Managing Value using Market Consistent Methodologies

MCEV – value management accelerator or hand brake?

Stefan Heyers

Ernst & Young GmbH

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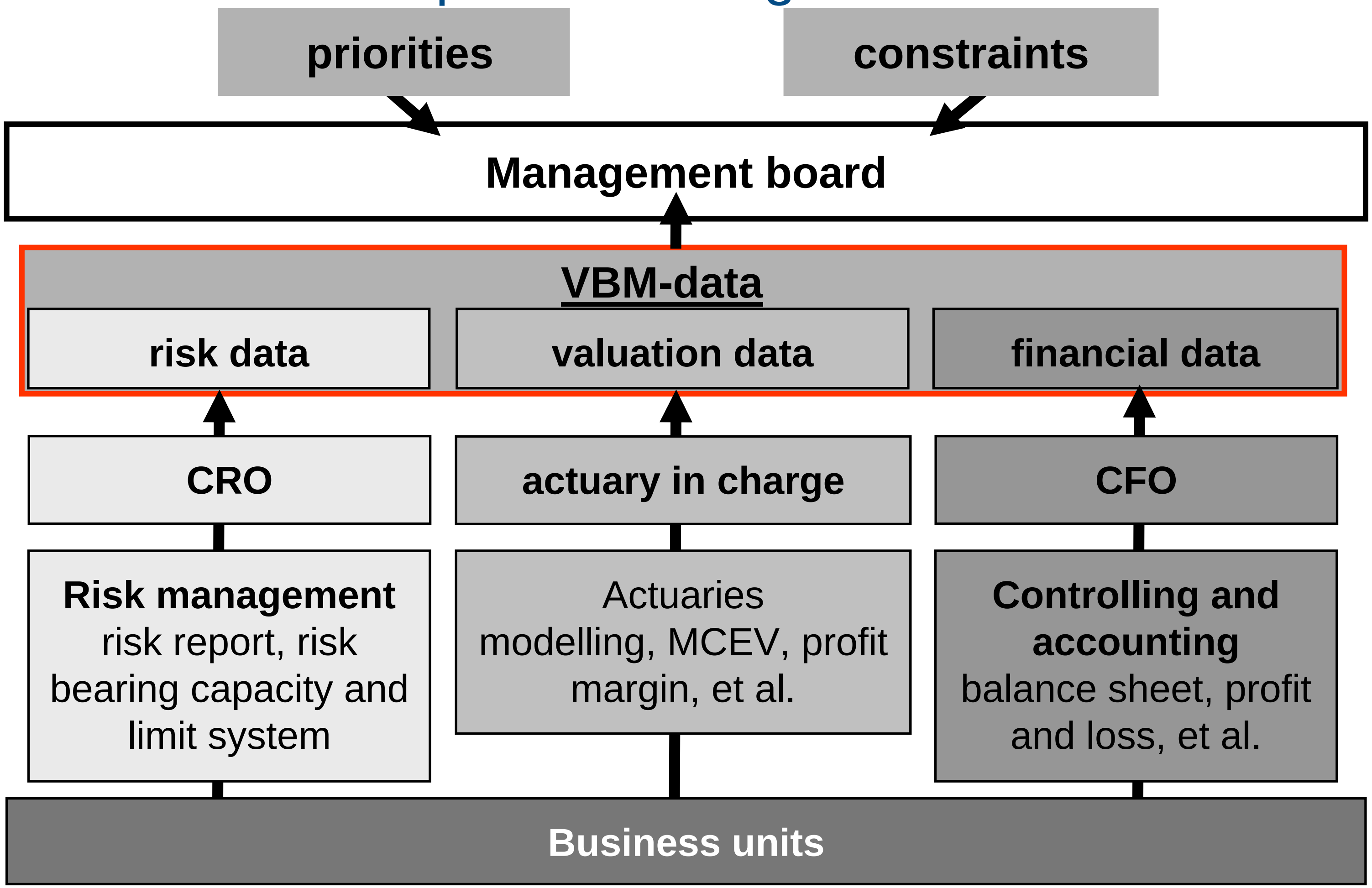
Agenda

