



IASB/FASB Meeting
Week commencing 14 March 2011

IASB Agenda
reference **3E**

FASB Agenda
reference **60E**

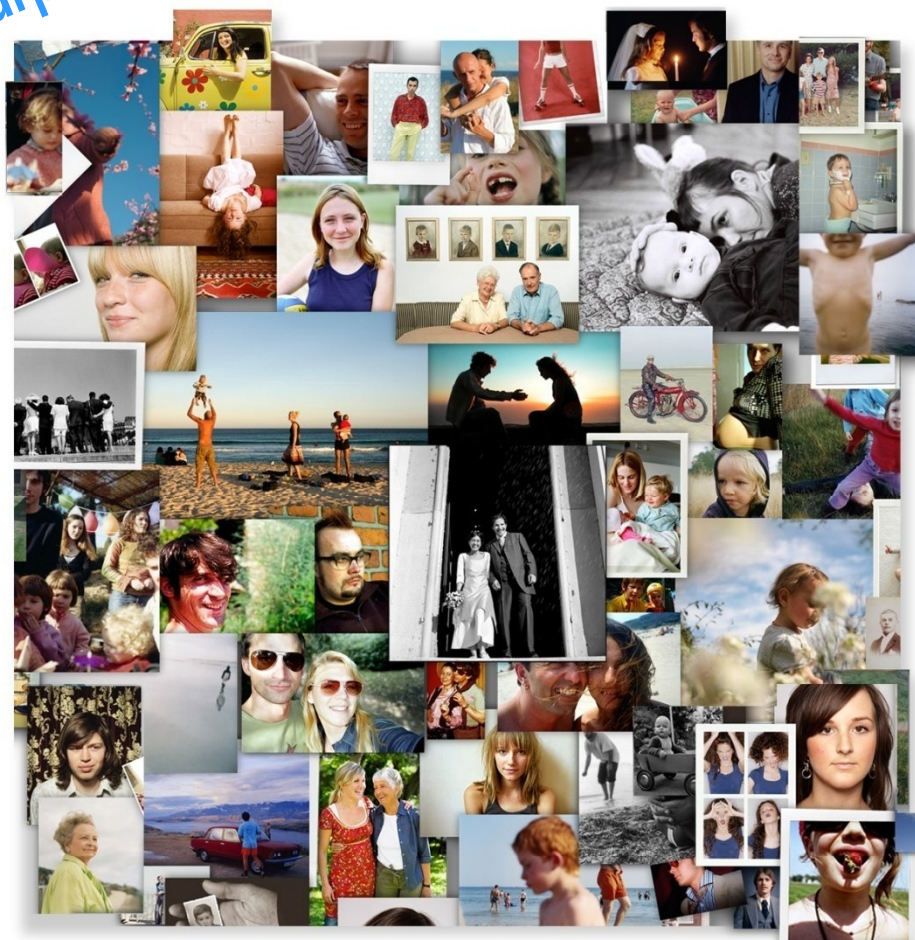
Project

Insurance contracts

Topic

Discount rate - Proposal to use an 'ALR' rate

*For discussion
purposes*



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An alternative method to discount par contracts: the Asset Liability Rate

Concept and application to a portfolio of par contracts of CNP Assurances

- 1. Background**
- 2. Basic principles of the ALR**
- 3. Simulations performed by CNP**
- 4. Snapshot of the ALR**
- 5. Appendix**
 1. DPF contracts
 2. CNP Assurances

With the assistance of
Deloitte.



IASB Board Meeting
15 March 2011

- We understand that the IASB is looking for a solution that complies with the following basic principles:
 - Use of a discount rate that adjusts the future cash flows for the time value of money and **reflects the characteristics of the insurance liability**.
 - Use of a discount rate that **reflects economic mismatches** (differences in duration between assets and liabilities)
 - Use of a discount rate that **avoids accounting mismatches**
 - by dealing with undue volatility caused by **changes in credit spread**
 - by being appropriate whatever of the measurement method (**bonds at fair value or amortized cost**)
 - **Value of options and guarantees** embedded in the contracts shall be reflected in the liabilities
 - If the cash flows are linked to the performance of assets held by the insurer, **the insurer should adjust those cash flows using a discount rate that reflects that dependence**.

