



FINANCIAL SERVICES

## **New Risk Management framework for European Insurance Companies**

May 25<sup>th</sup> 2006

ADVISORY

### Agenda

- Solvency II project
- International framework
- KPMG approach
- An Italian case study

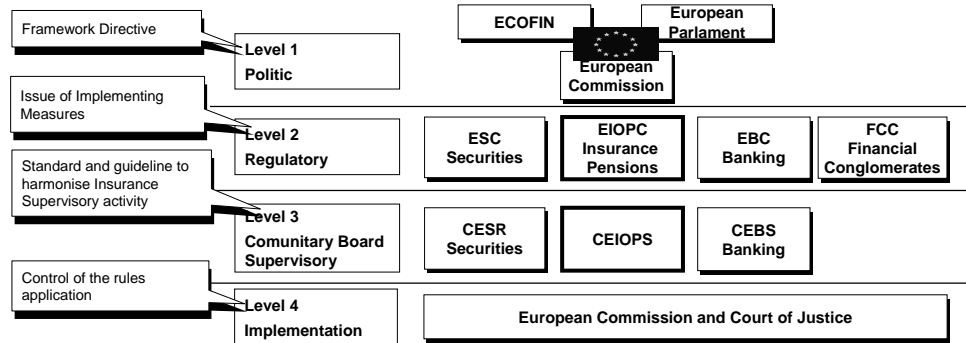


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## Solvency II Project General framework and institutional subjects

- Through the Solvency II Project, the European Commission has started a fundamental and wide-ranging review of the current EU solvency regime.
- The key objective of Solvency II is to establish a solvency system that is better matched to the true risks of an insurance company.
- The European Commission has issued Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) with three waves of 'calls for advice' covering a total of twenty-three issues.



- The Solvency II project will be fully operative by 2010.

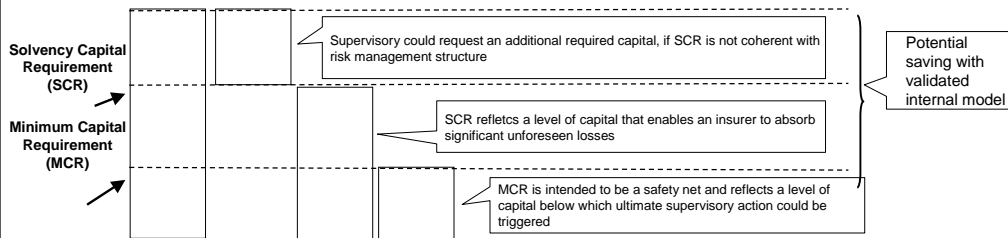


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## Solvency II Project 3 Pillars approach

- Solvency II project is based on a 3 Pillars approach:
  - **First Pillar:** includes technical rules for the valuation of assets, liabilities and required solvency margins.



- **Second Pillar:** represents an enhanced supervisory process including the ability to set capital requirements having regard to the effectiveness of systems and controls.
- **Third Pillar:** represents disclosure requirements, including both public disclosure and private disclosure to the supervisor.

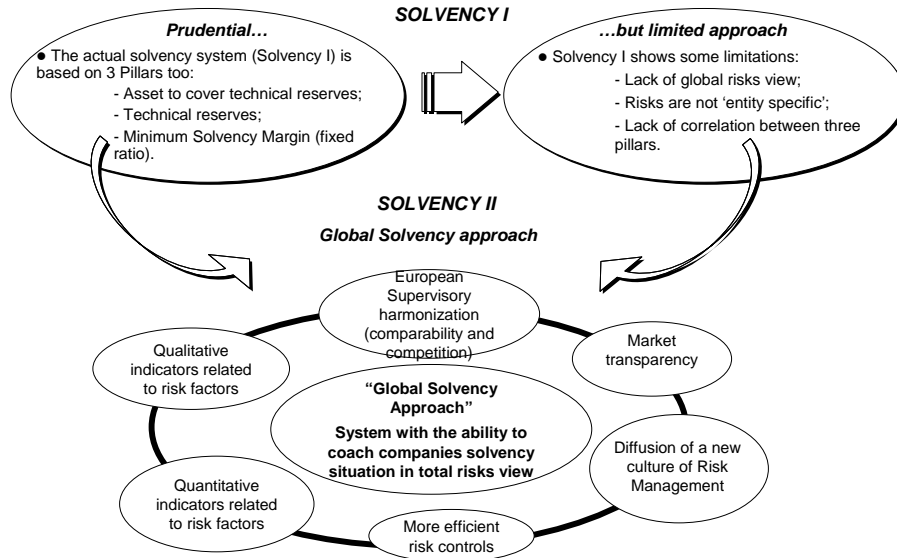
- To quantify the impact of new directive, Quantitative Impact Studies (QIS) are used iteratively in order to calibrate quantitative requirements.



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## Solvency II Project From Solvency I to Solvency II

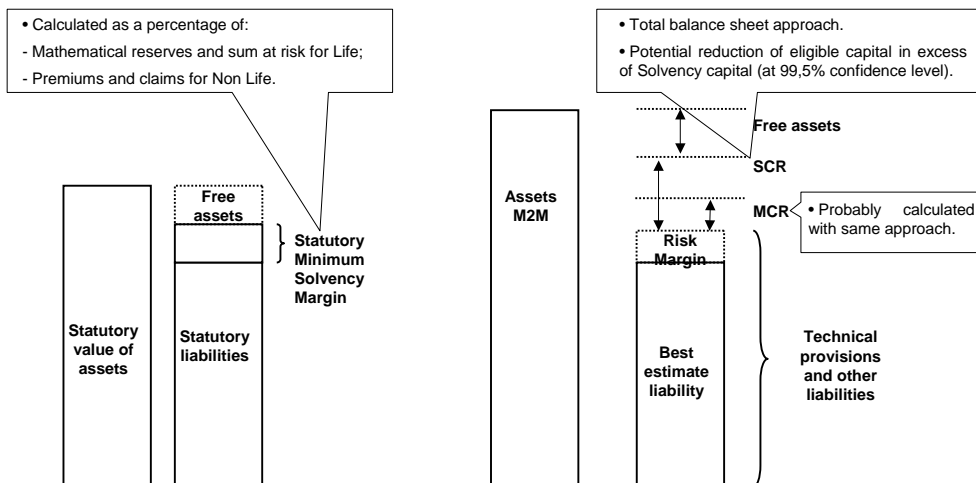


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## Solvency II Project From Solvency I to Solvency II

- The aim of the Solvency II Project is the establishment of solvency standards to match risk and encourage proper risk control.