1. **Requirements for risk appropriate value measurement**
2. Appropriateness of Market-Consistent-Valuation-Methods
3. Suitability of MCEV
4. Value based management using MCEV

Implementing VBM

Information for corporate management



CFO: Chief Risk Officer, CFO: Chief Financial Officer, VBM: Value based management

Implementing VBM

Processes, Methods and Organization

Processes	Methods	Organization

- **Calculation of results**
  - Defined accounting for service
  - Financial reporting on business units
- **Quantification of risks**
  - Risk models
  - Concept for risk bearing capacity & limit system
- **Reporting / Decision / Controlling**
  - Hierarchical, consistent system of risk guidelines
  - Inspection of and compliance with the specified risk guidelines
  - Determination of binding minimal requirements for operating units
  - Capturing transactions within the group
- **Sufficient calculating capacity**

Implementing VBM

Processes, Methods and Organization

Processes	**Methods**	Organization

- **Calculation of results**
  - Determination of capital cost requirements (on the balance sheet vs. economical)
- **Quantification of risks**
  - Risk models with appropriate methods
  - Definition of when events are classified to be exceptional, show the effects of those events on VBM key figures and, if applicable, make qualitative comments
- **Reporting / Decision / Controlling**
  - Regular calculation and reporting of key figures
- **Risk bearing capacity and limit system** have to be clearly documented and comprehensible

Implementing VBM

Processes, Methods and Organization

Processes	Methods	**Organization**

- **Responsibilities**
  - Results (revenues and expenses) and risks have to be clearly assigned to the business units that are to be controlled
- **Separation of functions**
  - Existence of an independent risk controlling
  - Separation of risk assumption and risk controlling
- **Interdependencies between business units**
  - The different strategic interests of the business units, including marketing and distribution, have to be incorporated into the new corporate management
- **Documentation of the operational and organizational structure**
  - The control system has to be documented (with respect to risk model, process cycle, level of automation, cycle for updating and adoption of the system to new requirements)

