Risk-Adjusted Performance Measurements in a multi-standards environment

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L'assureur de toute une vie

1. Introduction

- Many different existing RAPMs…
- …not always used in running the performance of the company
- We observe a multiplication of indicators, especially based on real world cash flows
- A new multi-standards environment with similar indicators

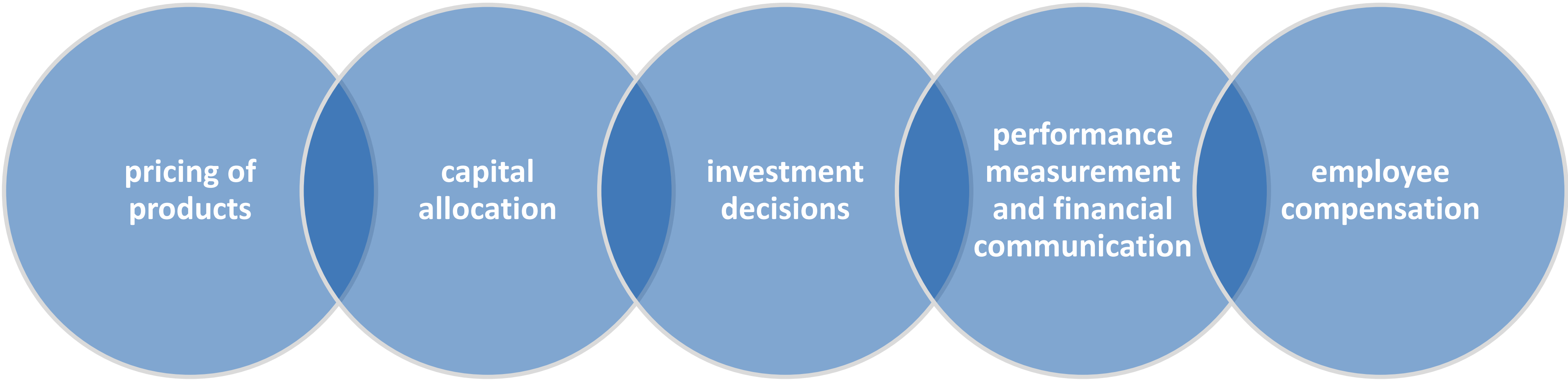
How to ensure that RAPMs will be used to manage the activity in a multi-standards environment ?

Agenda

1. Introduction
2. Potential uses of risk-adjusted performance measures
3. RAPMs in a multi-standards environment
4. Example
5. Proposals to develop RAPMs used in the strategic planning process
6. Wrap-up

The work presented here is still in progress. The different quantitative results are just here to illustrate the concepts which for most of them are not yet stabilized.
The views expressed in this presentation are those of the presenters.

2. Potential uses of risk-adjusted performance measures



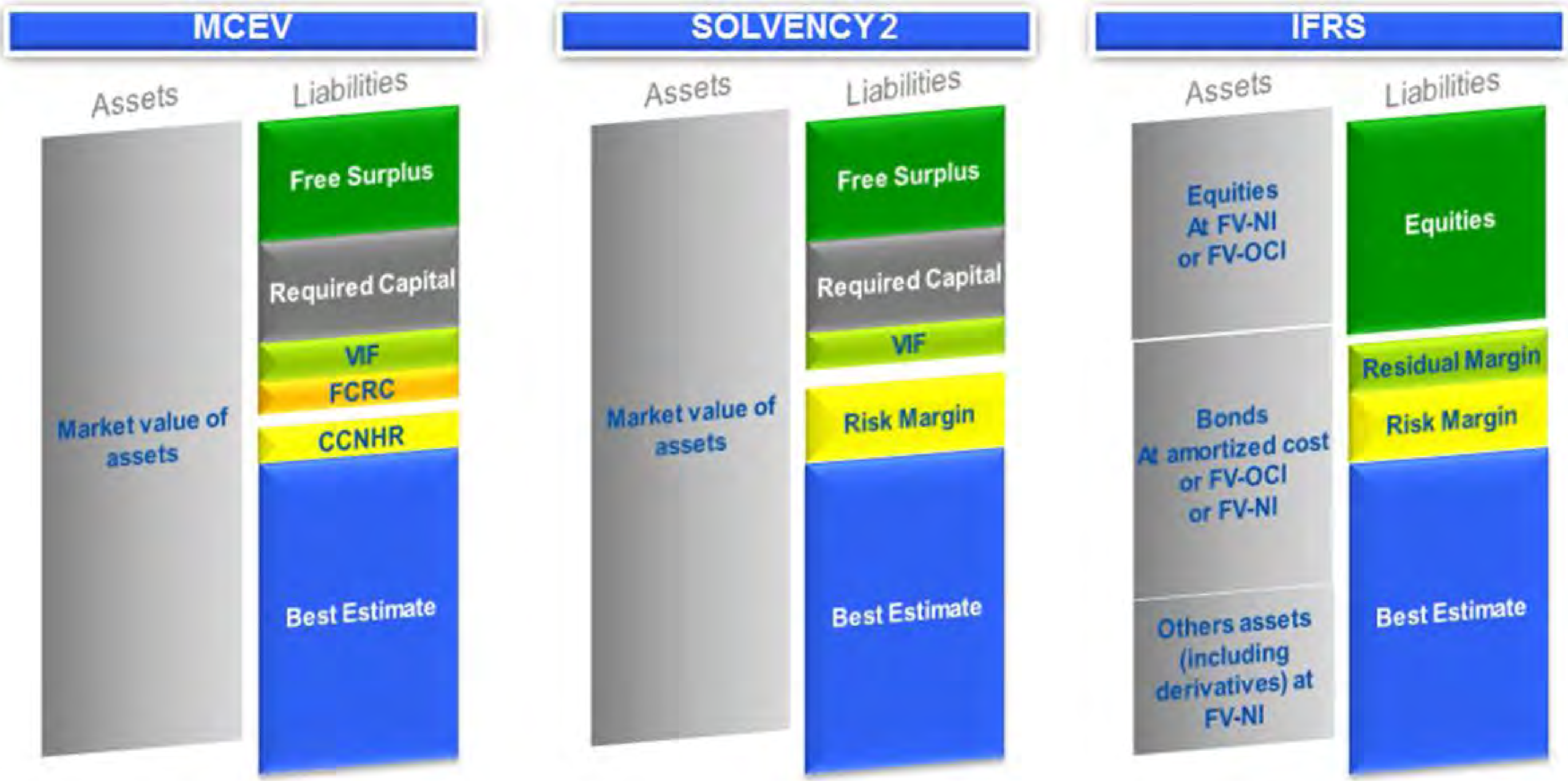
RAPM	DEFINITION
Return on capital	$\frac{Income}{Capital}$
Economic value added	$Income - Cost\ of\ Capital \times Capital$
Market value added	$\sum_{t=1}^{\infty} \frac{EVA_t}{(1 + Cost\ of\ Capital)^t}$
Risk-adjusted return on capital	$\frac{Income}{Risk - Adjusted\ Capital}$
Internal rate of return	$IRR\ such\ that \quad Capital = \sum_{t=1}^{\infty} \frac{Income_t + Release\ of\ capital_t}{(1 + IRR)^t}$