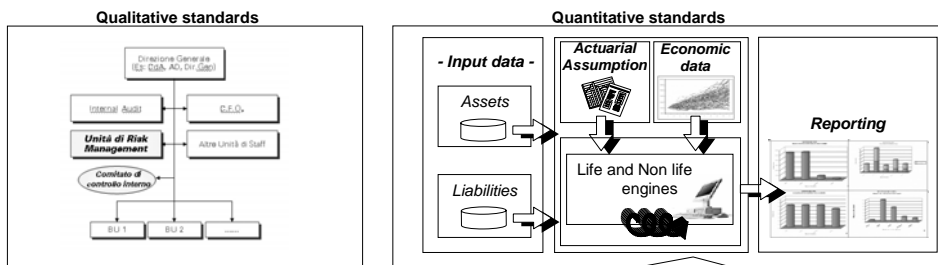
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## Solvency II project The Italian market

### Regulatory requirements

- New regulation in December 2005 (Circolare ISVAP 577/D) with companies required to:
  - demonstrate risk management and internal controls
  - have a unit that takes ownership of risk management measurement and control, notably for quantitative models.



### Market answer

- Three biggest insurance groups are developing risk - based internal models for calculate Economic Capital;
- Internal models are both for Life and Non Life businesses and cover liquidity, credit, market and insurance risks;
- Models are focused on ALM techniques (Life business);
- No correlation matrices are used.



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## International framework

- The international Regulatory Bodies or Industry associations are adopting new solvency assessment models in order to follow CEIOPS guidelines;
- Models follow different approach (by sophistication grade):
  - Fixed Ratio approach
  - Risk Based Capital
  - Scenario Based approach
  - Probabilistic approach.

	Models	Approaches	Enforcement	Sources
	Enhanced Capital Requirements and Individual Capitale Assesment for Life – Non Life Insurers	Non-life: Pure Risk Factor Based + stress test; Life: Risk Factor Based + stress test and scenario analysis on with profits products.	In force	FSA
	Financial Assessment Framework	Scenario Analysis + Risk Factor Based for underwriting risks	Planned for 2006, postponed at least 1 year	PVK
	Supervisory model for German Insurance	Risk Factor Based	N.A.	GDV
	Risk Based Capital	Risk Factor Based + scenario analysis for ALM risks	In force	NAIC
	Minimum Continuing Capital Solvency Requirement e Minimum Capital Test	Risk Factor Based	In force	OSFI
	Capital Adequacy Model	Risk Factor Based	N.A.	S&P
	Swiss Solvency Test	Stochastic + scenario analysis, except for Credit risk (Basiel II)	In force	FOPI

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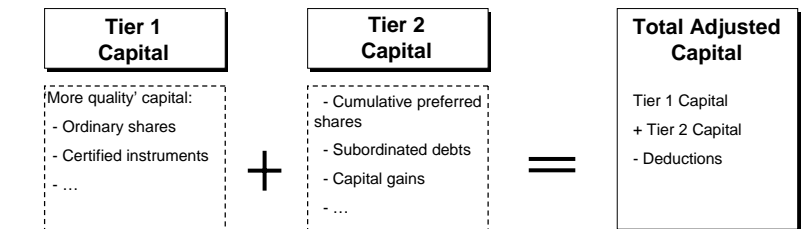
## Agenda

- Solvency II project
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## KPMG approach

- Capital at Risk (CaR)** → KPMG choose the models more similar to CEIOPS approach to calculate Capital at Risk for Italian insurance companies (UK for Non Life business and NL for Life), because:
- These models are 'of new generation', so they are evolved for the markets;
  - Sources (FSA and FTK) are active figures in Solvency II Project.

- Total Adjusted Capital (TAC)** →
- Basel II approach to calculate the Total Adjusted Capital (call for advice n°19);
  - TAC distinguishes between two categories (*TIER*) different for capital quality:



- Limits :
  - Tier 1 Capital  $\geq$  50% of SCR
  - Tier 2 Capital  $\leq$  Tier 1 Capital.

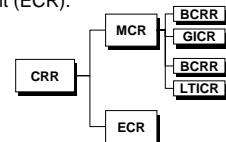


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## KPMG approach UK and NL model

- The **UK model** is a **Risk Factor Based** and treats the most relevant risks for non life business: **market risk** and **underwriting risks**
- In line with Solvency II approach, the capital requirement (**Capital Resources Requirement - CRR**) is the maximum among the Minimum Capital Requirement (MCR) and the Enhanced Capital Requirement (ECR).
- ECR is the sum of:
  - Asset Related Capital Requirement
  - Reserve Related Capital Requirement
  - Premium Related Capital Requirement



- The model proposed by the **Netherlands Authority (PVK)** focus the attention on the **realistic value of the asset and liability** intended to be in line with the International Accounting Standard Board.
- The capital requirement is computed according the following formula:

$$Tot = \sqrt{(S_1^2 + S_2^2 + 2\rho S_1 S_2 + S_3^2 + S_4^2 + S_5^2 + S_6^2)} \quad \rho = 0,8$$

### Scenario Based

- S-1 Interest rate risk
- S-2 Equity and Real Estate risk
- S-3 Foreign Exchange risk
- S-4 Commodities risk

### Risk Factor Based

- S-5 Underwriting risk



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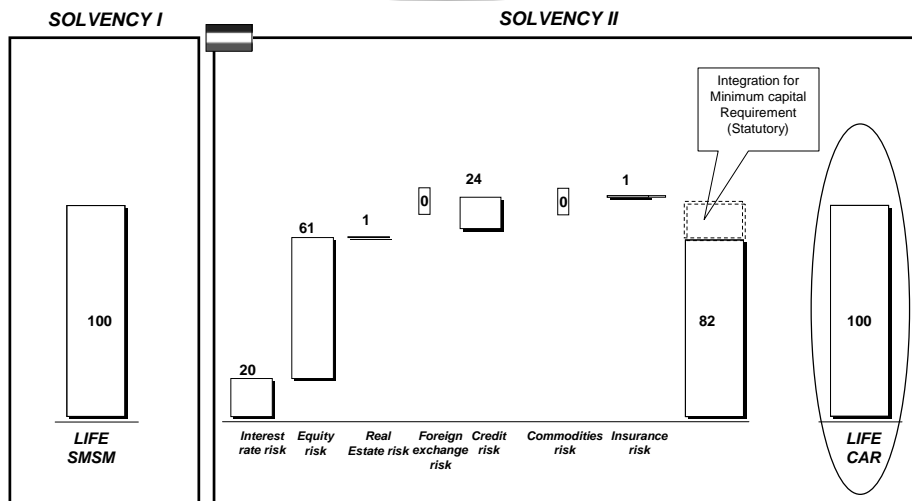


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## An Italian case study Solvency Capital Requirement - Life

*The Capital at Risk for Life business is 100 U, equal to Statutory Minimum Solvency Margin.*

