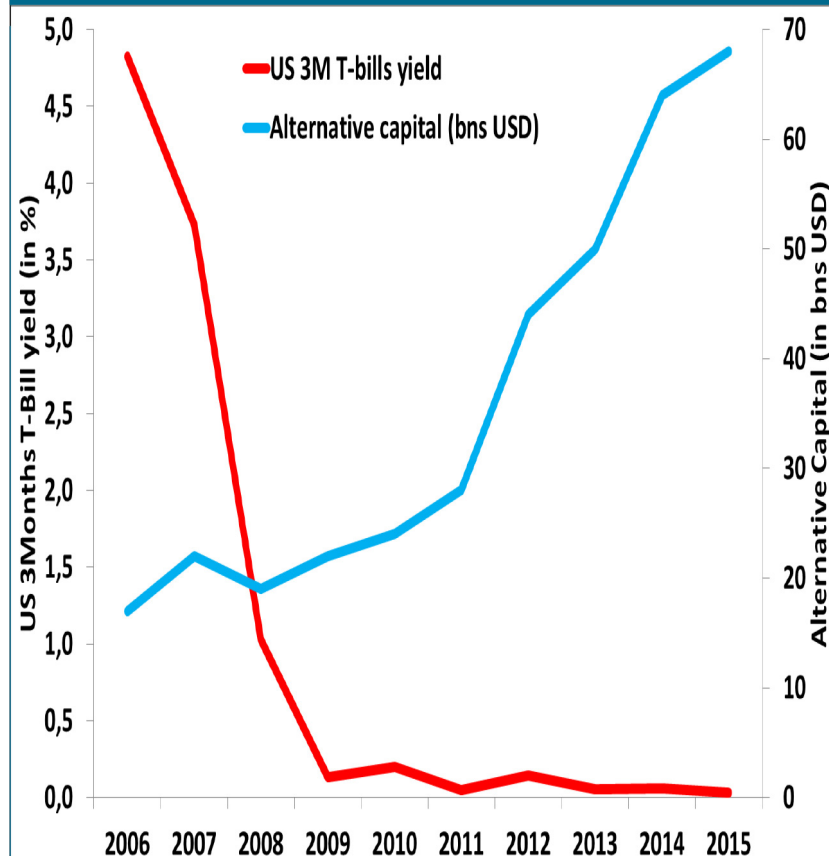
When watching the G20 concerns by measuring the occurrences of the word growth minus the occurrences of the words crisis or risk in its press releases, one can observe that this index has been shifting from 2008 to 2014



Banks versus non-banks : how to avoid negative spill-over effects from banks to non-banks ?

- ❑ Following Lehman Bros, Central Banks have implemented accommodative monetary policies which have contributed to restore stability in the banking system
- ❑ But, this has destabilized non-banks / reinsurance sectors by inducing negative spill-over effects :
 - *financial repression (with low interest rates all along the yield curve)*
 - *asset bubbles (real estate and stock market)*
 - *reallocation of investors' portfolio in favor of non regulated / better remunerated alternative capital , which puts pressures on reinsurance prices and on reinsurance ability to accumulate capital*
- ❑ This negative spill-over effects on reinsurance have been exacerbated by new prudential standards that have:
 - *increased capital requirements*
 - *encouraged reinsurers, having to apply distorted capital charges on assets , to invest in low remunerated sovereigns*
- ❑ General equilibrium has to be taken into account beyond partial equilibrium

Investments in alternative capital transactions have been accelerating in conjunction with monetary policy at Zero Lower Bound



APPENDICES

IFRS 2014	technical provisions/ total BS	Shareholder's equity/ total BS	total
SCOR	69,5%	15,4%	84,9%
Swiss re	64,3%	17,6%	81,9%
Munich re	71,7%	11,1%	82,8%
Hannover Re	64,4%	13,6%	78,1%

Number of quotes, by G20 press release, of the word									
	2008	2009	2009	2010	2010	2011	2012	2013	2014
crisis	11	14	44	30	8	2	6	5	2
risk	22	6	32	30	25	4	10	23	4
Crisis + risk	33	20	76	60	33	6	16	28	6
Growth	9	17	64	67	58	12	54	88	28
growth-crisis	-24	-3	-12	7	25	6	38	60	22