2- Basic principles of the ALR

➤ The Asset Liability Rate is a yield curve:

▪ **Consistent with the liabilities' cash flows (linked to the return of the asset held and market expectations). The yield is derived from:**

- Financial revenues from the portfolio held (that impact the cash flows) : coupons from bonds, fair value adjustments of equities, ...
- Market forward rates for the reinvestments : reinvested coupons, nominal amount received at the maturity of the bond,...

▪ **Consistent with the classification of the financial assets under IFRS 9 (according to the business model of the insurer):**

- If bonds are classified at amortized cost, the ALR does not reflect fair value adjustments of bonds
- If bonds are classified at fair value, the ALR is impacted by fair value adjustments of bonds

▪ **In a risk neutral environment with a liquidity premium**

- No credit spread is added to the risk free rate
- $$\begin{aligned} \text{ALR} &= \underbrace{\text{financial return form assets held} - \text{credit spread}}_{\text{risk free rate}} + \text{liquidity premium} \\ &= \text{risk free rate} + \text{liquidity premium} \end{aligned}$$

3- Simulations performed by CNP

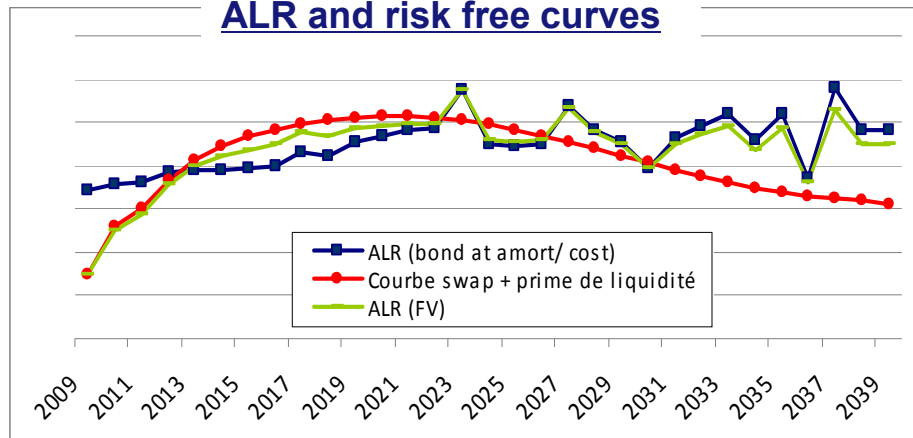
- Our simulations have been performed with our **internal model** that is used for MCEV and Solvency II purposes. The model has been adjusted to take into account the principles of the ED *Insurance contracts*.
- The portfolio used for the simulation represents €85 billion of par contract liabilities.
- The projections are based on a **risk neutral environment** (ie. no credit risk is added to the risk free rate) plus a liquidity premium (of 16bps).
- The insurance liability is obtained by discounting projected cash inflows and outflows. **Benefits are calculated according to a fulfilment approach.** Account is taken of the average of the probable stochastic scenarios, in order to give effect to **all favourable and unfavourable scenarios**.
- We present in the following slides **different methods where the projected cash flows are exactly the same. The only differences are the measurement method for bonds and the rate used to discount the projected cash flows.**

	Discount rate	Measurement of financial assets	
		Equities	Bonds
Method 1: risk free rate + liquidity premium	Risk free rate + liquidity premium	FV-NI	FV-NI
Method 2: ALR	ALR curve	FV-NI	Amortized cost
	ALR curve	FV-NI	FV-NI