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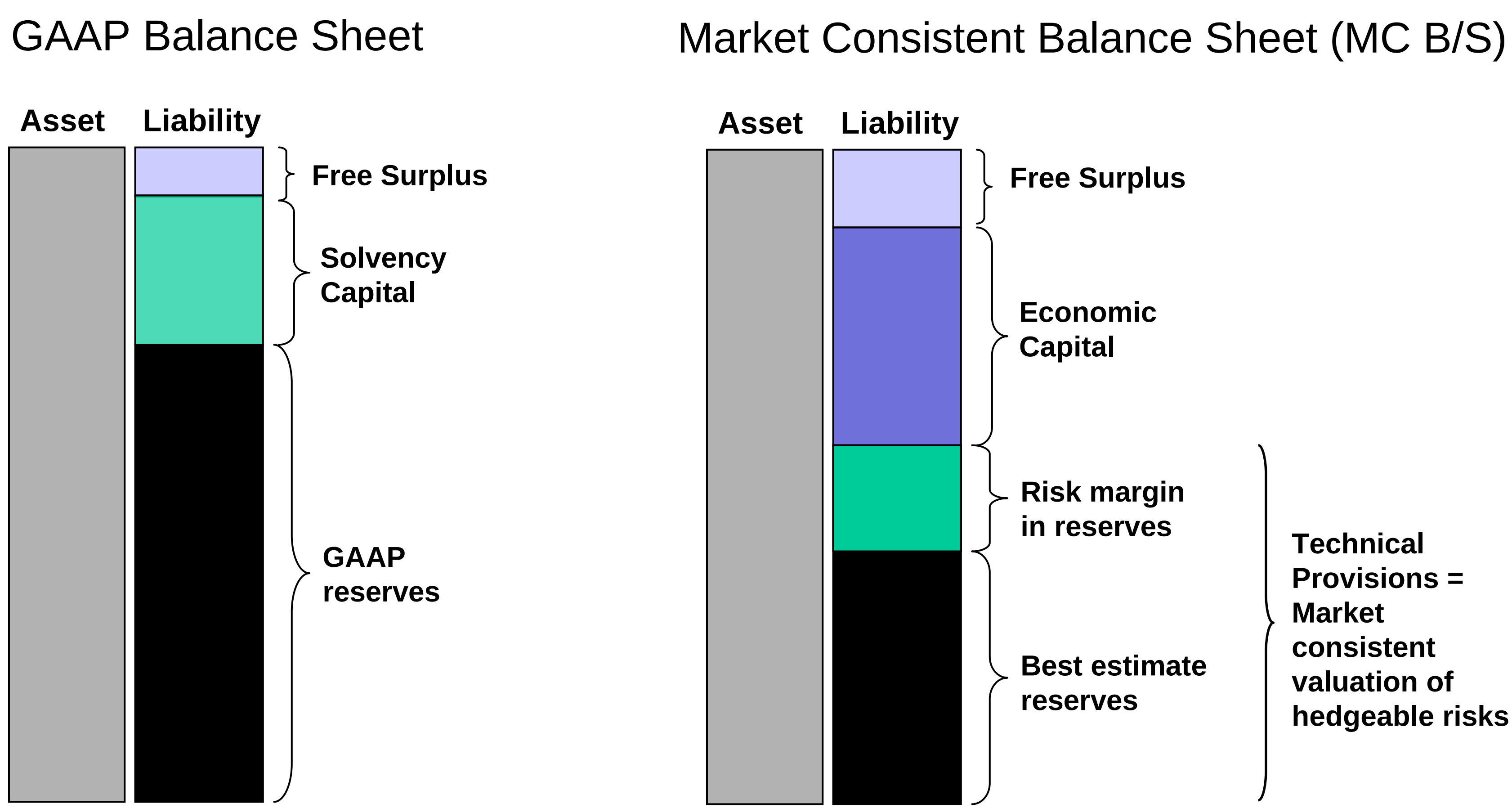
GAAP vs MC B/S



GAAP: Generally accepted accounting principles; MC B/S: Market Consistent Balance Sheet

Differences between GAAP and MC B/S

GAAP Balance Sheet

- Cost of **guarantees** & options not explicitly valued
- Liabilities contain implicit "**margins**", that may in fact be shortfalls
- Embedded value calculations required to determine the **true value** of the business
- Solvency capital requirement unresponsive to **risk profile** of the business
- **Allocation of capital** to different businesses is not efficient – actual profitability of the business and risk-based capital requirements not visible