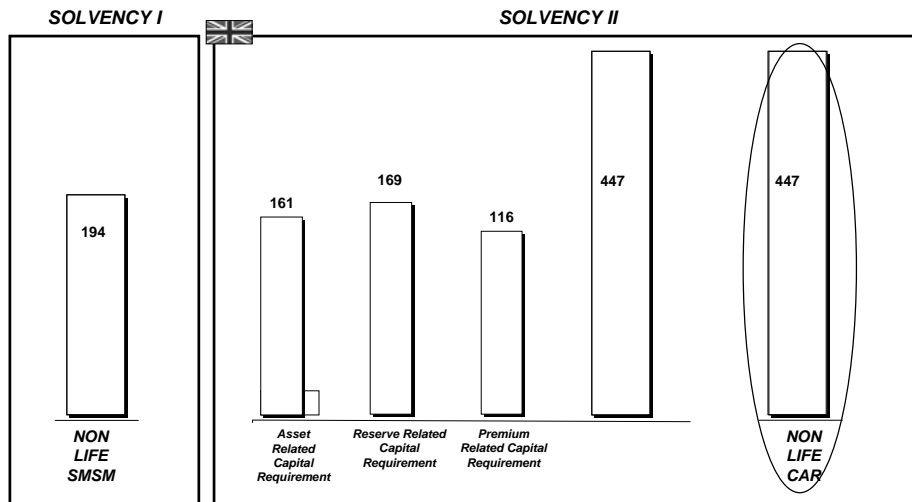


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## An Italian case study Solvency Capital Requirement – Non Life

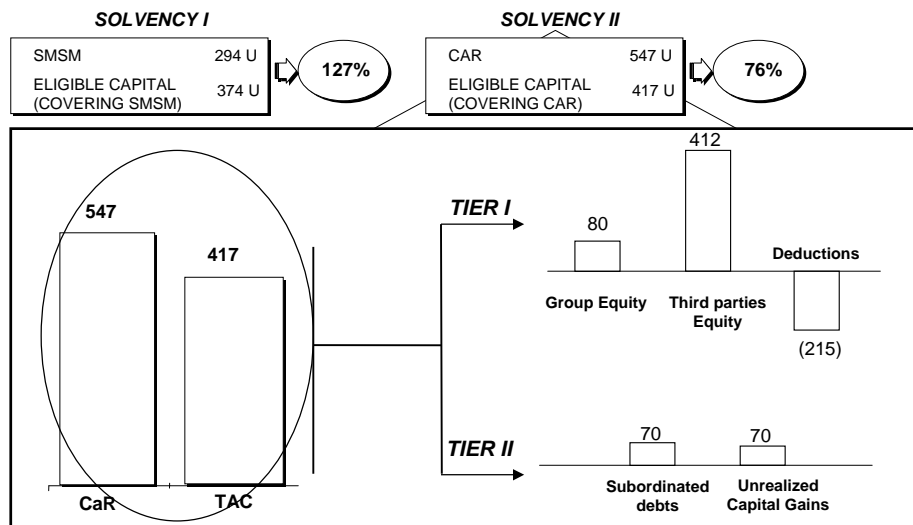
The Capital at Risk for Non Life business is **447 U**, largely over Statutory Minimum Solvency Margin.



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## An Italian case study Solvency ratio



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## Contact



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Position	<ul style="list-style-type: none"><li>• Partner</li></ul>
Experience	<ul style="list-style-type: none"><li>• Paolo joint KPMG BAS S.p.A. (formerly KPMG Consulting S.p.A.) in June 1995.</li><li>• He is currently Partner within the Financial Services practice, focused on the Insurance Industry. Actually he leads insurance advisory practice in Italy.</li><li>• His market segment experience is strategic and business planning, implementation of risk management processes, performance analyses and controlling, implementation of a Value Based Management process, implementation of ALM systems.</li></ul>



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**IFRS and USGaap, an Italian study case**

S.O.A. Spring meeting  
 Hollywood, FL, 25th may 2006

Gino Fassina

**A new (accounting) era is beginning in Europe**

<p>Referring to the latest document issued by the IASB, the first stone has already been settled: we are going towards the harmonisation of the worldwide accounting standards in order to provide to the investors more:</p> <ul style="list-style-type: none"> <li>▪ transparency</li> <li>▪ clarity</li> <li>▪ comparison</li> <li>▪ unique economic reality</li> </ul>	<p><b>GREAT DREAM</b></p>
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S.O.A. Spring meeting – Miami – 25/05/2006 - Gino Fassina

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Two phased process	
<p>The whole process can be ideally split in two phases:</p> <p>Phase 1, nowadays. Some companies are applying the new accounting rules</p> <p>Phase 2, the theoretical work started a couple of years ago, but the practical issue is still to be defined</p>	<p><b>There are political, economic, technical and philosophical reasons at the basis of the thoughts</b></p>
<p>S.O.A. Spring meeting – Miami – 25/05/2006 - Gino Fassina <span style="float: right;">3</span></p>	

A significant insurance risk	
<p>“A contract under which one part (the insurer) accepts significant insurance risks from another party (the policyholder) by agreeing to compensate the policyholder if specified uncertain future event (the insured event) adversely affects the policyholder”</p> <p>We can breathe now....and simply say that a contract to be classified as insurance, a significant insurance risk must be present, like (under IASB blessing):</p> <ul style="list-style-type: none"> <li>▪ term assurance</li> <li>▪ whole life policies</li> <li>▪ most property/casualty insurance contracts</li> <li>▪ disability and medical cover</li> </ul>	<p><b>The benefits to the policyholder must be paid in any scenario, except those that lack commercial substance.</b></p>
<p>S.O.A. Spring meeting – Miami – 25/05/2006 - Gino Fassina <span style="float: right;">4</span></p>	

## Not a significant insurance risk, but insurance as well...

The investments contracts classified by IASB are basically Unit linked without significant death benefit and guaranteed investment contracts.

Those contracts showing a discretionary participation are treated under IFRS4 as insurance contracts. The concept of 'discretionary participation' rounds to the facts that the insurance company has discretion over the timing or amounts payable to the policyholder.

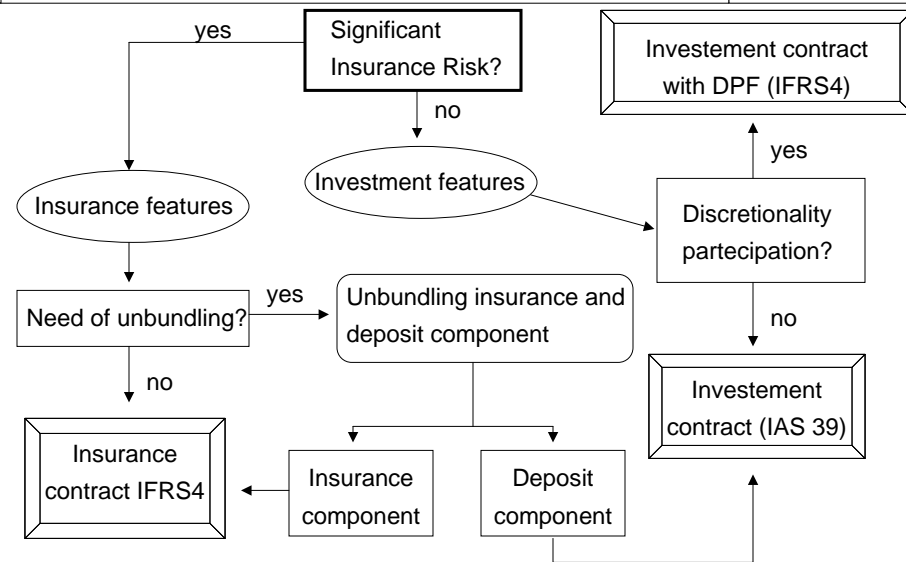
In other words, the rest of the contracts....and Italy thanks!