3- Simulations performed by CNP

Results of the simulations

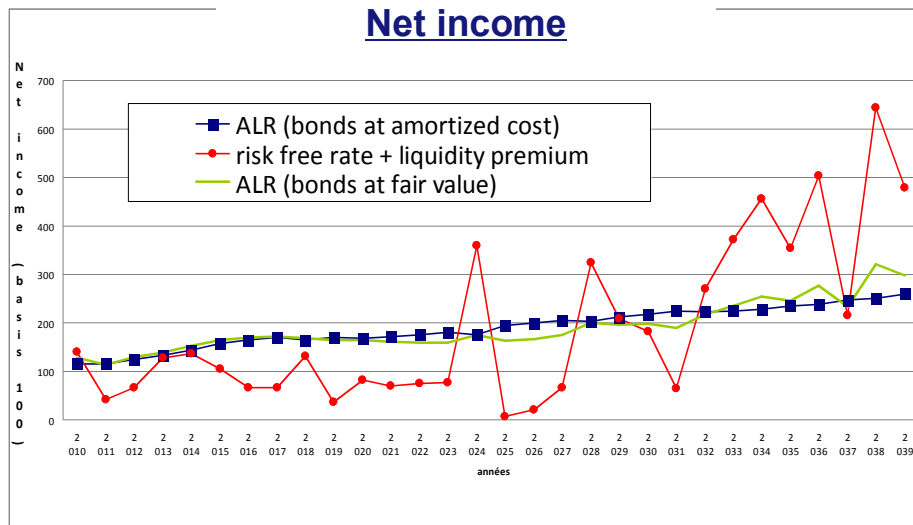
ALR and risk free curves



The ALR is based on :

- the **financial return on the current portfolio** in a risk neutral environment plus a liquidity premium, and
- the **current market risk-free rate curve** plus a liquidity premium for the gradual reinvestment.

Net income



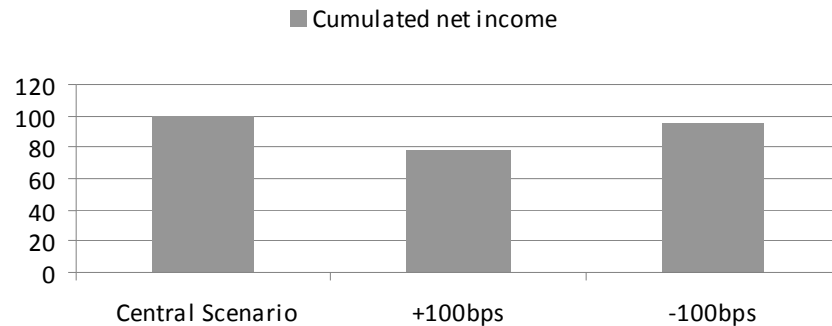
- For both methods, **the cash flows are the same** (based on a risk neutral stochastic methodology). The only **difference is the discount rate used to discount the cash flows**.
- The red curve is based on financial assets at FV-NI. The volatility is due to the volatility of the financial assets in our simulations.
- The ALR method reduces the volatility since the cash flows are discounted using a discount rate that is consistent with the financial return from the insurer portfolio (and market expectations).

We assume in this simulation that no experience adjustment occurs.

3- Simulations performed by CNP

Sensitivity analyses

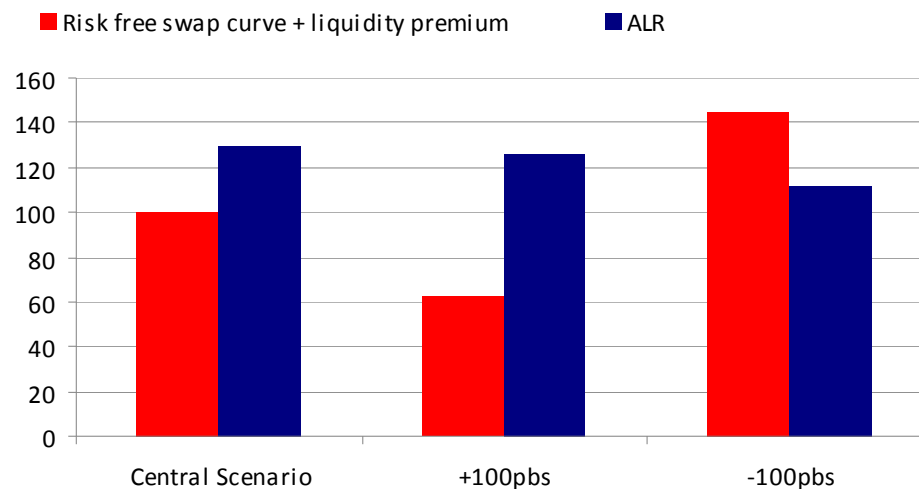
Cumulated Net Income over the life of the contract



