



Illiquidity Premium Adjustment

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Market consistent valuation of liabilities

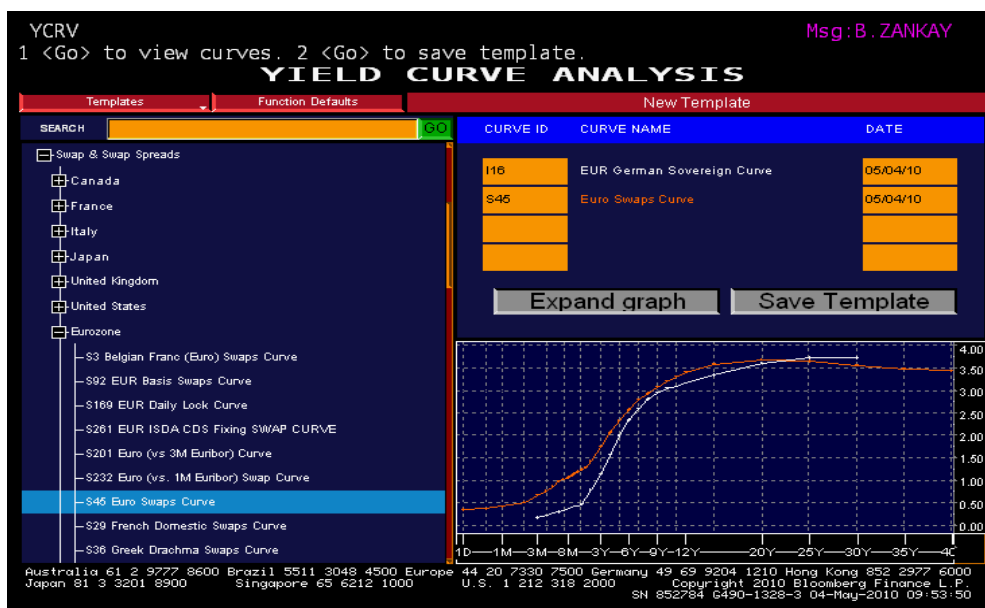
- **Solvency II Directive** (Article 77)
- Calculation of technical provisions
- The best estimate shall correspond to the probability-weighted average of future cash-flows, taking account of the time value of money (expected present value of future cash-flows), using the relevant **risk-free interest** rate term structure.



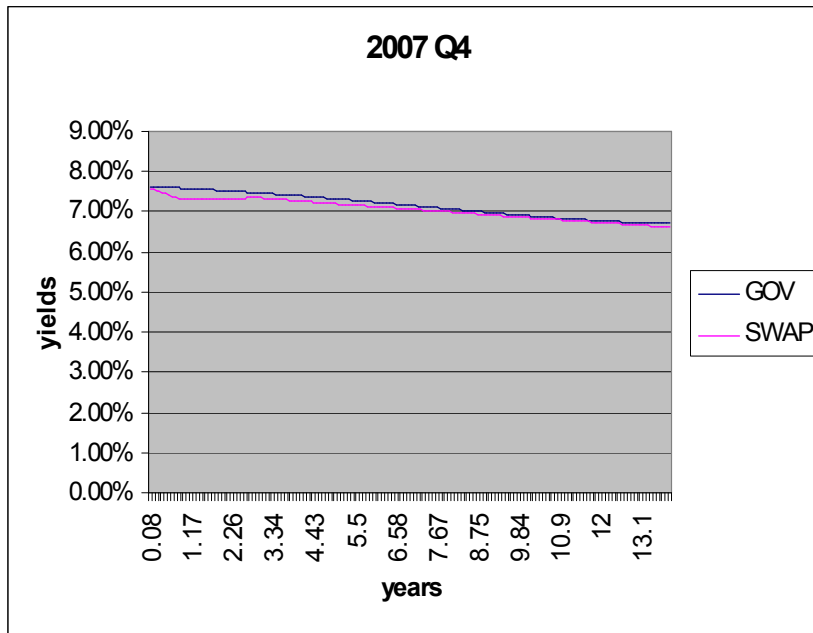
Risk free rates

- Zero coupon **government curve**
- A yield curve (which is known as the term structure of interest rates) represents the relationship between market remuneration (interest) rates and the remaining time to maturity of debt securities. The information content of a yield curve reflects the asset pricing process on financial markets.
- Zero coupon **swap curve**
- The name given to the swap's equivalent of a yield curve. The swap curve identifies the relationship between swap rates at varying maturities.