**Insurers continue to use their existing accounting rules.**

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## The decisional process to classify the products

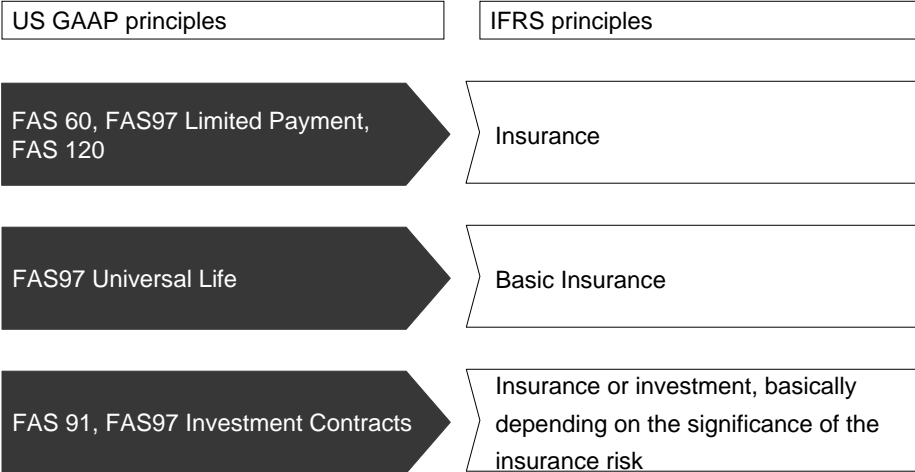


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The same decisional process to classify the products, but according to the USGaap principles....

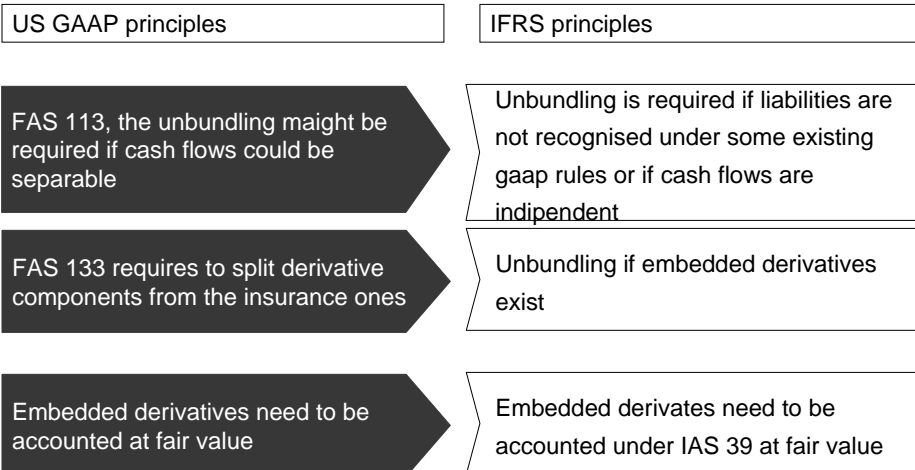
..mmmh, the flow chart is too criptical. This summary is more immediate!



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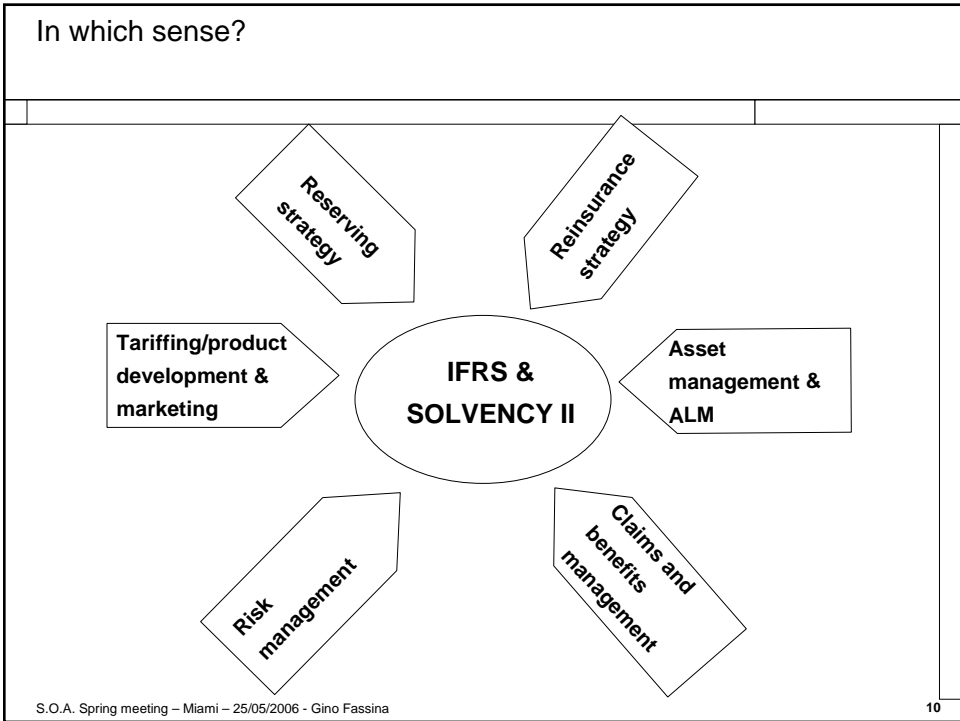
### A little excursus to the reinsurance



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IFRS4 and Solvency II: will they converge?	
	Original model
<p>Phase II is based on the concept of full fair value, and the Solvency II's expectation is to evade the problems of the current Solvency system, passing through the independency of the local Gaaps because of a fair value of assets and liabilities accounting.</p> <p>Solvency II will influence an insurance undertaking all-inclusive of, IFRS as well.</p> <p>Identical concepts and operational impacts to the Company.</p>	<p><b>Will we arrive to a unique definition of mathematical reserve?</b></p>
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The impacts: operational	
<ul style="list-style-type: none"> <li>▪ <u>Pricing and product design</u>: re-evaluation of guarantees, options, profit sharing, embedded derivatives,....</li> <li>▪ <u>Marketing&amp;Sales</u>: possible pressure to move towards 'real' insurance contracts</li> <li>▪ <u>Internal (financial) planning and control system</u>: new tools consistent with the reporting</li> <li>▪ Actuarial modelling</li> <li>▪ IT systems</li> <li>▪ Investor relators activities</li> <li>▪ Accounting activities and reports/disclosures (the last but not the least!)</li> </ul>	<p><b>Definately, a new way to steer the company.</b></p>
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The impacts: economic	
<ul style="list-style-type: none"> <li>▪ <u>Volatility</u> in reported earnings (part due to the market conditions, but part due to the new accounting rules)</li> <li>▪ <u>New asset allocation</u></li> <li>▪ Money spent....</li> </ul>	<p><b>Can an investor distinguish between real and artificial volatility?</b></p>
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<p><small>12</small></p>	