3. RAPMs in a multi-standards environment

	INCOME - one period	INCOME - multi-periods	CAPITAL
STATUTORY ACCOUNTS			
MCEV			
SOLVENCY 2			
IFRS			

- Shall the income measures be pre or post-taxes?
- What risk capital measures shall be selected?
- How to take into account diversification within product lines or within entities part of the same company?
- How to allocate capital to the different business units of the entity?
- The level of target capital that should be held (above the required capital)?
- What is the amount of cost of capital?

3. RAPMs in a multi-standards environment



3. RAPMs in a multi-standards environment

	MCEV	SOLVENCY 2	IFRS
PURPOSE	Measure the shareholders' value	Protect policyholders with sufficient capital	General purpose accounts (net asset value and performance of the entity)
REQUIRED CAPITAL	Regulatory capital / Target capital / Economic capital	Economic capital : SCR & MCR	CAPITAL = Assets – BE– Risk Margin – Residual Margin
FCRC	The FCRC consists of the projected tax to be paid as well as fees for the management of the assets backing the RC	N/A	N/A
RISK MARGIN	No prescribed method	Cost of capital method (6% of cost)	No prescribed method
FUTURES PREMIUM	New business excluded and future premiums usually limited to recurring premiums	Limited to risk group and saving contracts with significant guarantees	Similar to Solvency 2?
DISCOUNT RATE	Swap rates + liquidity premium	Swap rate (+ adjustment premium?)	No prescribed rate (but risk free) and a specific mirroring approach principle for participating contracts
EXPENSES	Expected ongoing expense levels required to manage the in-force business	Best estimation of expenses	No inclusion of overheads expenses and specific treatment of acquisition costs

