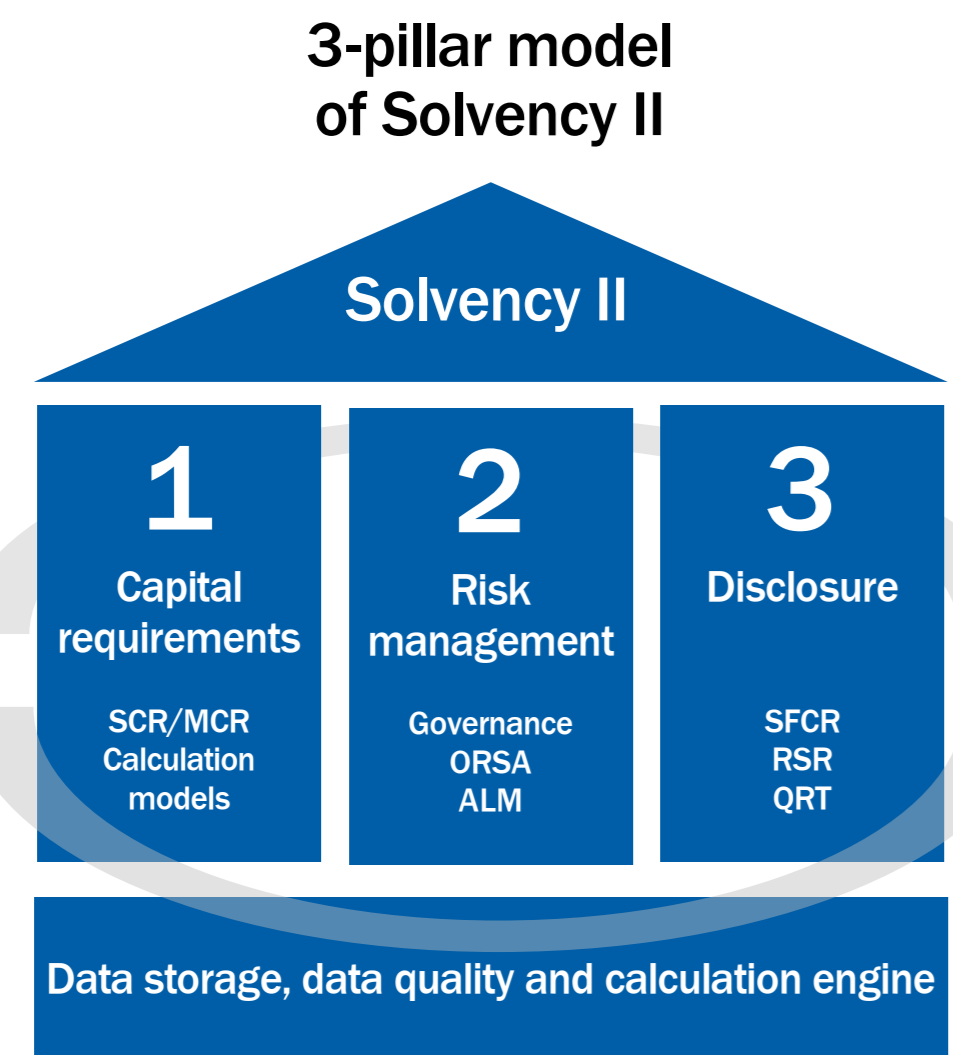


### Solvency II basics

Solvency II refers to the statutory *own funds* required to always be able to fulfill obligations to insurance policy holders.



### Solvency margin covered by own funds

To ensure that their liabilities under the insurance contracts may be fulfilled at all times, the insurance undertakings are obliged to maintain own funds free of all foreseeable liabilities in an amount not less than the required solvency margin, which is determined in relation to the total volume of business. One-third of the required solvency margin is deemed to be the guarantee fund.

### General information

#### Objectives of Solvency II

- Risk-adjusted capital reserves
- Introduction of an "early warning system" (for SCR shortfall)
- EU-wide protection of insurance policy holders
- Integration of European insurance market
- Improvement of internal risk management approach (ORSA)

#### Initial situation

EU-wide solvency requirements have been in place since the 1970s. Their verification and harmonization led to the introduction of Solvency I in 2002. The demand for a second more comprehensive reform process already evolved during the introduction process of Solvency I. This reform should specifically focus on all relevant risks for insurers.