In each method, the cash flows are impacted by a change in assumptions in the same way:

- In the case of a 100-bps increase, surrenders increase and thus cumulative income is lower.
- In the case of a 100-bps fall, the main effect relates to the guaranteed rates served to policyholders.

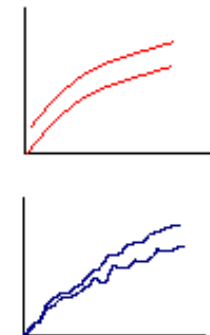
Sensitivity of the first 4 years of cumulated Net income



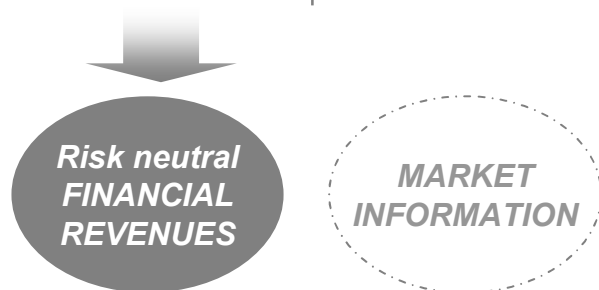
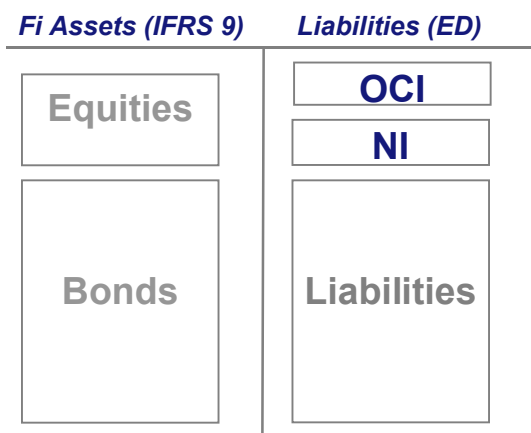
With the ALR, earnings sensitivity is consistent with the economic reality of our business:

- With the **risk-free rate curve method**, any change in market interest rates implies a shift in the risk free yield curve.
- With the **ALR method**, the change in interest rates gives rise to a new discount curve (the new market yield curve is applied only to future reinvested revenue and gains)

ILLUSTRATION



4- Snapshot of the ALR



Define risk neutral CF and ALR

$$\text{Liabilities} = \sum \frac{CF_n}{(1 + ALR_n)^n}$$

The Asset Liability Rate is a discount rate

- **Consistent with the business model of the insurer**
 - The rate reflects the asset-liability management of portfolios of insurance contracts and their IFRS 9 classification (i.e. the ALR can be based on financial revenues from bonds at amortized cost or FV-NI)
- **Consistent with observable market prices**
 - The ALR is based on the current portfolio of the insurer and current forward rates
 - It does not depend on the entity's expectations including future asset yield projections
 - It is not based on the pricing
 - It is adjusted at each period with current information
- **Risk neutral**
 - The ALR excludes any factors that influence the observed rate but are not relevant to the insurer contract liability: credit spreads are not added to the risk free component
- **Takes into account a liquidity premium (16bps)**

Q1. Can the ALR method be applied to all insurance contracts?

- The ALR method can be used for **all contracts for which there is a link between the assets and liabilities** and at least for contracts with a participation feature.