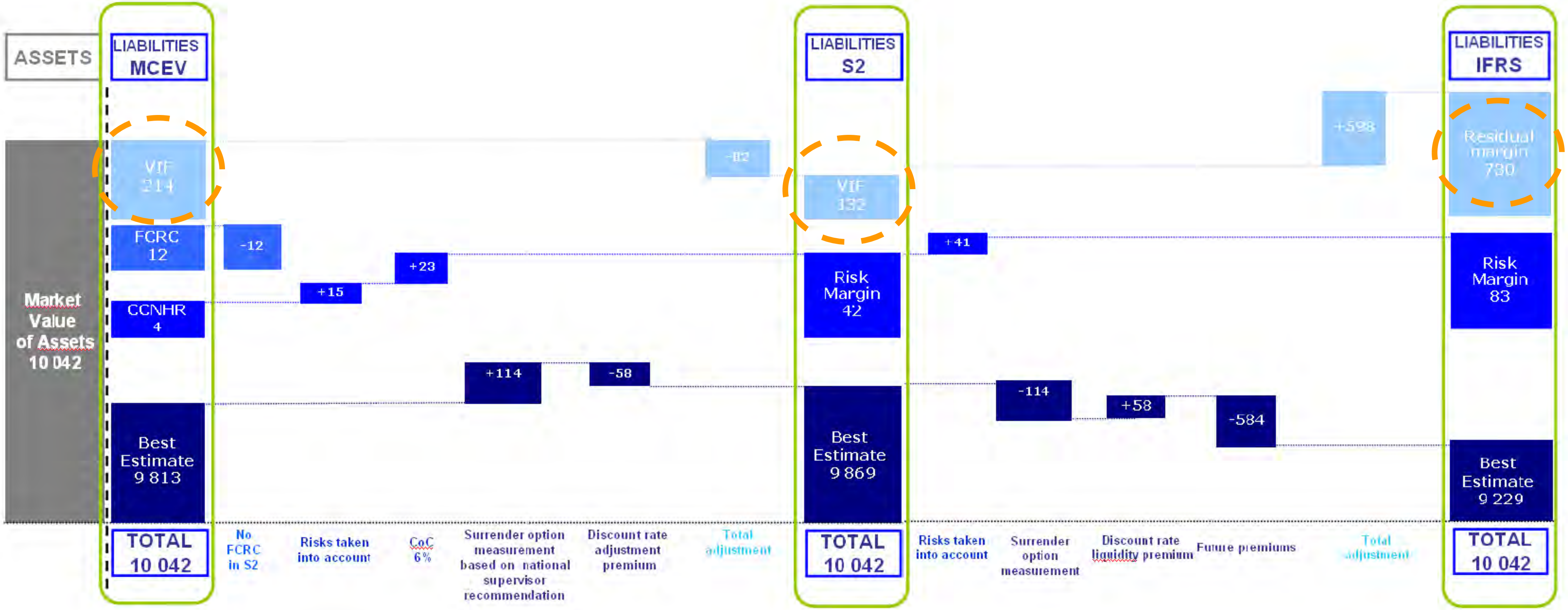
4. Example

31/12/2011	VIF (residual margin)	Solvency 2 required capital	Solvency 2 coverage ratio	VIF / CR	IRR
MCEV	214			146%	10%
SOLVENCY 2	132	146	357%	90%	3%
IFRS	730			500%	31%

- Contract boundaries: future premiums (or renewals) may have a significant multiplier effect.
- Discount rates: significantly modifies the different indicators of profitability.
- Risk margin: significantly impacts the level of performance indicators of each standard.
- Surrender pattern: changes significantly the time value of the surrender option.

- How to reconcile the performance of each standard?
- Shall we measure unique RAPMs in a multi-standards environment and manage the entity based on them?

4. Example



ASSETS
LIABILITIES MCEV
LIABILITIES S2
LIABILITIES IFRS
Market Value of Assets 10 042
VIF 214
FCRC 12
CCNHR 4
Best Estimate 9 813
-12
+15
+23
+114
-58
-82
VIF 132
Risk Margin 42
Best Estimate 9 869
+41
-114
+58
-584
+598
Residual margin 730
Risk Margin 83
Best Estimate 9 229
TOTAL 10 042
No FCRC in S2
Risks taken into account
CoC 6%
Surrender option measurement based on national supervisor recommendation
Discount rate adjustment premium
Total adjustment
TOTAL 10 042
Risks taken into account
Surrender option measurement
Discount rate liquidity premium
Future premiums
Total adjustment
TOTAL 10 042

5. Proposals to develop RAPMs used in the strategic planning process

MAIN CRITICS	BASIC PRINCIPLES FOR RAPMS
TOO COMPLEX DO NOT FULLY REPLICATE THE REALITY OF MANAGEMENT AND POLICYHOLDERS BEHAVIORS	Performance measurement should be aligned with pricing and expense decisions, measured in a real world or risk-neutral environment (depending on the indicator) and should include future business (with a distinction between in force business, renewals, and new business).
TOO SENSITIVE TO SHORT TERM MARKET VOLATILITY	RAPMs should be based on market consistent models and take into account the time value of option and guarantees embedded in life insurance contracts.
VERY SENSITIVE TO THE PARAMETERS	To increase confidence in these indicators, all aspects of expert judgment should be identified and sensitivity testing to assess materiality should be provided.
PARTIALLY USED TO RUN THE BUSINESS	RAPMs should be sufficiently transparent to be easily understood by executives and staff. If not absolutely necessary, it should be avoided to produce different sort of RAPMs for the different standards (sometimes corresponding to different departments in a company), or for different lines of business.
NOT ALWAYS CONSIDERED AS RELEVANT BY INVESTORS AND ANALYSTS	Basic information used to produce RAPMs shall be published e.g. timing of the cash flows, methodology to derive stochastic scenarios, impact of policyholders and management behavior on the model. A reconciliation between similar indicators produced for prudential, accounting, or performance purposes, shall be performed.

6. Wrap-up

- Different values for similar RAPMs will be published in a multi-standards environment.
- The challenge for insurers is to be able to run the profitability of their portfolios under economic, prudential and accounting rules while providing a consistent publication to markets.
- We should not compare apples and oranges.
- A necessary alternative standard reflecting the full view of the Board management?

Questions?

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