So, what really changes for Insurers in Phase I is:	
<ul style="list-style-type: none"> <li>▪ Product classification</li> <li>▪ New categorisation of investments (held for trading, available for sale, held to maturity) and accounted at amortised cost or at fair value (IAS 39)</li> <li>▪ Extensive additional disclosures (both qualitative and quantitative); it means more external communication</li> <li>▪ Liability adequacy test (IAS 37)</li> <li>▪ Cat and claims equalization provisions for future claims are not allowed anymore (to be allocated to equity)</li> <li>▪ Reinsurers will be affected</li> </ul>	<p><b>Good luck!</b></p>
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<p><small>13</small></p>	

Phase II: Geneva Association's survey states that	
<ul style="list-style-type: none"> <li>▪ No surveyed insurer would wish to introduce fair value accounting voluntarily</li> <li>▪ Alignment of internal accounting system to new financial reporting system for cost reasons and investor perceptions</li> <li>▪ Introduction of full fair value reporting would significantly change the business strategies of insurers and reduce their competitiveness</li> <li>▪ Higher volatility of earnings increase the cost of capital of insurers</li> <li>▪ Fair value of insurance liabilities considered to be very subjective</li> <li>▪ Increase in transparency to be provided in the notes rather than distorting the primary financial statements</li> <li>▪ Full fair value reporting system causes adverse impact on the risk transfer role that the insurance industry plays within the wider economic system</li> </ul>	<p><b>These issues are real</b></p>
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Phase II: a thought before sleeping....	
<p>Will be addressed this assessment in Phase II?</p> <p>'The measurement of insurance company liabilities under Phase II should be fully consistent with the nature of insurance, allowing companies to diversify risks over time and the new Solvency requirements should not induce additional procyclicality'</p> <p>That summarizes, what I tried to explain before.</p>	<p><b>Source: ANIA</b></p>
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An Italian case: Ergo Previdenza	
<ul style="list-style-type: none"> <li>▪ Listed life insurance</li> <li>▪ Traditional business model (multichannel and multiproduct)</li> <li>▪ Renewed company in management and processes</li> <li>▪ Munich Re</li> </ul> <p>That means we are able to lead the IFRS challenge successfully!</p>	<p><b>2005 was closed with the IFRS accounting rules</b></p>
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## An Italian case: Ergo Previdenza

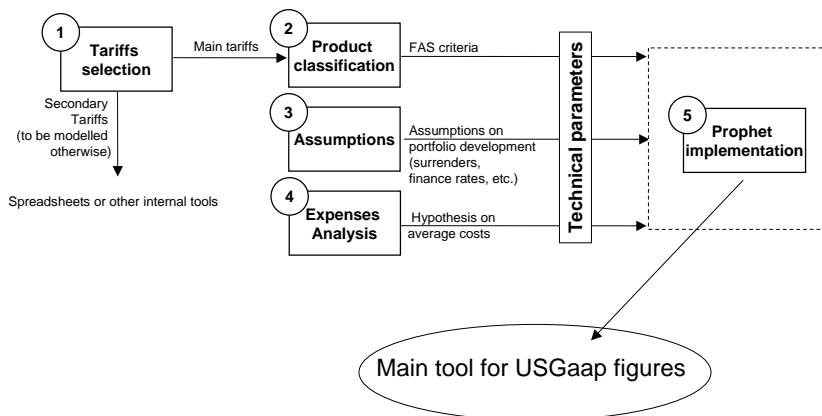
Not only. Because we are part of the biggest reinsurer we should do also the infra group balance according to the USGaap principles.

So we lead a so called Fast Close project that had the goal of:

- reducing accounting closing period;
- creating rules to estimate data (when actual data are not available, due to time constraints);
- minimizing the internal effort in managing Local and IAS/US-GAAP data at the same time;
- setting the basis for a new business culture, focused on concepts such as “clean input” and “responsibility on data”.

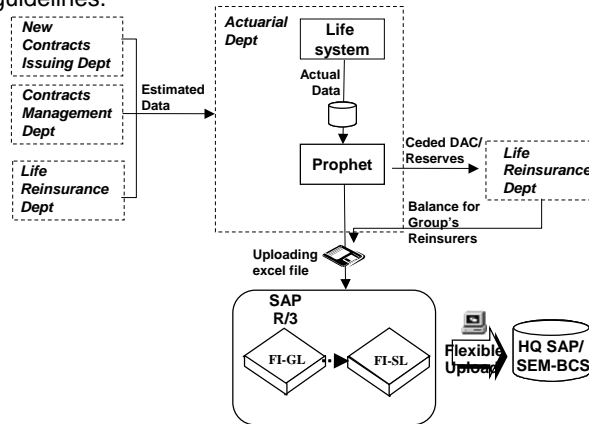
**A real new  
mentality and  
knowledge was  
introduced**

## Fast close project: process flow and tool



## Realization: Prophet implementation

From the technical point of view, Prophet has been chosen as the main tool to enable a real IAS Reserving Process, compliant with a SAP solution and with Fast-Close and Econ Reporting guidelines.



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## What we actually do

LOCAL accounting

Based on IFRS

PHASE I principles + DAC, DIR, Shadows accounting, LAT, market value for assets

Existing (but improved) tools + Prophet for LAT

GROUP accounting

Based on USGaap for liabilities (FAS60, FAS97LP and IC), DAC, LRT, Shadows accounting

IAS figures for the other figures

Prophet as main tool for liabilities, DAC and LRT

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## HOT TOPICS

Phase I could signify impact of the assets side of the balance sheet leading to potential mismatches between assets and liabilities, increasing volatility in results

IFRS4 does not allow on balance sheet earnings smoothing mechanisms such as cat reserves and equalisation reserves

IFRS4 requires expanded disclosures posing significant challenges

FAIR VALUE methodology still vague minimize the internal effort in managing Local and IAS/US-GAAP data at the same time;

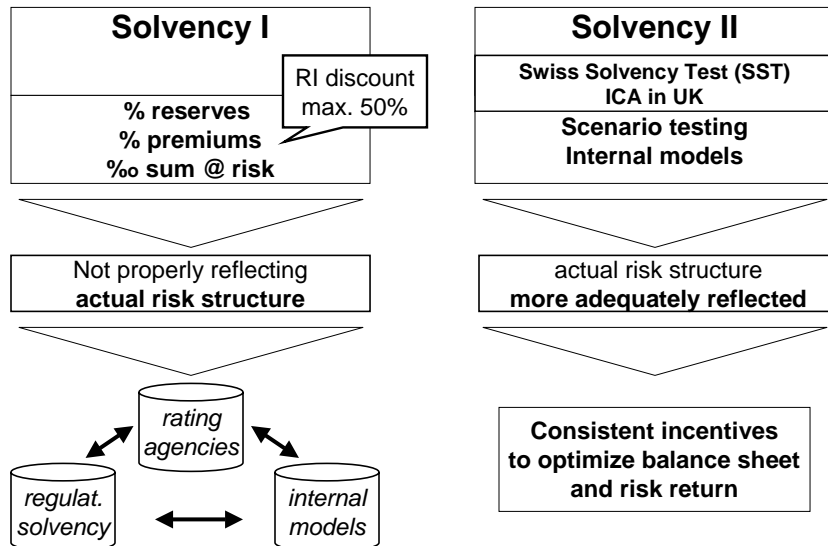
Thank you for your attention and  
patience!