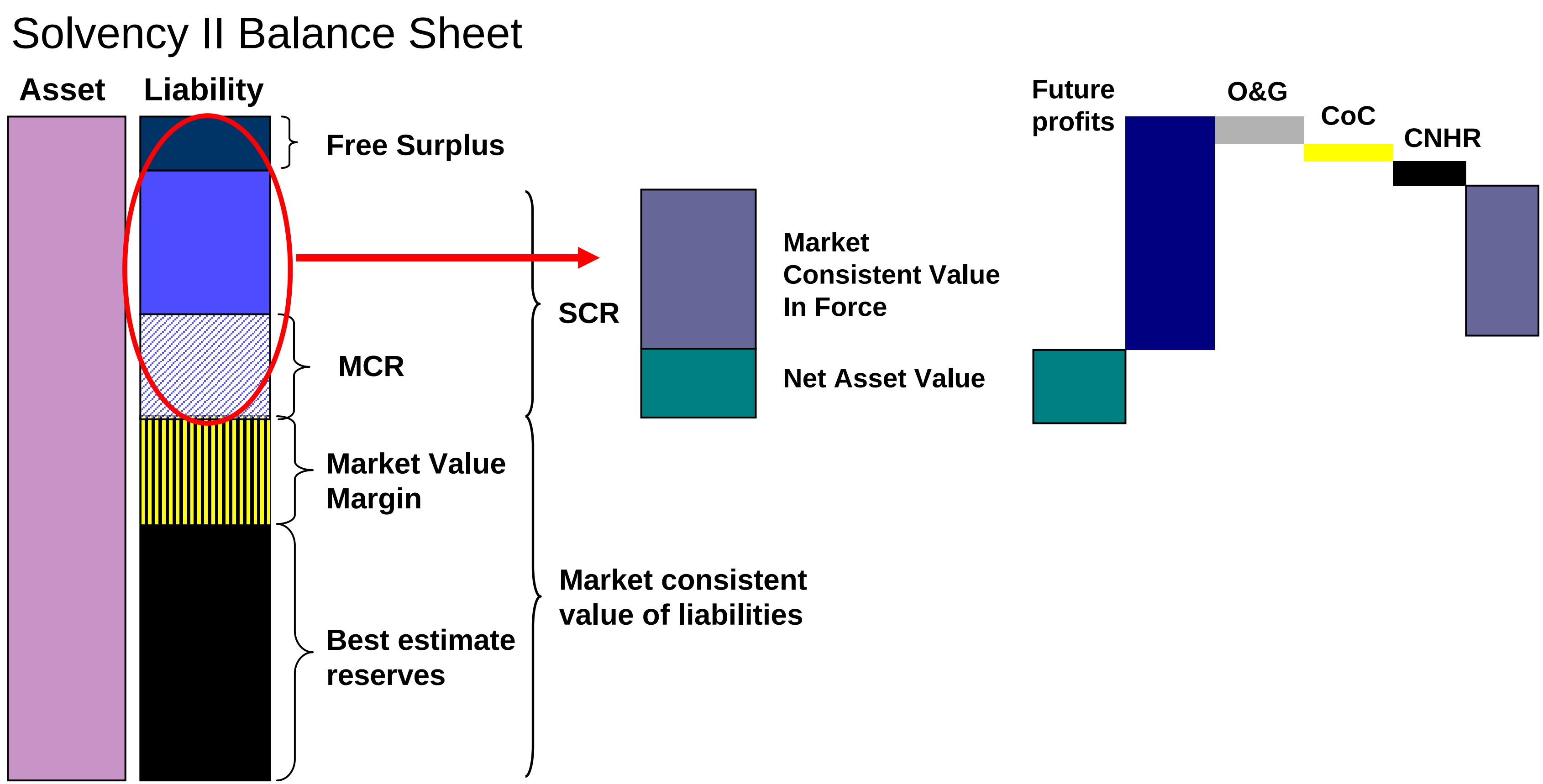
Market Consistent B/S

- **Value of liabilities** should equate to the cost of laying off the risks to a third party
- If liabilities are valued on a market consistent basis, then **MC VIF** should be zero
- Economic capital requirements that reflect the **true risks** of the business are determined from the change in economic balance sheet under different scenarios
- Capital can be **efficiently allocated** since profit measures can be used that reflect the cost of bearing the risks of the business

MC VIF: Market consistent value of in force; MC B/S: Market Consistent Balance Sheet