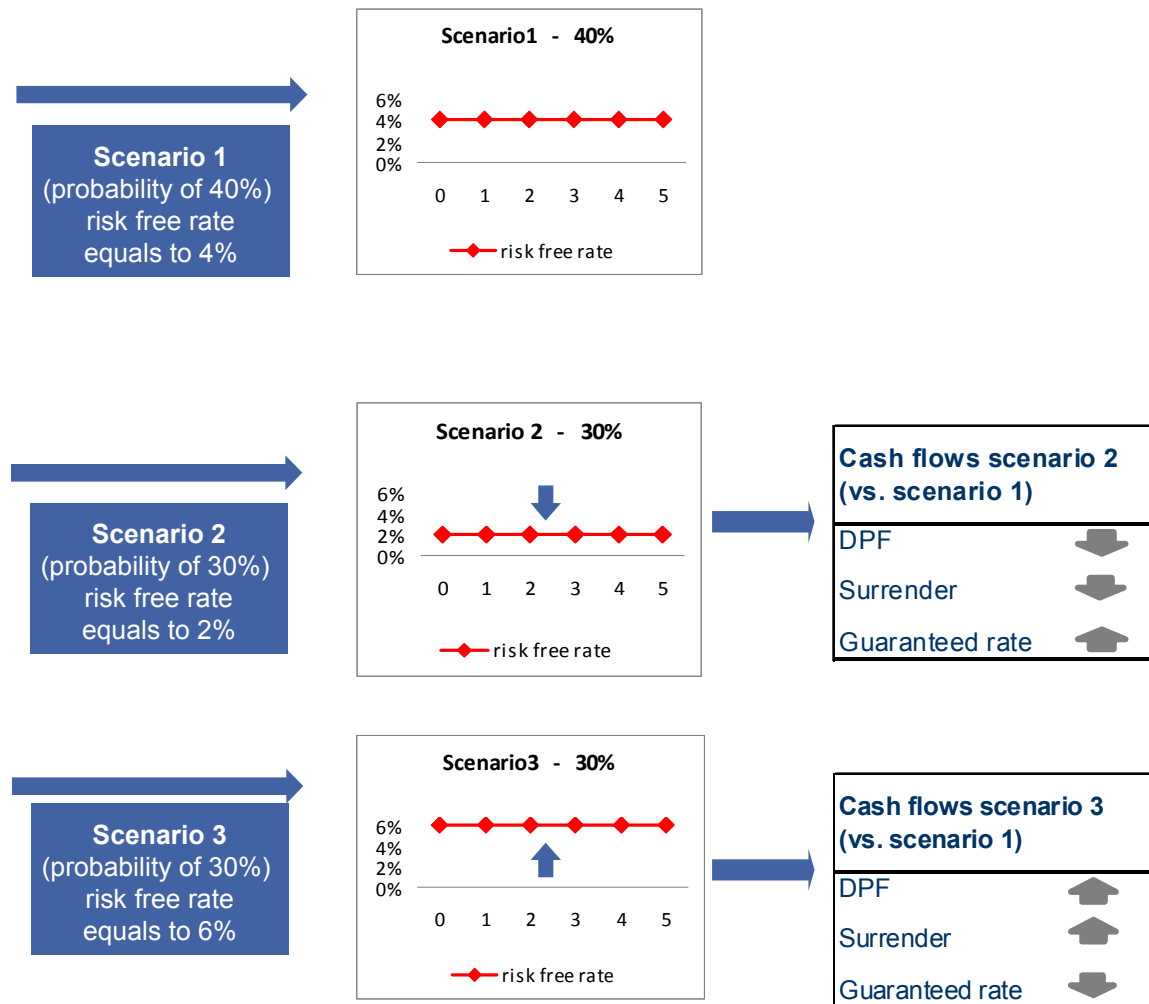
Q2. Is the ALR method consistent with the insurance business model?

- **The ALR method can be applied to two different business models.** An insurer whose business model consists of managing assets at fair value through profit or loss will calculate the ALR for assets measured at fair value. For assets measured at amortized cost (bonds), only the interest (and any premium or discount) is taken into account in the ALR. The ALR therefore depends on the yield on the assets backing the participating contracts and the assets' classification. For both of these types of business model, use of the ALR method reduces earnings volatility.
- The ALR method is therefore **principle-based** and, in our opinion, **cannot be manipulated due to its simplicity and auditability.**

Q3. Is the ALR method based on a fulfillment value approach?