## Impact of Solvency Regimes on Risk Transfer

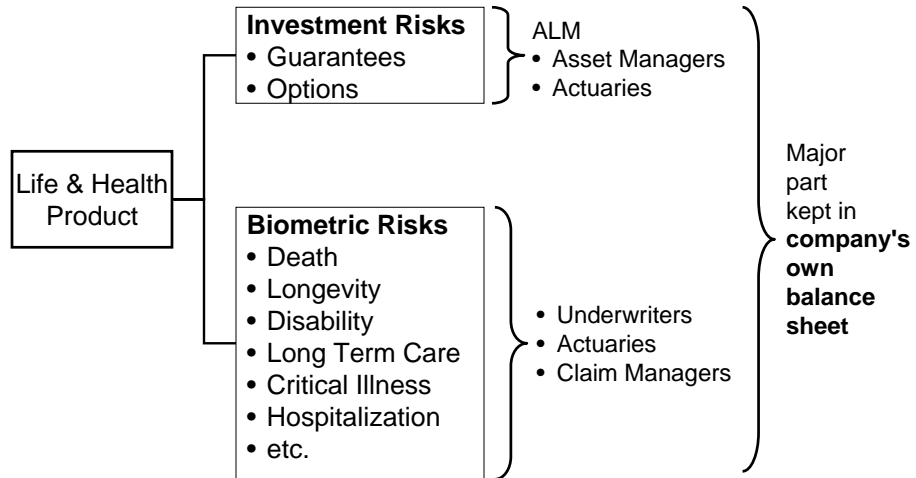
SOA Life 2006 Spring Meeting  
Hot Topics in International Markets

Michael Winkler  
Managing Director  
Winterthur Group

## Different Solvency Regimes



## Current Risk Handling (1)

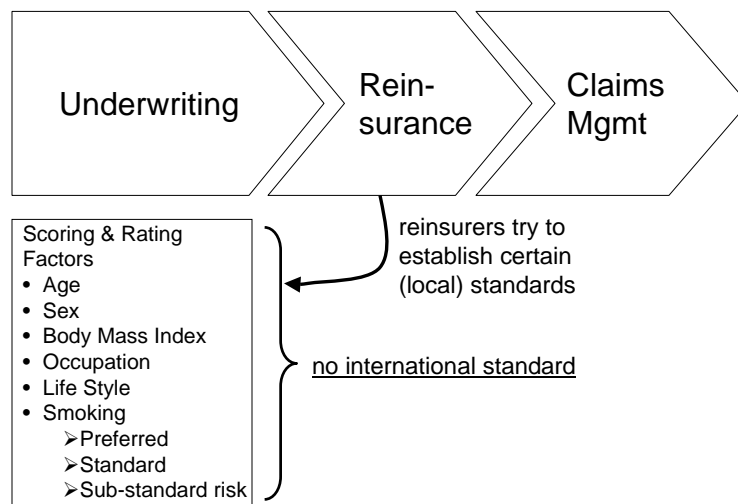


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## Current Risk Handling (2)