Calculating MC B/S: Indirect

Method that has been typically adopted to date

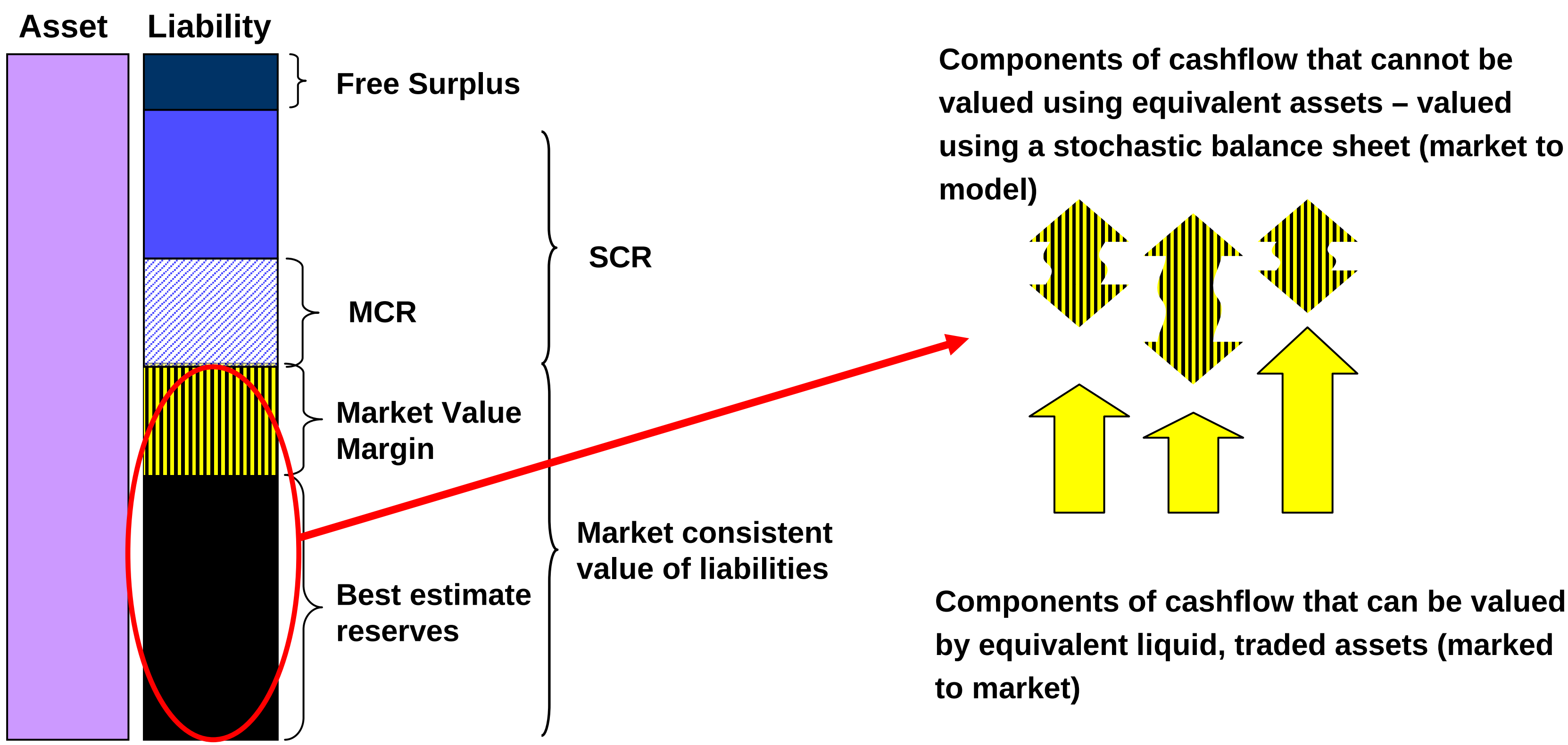


SCR: Solvency Capital Requirement, MCR: Minimum Capital Requirement,
O&G: Options & Guarantees, CoC: Cost of Capital, CNHR: Cost of residual Non-Hedgeable Risks

Calculating MC B/S: Direct

Approach that reflects leading market practice

Solvency II Balance Sheet



Are market consistent methods appropriate?