- The ALR is based on cash inflows from assets that are used to pay a return to policyholders and is therefore **consistent with a fulfillment value approach.**
- **The ALR only takes into account market data** (assets in the portfolio and forward interest rates for reinvested revenue and gains).

Q4. How are options and guarantees measured under the ALR method?



- The **time value of guarantees and options** (participating feature and surrenders) **is included in the projection of future cash flows through the use of stochastic calculations** based on a **risk neutral approach** without requiring unbundling.
- The different simulations lead to include the financial losses incurred by the insurer (related to the guaranteed rates, allocation of DPF or surrenders) and the financial gains shared with policyholders under the terms of regulatory and contractual participation clauses.
- Options and guarantees are considered part of the integrated cash flows of the contract.

Q5. Is the ALR a current or lock-in approach?

- The cash flows take into account **current market information** (for instance, a change in market interest rates will affect the cash flows). It exclusively incorporates current cash flows and all the consequences of the current asset portfolio.
- The ALR curve depends on
 - The **risk free investment return** of the portfolio of assets held,
 - The **classification of the bonds** held, and
 - The market **current forward rates for reinvestments**
- When bonds are at amortized cost, the ALR rate is:
 - **Locked-in** for the assets held duration
 - **Current** for cash flows not backed by assets currently held
 - **Current** for the value of options and guarantees included in the cash flows

Q6. How does the ALR method limit earnings volatility?

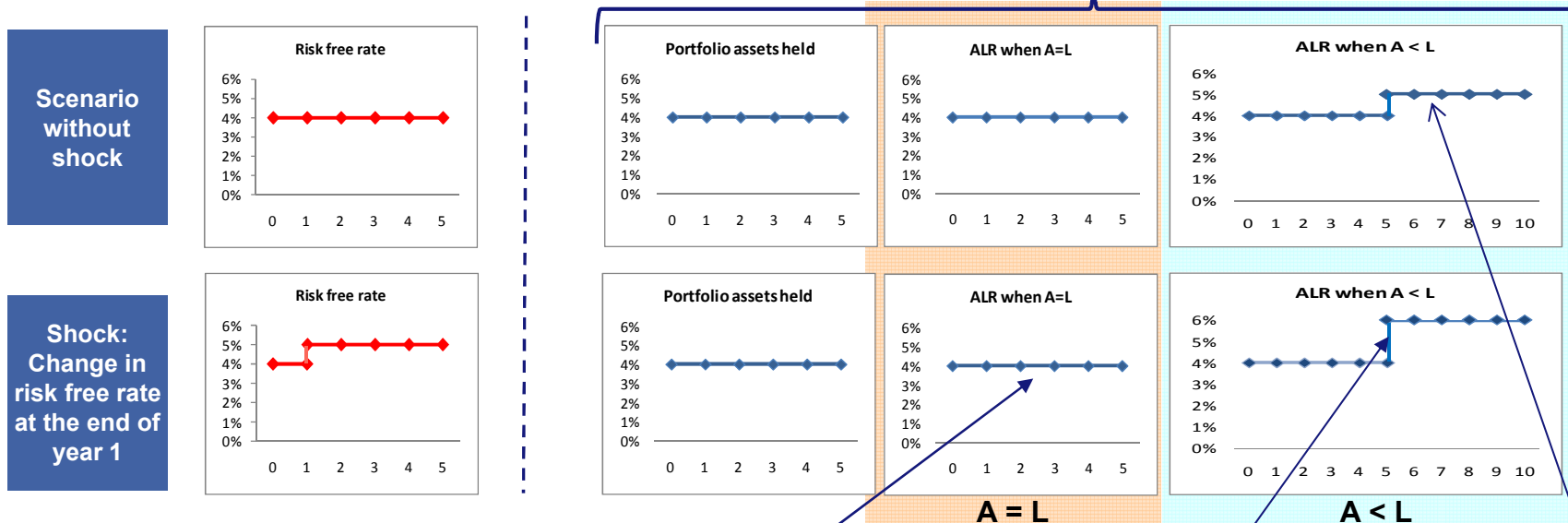
- Insurers are not required to measure bonds at fair value through profit or loss under the ALR method. It is therefore consistent with IFRS 9 which requires bonds to be measured at amortised cost when that corresponds to the entity's business model for managing the asset. Consequently, if bonds backing participating contracts are classified as financial assets at amortised cost, no fair value adjustments are recognized in profit or loss (except for realised gains and losses). Similarly, the ALR method also limits earnings volatility when assets are measured at fair value through profit or loss even though to a lesser extent.
- Concerning the liability, in case of a change in market interest rates:
 - **Benefits for all periods are adjusted based on the new rate** (adjustment of policyholder yield and impact of surrender rates)
 - For the purpose of determining the ALR, **the new yield curve is applied only to future reinvested revenue and gains**. This treatment is consistent with the business model because, when market interest rates change, the insurer does not sell the entire bond portfolio and use the proceeds to purchase bonds on the market at the new rate. **The ALR is partly derived from revenues that are not sensitive to interest rates for the duration of the held assets and therefore earnings volatility is limited.**