Bond curve versus swap curve - EUR



Bond curve versus swap curve - HUF

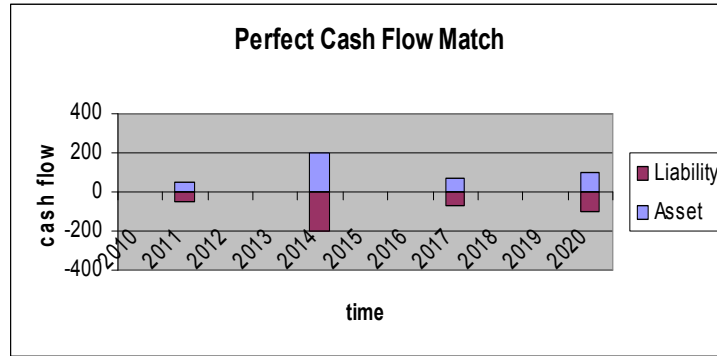


Solvency II – Implementing Measures – IR 2

Basic risk free interest rate term structure

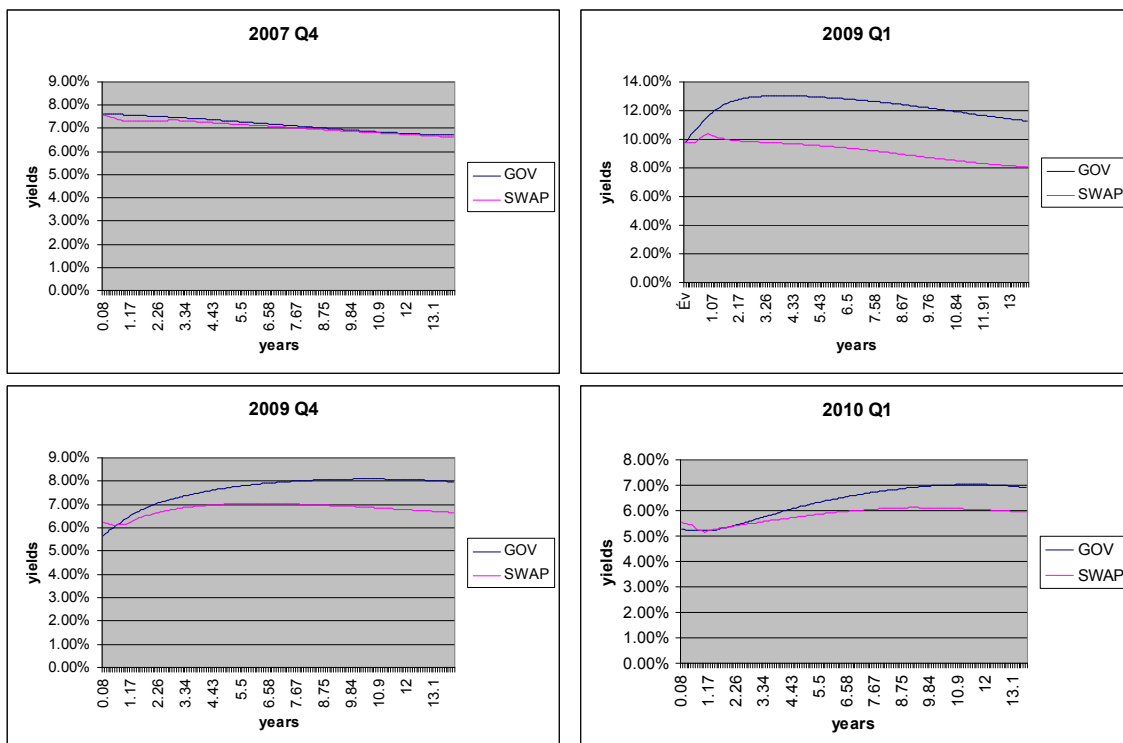
- The rates of the basic risk-free interest rate term structure shall meet all of the following criteria:
 - they are free of any risk,
 - insurance and reinsurance undertakings are able to earn the rates in a risk-free manner in practice,
 - the rates are reliably determined based on financial instruments traded in a market...
- For each relevant currency, the basic risk free interest rate term structure ... shall be derived, where appropriate, on the basis of the interest rate swaps rates adjusted to take account of the credit risk and basis risk of the corresponding interest rate swaps.