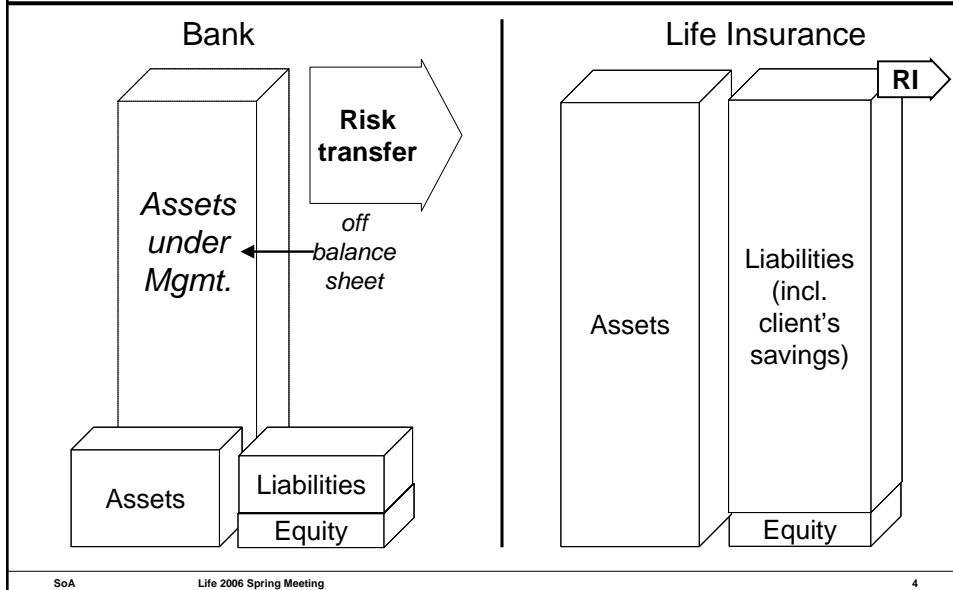


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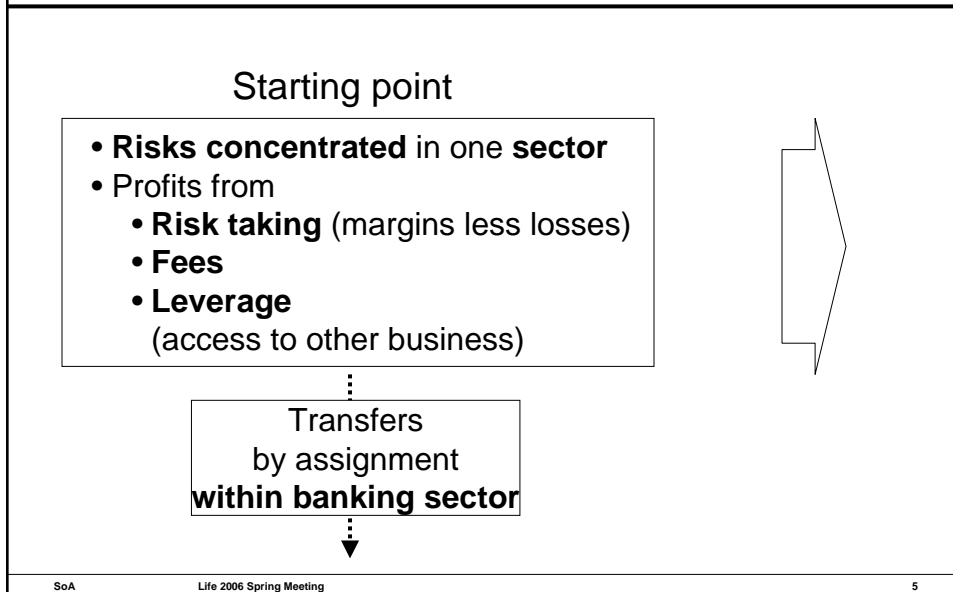
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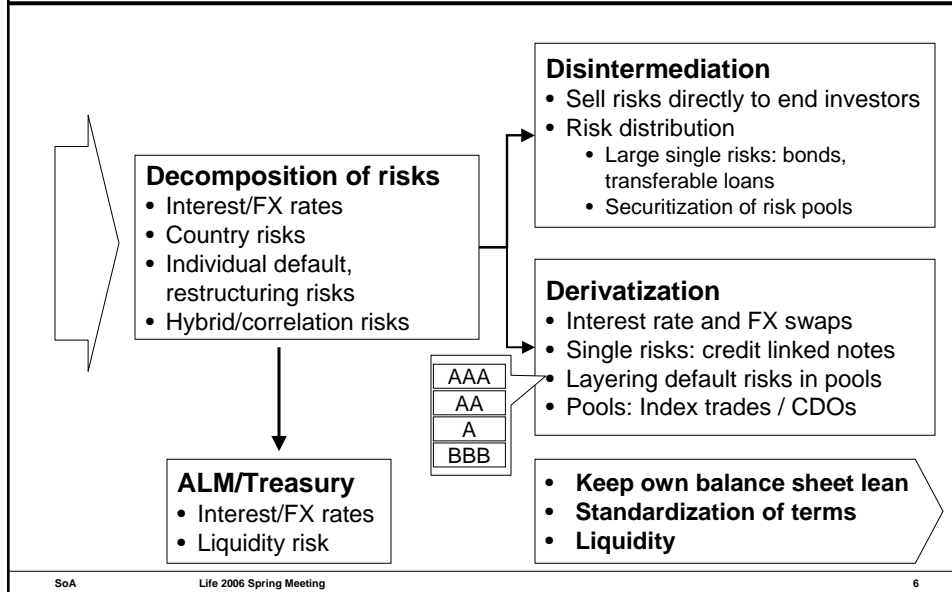
## Balance Sheet: Bank vs Life Insurance



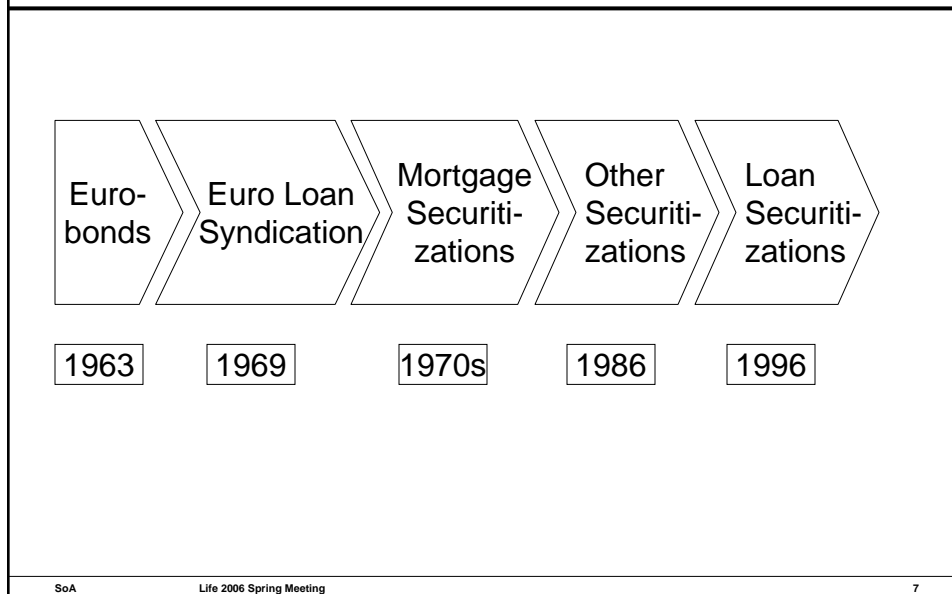
## Development in Banking (1)



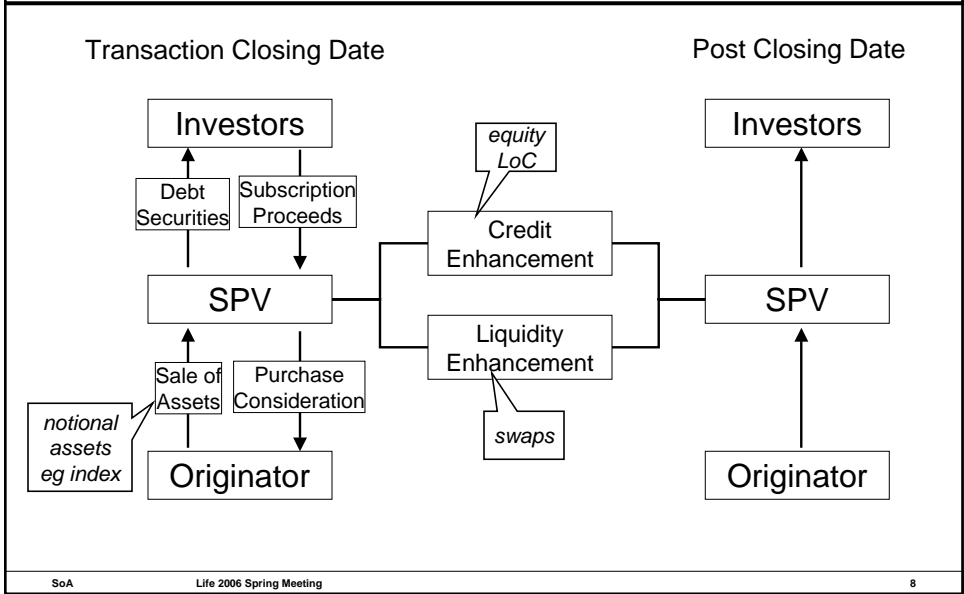
## Development in Banking (2)



## Disintermediation

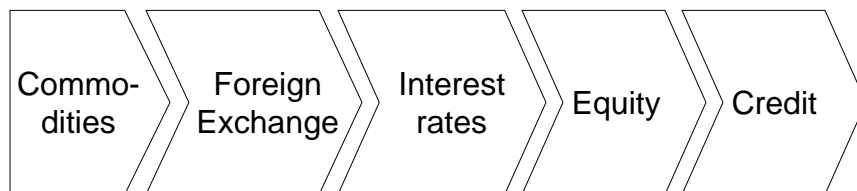


## Securitization: Basic Structure



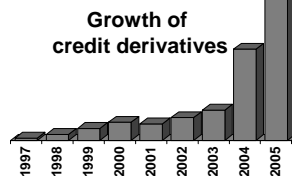
## Derivatization

The march through the asset classes:



### Drivers

- Tax
- Accounting
- Regulation
- Hedging
- Investment
- Trading



## Analogy for Life Insurance (1)

### Starting point

- **Risks concentrated in one sector**
- Profits from
  - **Investment income**
  - **Mortality/morbidity risk taking**