Q7. Does the ALR method offer a solution to economic and accounting mismatches?

- **Duration mismatches are reflected in the ALR:** an asset with a shorter maturity than the liability it backs is a source of volatility (change in the liability not matched by a change in the bond portfolio because of reinvested coupon at market yield curve).
- **Any change in the fair value of equities affects the insurance liability through the benefit projections.**
- The different scenarios below present the effect of the duration mismatch on the ALR rate.

We considered 2 most common scenarios:

- Asset duration (5 years) = Liability duration (5 years)
- Asset duration (5 years) < Liability duration (10 years)



No change in the ALR when there is no duration mismatch between assets and liabilities

Change in the ALR due to reinvestments in year 5 with a higher investment rate. We suppose that risk free rate after the end of year 5 is set to 5% in the scenario without shock and 6% in the shocked scenario

Q8. Does the ALR method involve reopening IFRS 9 Phase 1?

- The ALR method does not involve reopening IFRS 9 Phase 1, as it can be used for financial assets at amortised cost and/or at fair value through profit or loss.

Q9. How is the credit spread or liquidity premium taken into account in the ALR method?

- Our simulations are based on a **risk neutral environment** (no credit spread recorded, liquidity premium taken into account).
- The approach is a **top down approach**
- Work is currently underway to determine to what extent **the credit spread could be added to the risk-free rate while ensuring that options and guarantees are properly measured.**

Q10. Is the ALR method consistent with other IFRSs?

- There is currently no single prescribed discount rate to take into account the time value of money.
- **The IASB has recognized that the specific nature of insurance contracts imposes the development of a specific standard** dealing with their recognition and measurement. The choice of a discount rate that is consistent with insurance liabilities meets this goal, even if the rate is different from that used under other IFRSs.

Q11. Is the ALR method used in other standards?

- We have not been able to determine all the discount rates applied to insurance liabilities around the world. **Our understanding is that this rate corresponds to a yield that is consistent with the entity's business model and is based on market data.**

Q12. How different is the ALR method from the liability discounting approaches used for MCEV calculations or a Solvency II balance sheet?

- For MCEV calculations or a Solvency II balance sheet, liabilities are discounted at a risk-free rate that includes a liquidity premium.
- **With the ALR, in the case of a change in interest rates, the discount rate is adjusted only for reinvestments at the new yield curve.** Consequently, the liability at date $t=0$ is lower than in a Solvency II balance sheet and it is also less sensitive to changes in interest rates.
- MCEV fulfils valuation purpose.
- Solvency II fulfils a prudential purpose in an extreme and liquidation valuation.

Q13. Is the ALR method difficult to implement from a practical standpoint?

- **The ALR method proved simple to implement in our internal model** based on a significant portfolio.
- The method is easy to document and to reconcile to the accounting records, and **does not involve the use of judgement by the preparer.**
- Compared with the straight application of a yield curve, the ALR method involves calculating a yield for each period reflecting the insurer's portfolio.