- The embedded value methodology is currently the only valuation methodology that captures the **long term nature** of the business
- **Objectivity** of actuarial parameters can only be achieved through reference to some benchmark. There is currently no better benchmark than information from the capital markets.
- These methods probably also form the basis for accounting under **IFRS** and risk management under **Solvency II**.
- Market Consistent-methods seem to be the only solution to reaching **comparability** between value disclosures of different companies.
- MC-Results may be **volatile**. Management has the responsibility to manage (and reduce) these volatilities. This puts the focus firmly on value management instead of parameter selection and is an objective base for setting incentives.

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Is MCEV a suitable value measure?

- MCEV measures long term value based on **objective** market consistent economic parameters
- December 2008 valuations were problematic, since the **market was unstable**, leading to significant liquidity premiums and increased volatilities
- The MCEV principles are still **developing** and need to be tested
- The calculation of **New Business Value** still needs to be clearly defined
- The **Analysis of Change** needs to be made more transparent. This includes a proper roll forward considering the unwinding of discount rate, release of the cost of options & guarantees and CNHR
- This Analysis of Change should be geared towards differentiating between changes created by **operational and by economic influences**

Consequences of using MCEV

- MCEVs are increasingly **aligned** to how insurance businesses are managed
- Calibration of economic parameters to market data more **objective**, but lack of suitable long-term options for **calibration** may create non-hedgeable financial risk
- Changes to deterministic VIF and cost of financial options and guarantees to the extent that swap curve differs from previous assumptions; **results** potentially more **volatile**
- For spread-supported business (such as immediate annuities), value of business severely impacted – companies affected may publish a value for the **liquidity premium** on the basis that assets are held to maturity

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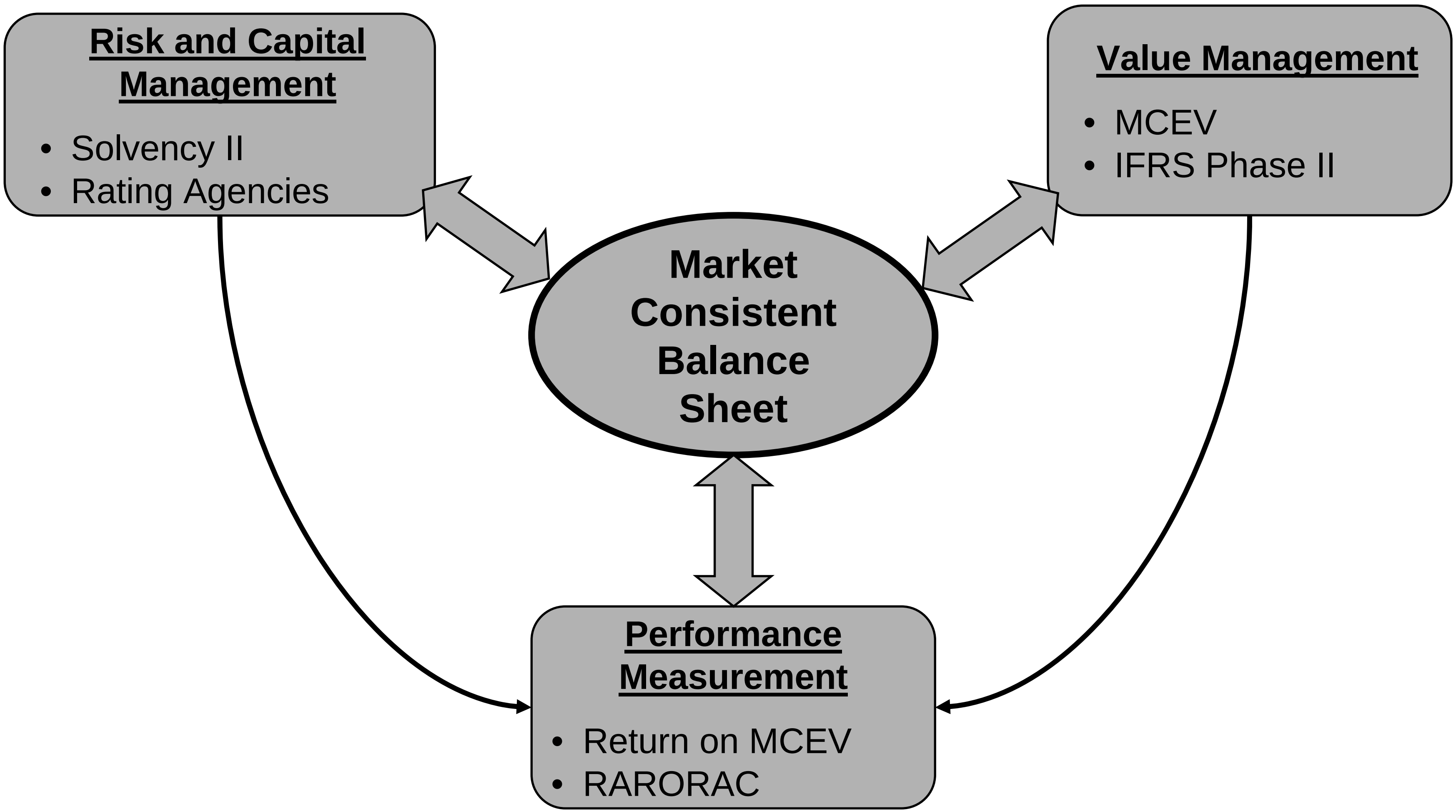
VBM and additional requirements