Transfers  
via **reinsurance**

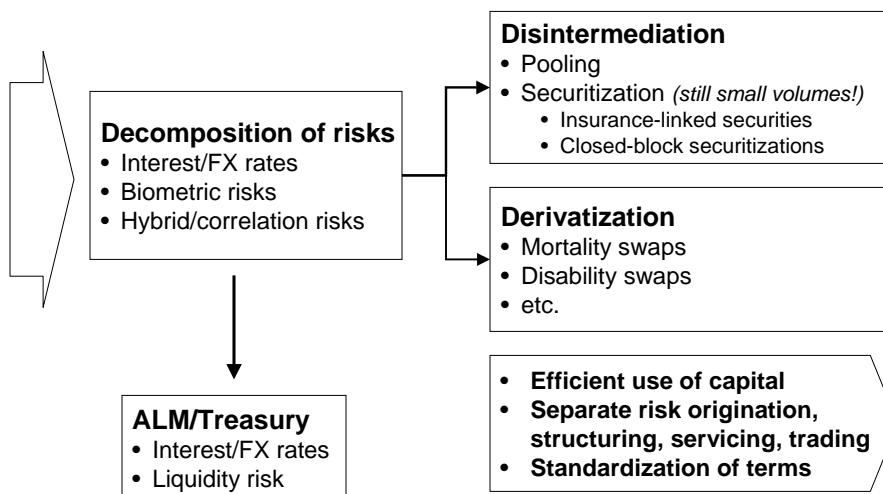


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## Analogy for Life Insurance (2)

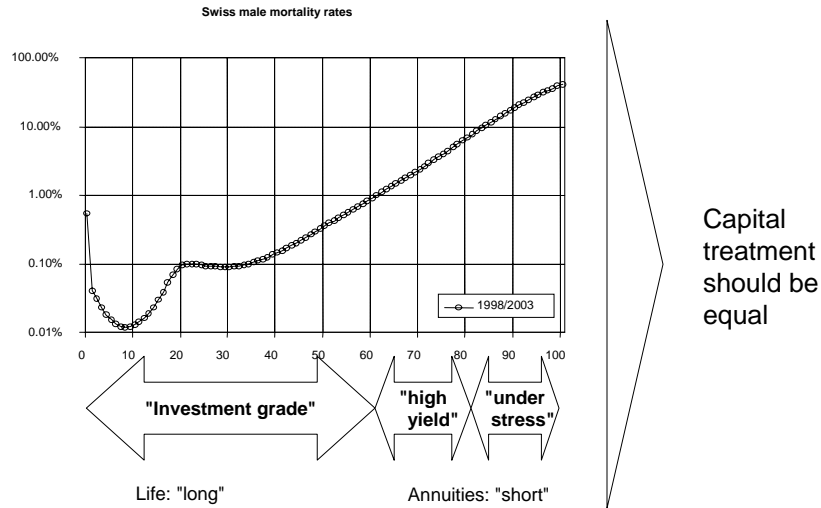


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## Mortality Risk $\leftrightarrow$ Credit Risk

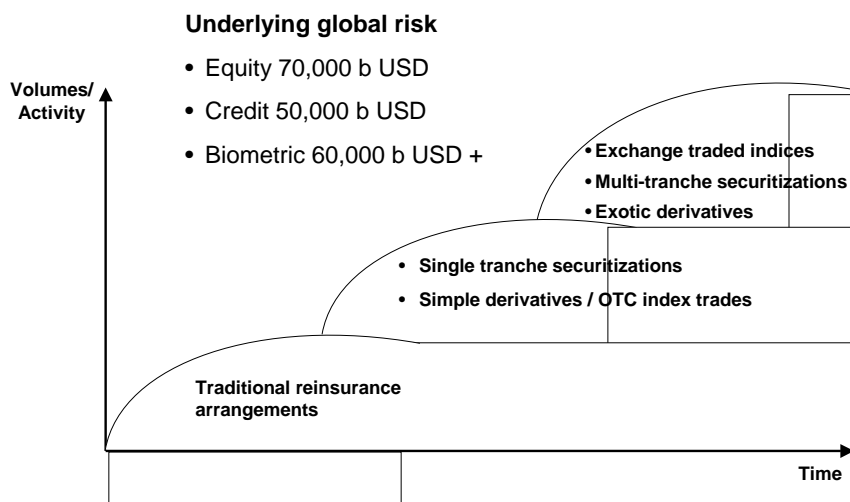


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## A market for Biometric Risks: 3 waves of development



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## Life Insurance Securitizations

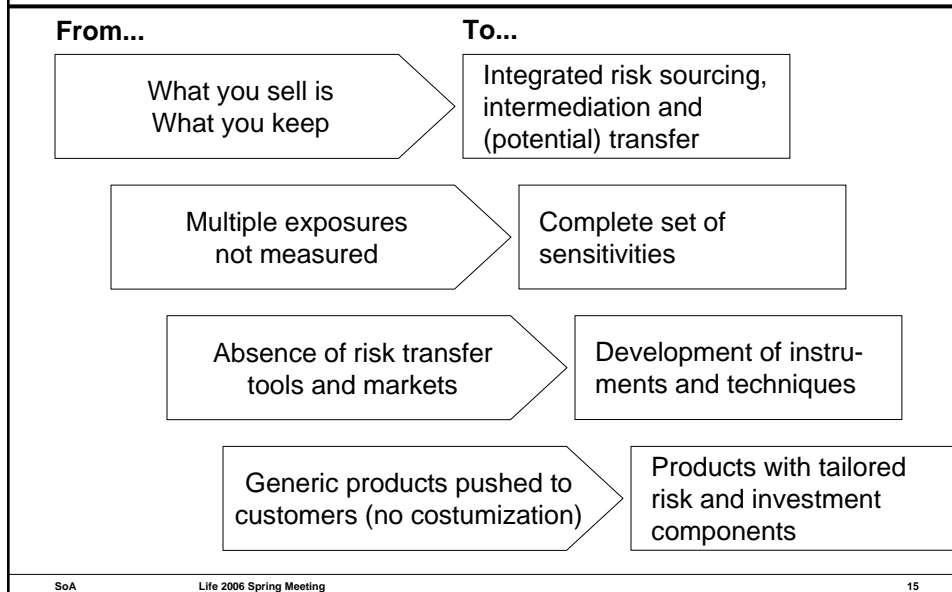
<b>Capital Raising</b>	<ul style="list-style-type: none"> <li>American Skandia 1996-2001 (VA)</li> <li>Prudential 2001 (Closed Block)</li> <li>Barclays 2003 (Embedded Value)</li> <li>Friends Provident 2004 (VIF)</li> </ul>	USD 900 m USD 1.75 bn GBP 400 m GBP 380 m
<b>Reserve Funding</b>	<ul style="list-style-type: none"> <li>First Colony 2003 (XXX)</li> </ul>	USD 300 m
<b>Risk Transfer</b>	<ul style="list-style-type: none"> <li>Swiss Re 2003/4 (Extreme Mortality)</li> <li>European Investment Bank 2004 (Longevity)</li> </ul>	USD 400 m  GBP 550 m

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## Summary



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