Consequences I. - ALM



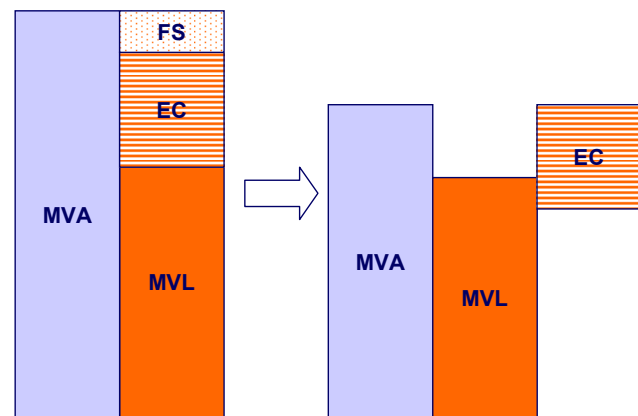
- Different discount rates on the asset and on the liability side
- $PV(A)$ and $PV(L)$ can move differently

The two curves historically



Consequences II. – Insolvency?

- Assume that the government curve spread suddenly rise:
- MVA drops while MVL and EC remain almost unchanged
- FS decreases or vanishes



Possible situations

- EURO countries like Greece, Spain, Italy
- Companies investing heavily into credit papers and credit spreads jump
- Low rated non Euro countries: (Hungary, Bulgaria, Romania)
- **ILLIQUIDITY ADJUSTMENT:**
- Use an **illiquidity spread above the swap curve** when valuing insurance liabilities because they are illiquid.
- Higher discount rate will lower the PV of liabilities and that way partly counterbalance the decrease in MVA.
- GAIL only, UL is out of scope

Concerns

- Isn't it just a sort of **creative accounting**?
- Liabilities must be paid to the policyholders for sure therefore they should be discounted using **risk free rates**!
- Some companies invest their assets into junk bonds why should we allow them to use high discount rates on the liability side? Is this an **award for gamblers**?
- Liabilities are **not illiquid** at all since policyholder can use their **surrender option** any time.

Arguments:

- Insurance liabilities are **illiquid if they cannot be sold (or it is difficult) to other investors**. If surrender activity increases it must be reflected in the cash flow projection independently from discount rates.
- Insurance cash flows are not certain they incorporates **uncertainty by nature**. In case of financial crises the required return for taking risk increases. This might be expressed in the form of an additional spread above the risk free curve.
- The illiquidity spread **must reflect** the general status of the capital markets and **NOT the special asset portfolio** of the insurer.
- Insurers are bound to follow investment rules they can choose assets with full freedom. In many cases **local rules have strong bias towards domestic** fixed income instruments.

Task force

- On 29 October 2009 CEIOPS has agreed to lead **further work on the issue of the inclusion of a liquidity premium** in the risk-free rate for discounting technical provisions as an additional input for Level 2 implementing measures.
- In order to carry out this work, a clear concept and mandate were needed and a **Task Force was created**.
- CEIOPS invited stakeholders to join the Task Force. CRO/CFO Forum, CEA, Groupe Consultatif, AMICE and Prof. Antoon Pelsser from Maastricht University were invited to discuss this issue with a small group of CEIOPS Members.
- The Task Force **published its report on 1st of March 2010**.

The report

- The **illiquidity** of an insurance liability **measures** the extent up to which its cash flows are **certain** in amount and in timing.
- **Most of life insurance liabilities** can be considered to be at least partially illiquid.
- A prerequisite for the application of a liquidity premium to illiquid liabilities is the existence of **objective and reliable methods** allowing to measure the degree of illiquidity.
- The liquidity premium should be **calculated and published by a central EU institution** with the same frequency and according to the same procedures as the basic risk free interest rate.

Implementing measure IM20

- **Portion of the observed illiquidity premium corresponding to insurance or reinsurance obligations shall, be set at 100% for contracts which meet all of the following criteria:**
 - the benefits of the contracts are **retirement benefits in the form of annuities**, and the only underwriting risks connected to the contracts are longevity risk and expense risk;
 - the contracts **do not pay discretionary benefits**;
 - the insurance or reinsurance undertaking does **not bear any risk in case of any form of surrender**;
 - the contracts are **single premium policies**, the premium has already **been paid** and no incoming cash-flows are allowed for in the technical provisions of the contracts;
- The portion shall be set at 0% for contracts other than those specified in paragraph 2.**

Challenging regulation – IM20

- **For each relevant currency, the European Insurance and Occupational Pensions Authority established by Regulation.../...of the European Parliament and of the Council shall derive and publish:**
 - the **basic risk free interest rate term structure** referred to in point (a) of paragraph 1, and
 - the **illiquidity premium observed in the financial markets** referred to in paragraph 1 of Article IR6.