The internal controlling can not be done only on the basis of risk oriented key figures but is subject to additional requirements such as:

- **GAAP-Accounting**:
  - Solvency
  - Fulfilling the expectations for dividends
  - Other internal local GAAP-requirements (e.g. profit participation)
- **IFRS-Accounting:**
  - Arriving at the planned absolute IFRS-results
- **Regulatory requirements:**
  - Compliance with the legal and regulatory requirements regarding equity capital and risk bearing capacity and meeting the Minimum Capital Ratio (MCR) and the solvency requirements (SCR) according to Solvency II
- **Rating standards**:
  - Achieving the target rating

Role of market consistency in financial management



Value management:

Ways management can add value in a market consistent world

- **New business**
  - Write new business with a positive VNB
- **Beat best estimate assumptions**
  - Manage more efficiently non-economic factors that can be influenced by management
  - Undertake tactical and strategic asset allocation to improve returns (net of cost of capital to support the additional financial risks taken on)
- **Reduce capital requirements**
  - Redesign products to optimise capital efficiency
  - Write business that improves diversification benefits
  - Seek opportunities to transfer risks provided that the benefits outweigh the costs

Performance management:

In a market consistent world

- In economic terms, the preferred performance measure is:
  - **Risk Adjusted Return On Risk Adjusted Capital (RARORAC)**

- For companies reporting on an MCEV basis, Return on MCEV is the typical performance measure:
  - **Return on MCEV = MCEV Earnings / MCEV**

- The value created should be **split between economic influences and management decisions**.

- Since MCEV Earnings include both the economic and operating effects, these should be allowed for when considering the MC value added by management
  - **MC Valued Added = MCEV Earnings – economic effects**

- Primary performance target is positive MC Value Added (Operating MC Value Added)

Managing value using MCEV

Summary

- In general market consistency **reduces subjectivity** of parameters and results
- MCEV appropriately allows for the long term nature of life insurance business and an **objective** reference to capital market information. However, the principles still need to mature.
- Subjectivity still remains in setting assumptions for **policyholder behaviour** and **management action**. Model design is driven by accuracy and speed of calculation. Reconciliation with IFRS and Solvency II could be challenging.
- MCEV is a useful base for risk adjusted value management. Only a **part of the value** created can be attributed to management performance.

Thank you for your attention!

Any questions?

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