Thank you.

Should you have any question, feel free to contact us.



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Jean-Michel, actuary, has been working as a financial analyst (equity and credit) and as an expert in accounting/financial issues in the insurance industry for more than 21 years. He is currently in charge of the CNP Assurances Group accounting department (standards, reporting and economic model).

With the assistance of

Deloitte.

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Eric, actuary, has been working for more than 20 years in actuarial and audit firms (Ernst & Young and Deloitte) in France and in Canada.

He is currently the partner in charge of the actuary department of Deloitte Paris and member of the actuarial worldwide Board of Deloitte.

6- Appendix - Discretionary participating contracts

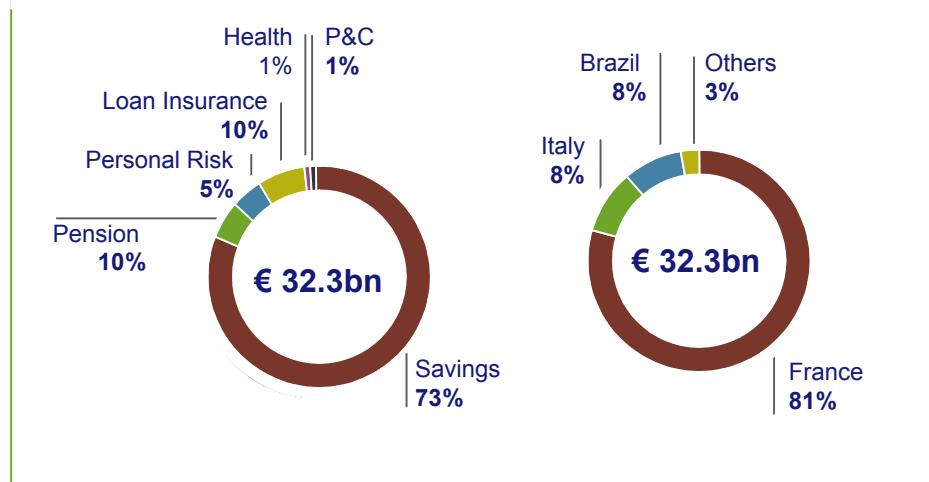
- **Most of the continental European life insurance market is based on participating contracts that include discretionary participation features.**
- Contracts with a DPF allow the companies to decide when and how much of the investment return on the assets supporting those contracts will be allocated to the contract holders.
- Regarding specifically French DPF contracts:
 - Income accrued to the policyholders must be at least 85% of the financial income of the underlying investment assets (financial income is computed on the basis of the local accounts).
 - Income is either accrued directly to the accounts of the policyholders, or booked in a reserve that will be distributed to the accounts of the policyholders over the next 8 years.
 - Once income is accrued to the policyholders (either through their accounts or the reserve), it cannot be subsequently debited.
 - At any time (but with different tax implications), the policyholder can cancel the contract, and receive the capital and accrued income.

6- Appendix - CNP Assurances, No. 1 personal insurer in France

■ No. 1 personal insurer in France

- ▶ 16,8%¹ share of the life insurance market as at 31 December 2010 (Gross Premiums)
- ▶ Significant share of the loan insurance market
- ▶ 14m clients in France and 24m globally (of which 7m in Brazil)
- ▶ 13m individual insurance contracts

Breakdown of gross premiums (FY 2010)



¹ Sources: FFSA Data, Company Data

■ Extensive distribution networks

- ▶ Exclusive long-term distribution agreements with the Savings Banks and La Banque Postale
- ▶ More than 19,000 sales outlets in France (and 28,000 globally)
- ▶ Access to a very wide retail base of 14 million policyholders in France

■ Controlled risk profile

- ▶ Prudent investment strategy and rigorous ALM
- ▶ Asset mix closely tailored to CNP's liability profile, high quality assets

■ One of the highest ratings among peers²

- ▶ Financial Strength Rating by S&P: AA-
- ▶ Counterparty Credit Rating by S&P: AA-
- ▶ Outlook: Stable