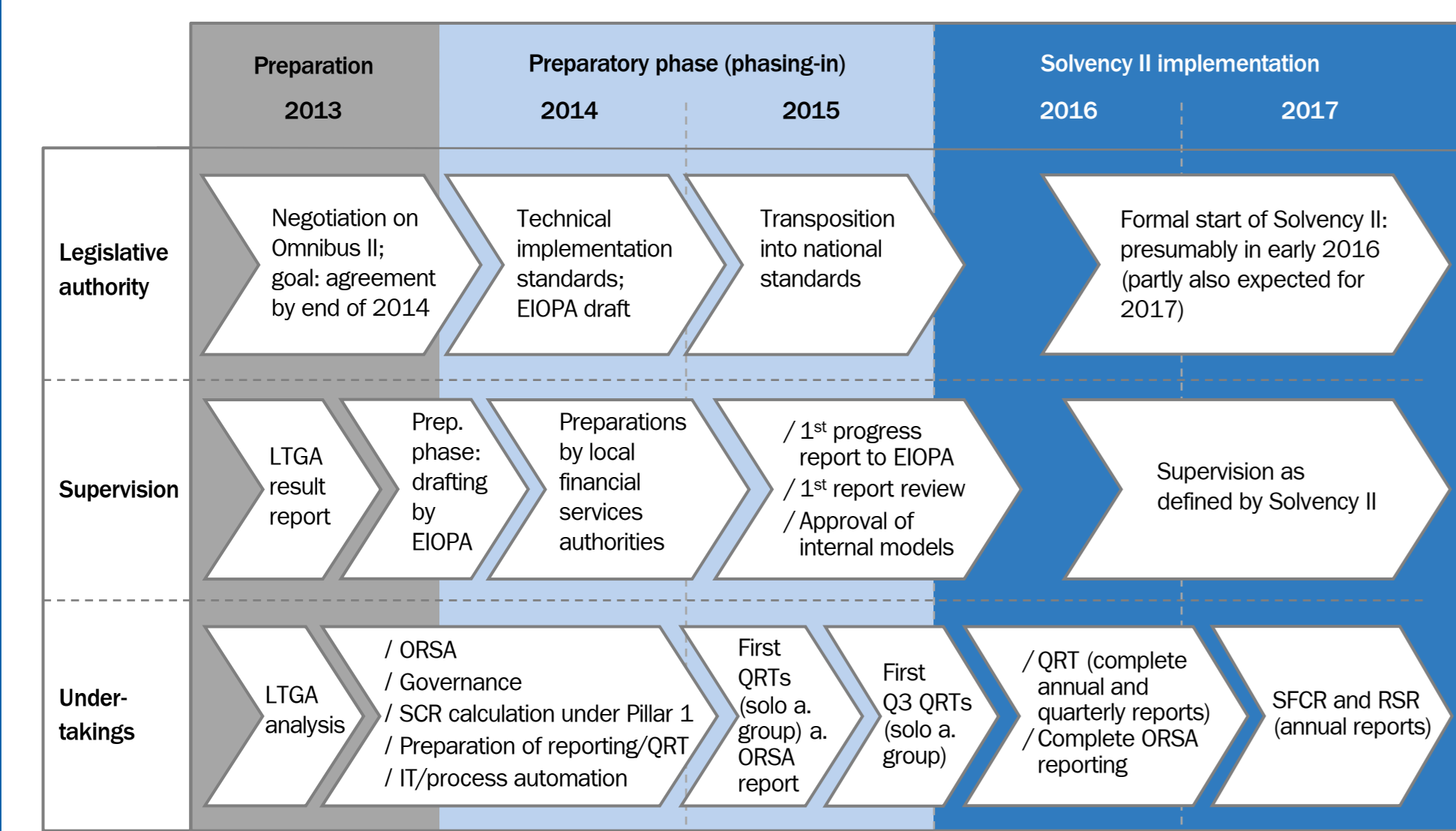
#### Motivation

Due to developments of the past years, the Solvency I calculation basis for reserving own funds has become obsolete, which also applies for risk management rules. In addition, rules for a continuous exchange with all stakeholders are missing. Supervisory authorities have hardly any possibilities to take precautions in order to prevent a company from threatening the entire market. Solvency II offers solutions for these drawbacks.

#### Legal framework

Solvency II is a reform process initiated by the EU in 2002 and introduces new provisions that specify the future mandatory amount and method for reserving capital (Pillar 1). It also defines new risk management requirements (Pillar 2) which, in part, have already been transposed into national standards. Furthermore, Solvency II specifies the disclosure of information to supervisory authorities and the public (Pillar 3). It also specifies various expansions of authority by supervisory authorities and transitional provisions (for example in the Omnibus II directive). Supervisory responsibility is assumed by local financial services authorities and EIOPA as a group supervisor in the EU. The implementation of the entire set of regulations as of 2016 or 2017 is currently under discussion—the formal decision of the European legislative authority is still due. As part of a preparatory phase ("Solvency 1.5"), selected elements of the regulation may be subject to an early implementation in 2014 and 2015.

### Schedule



### Contacts

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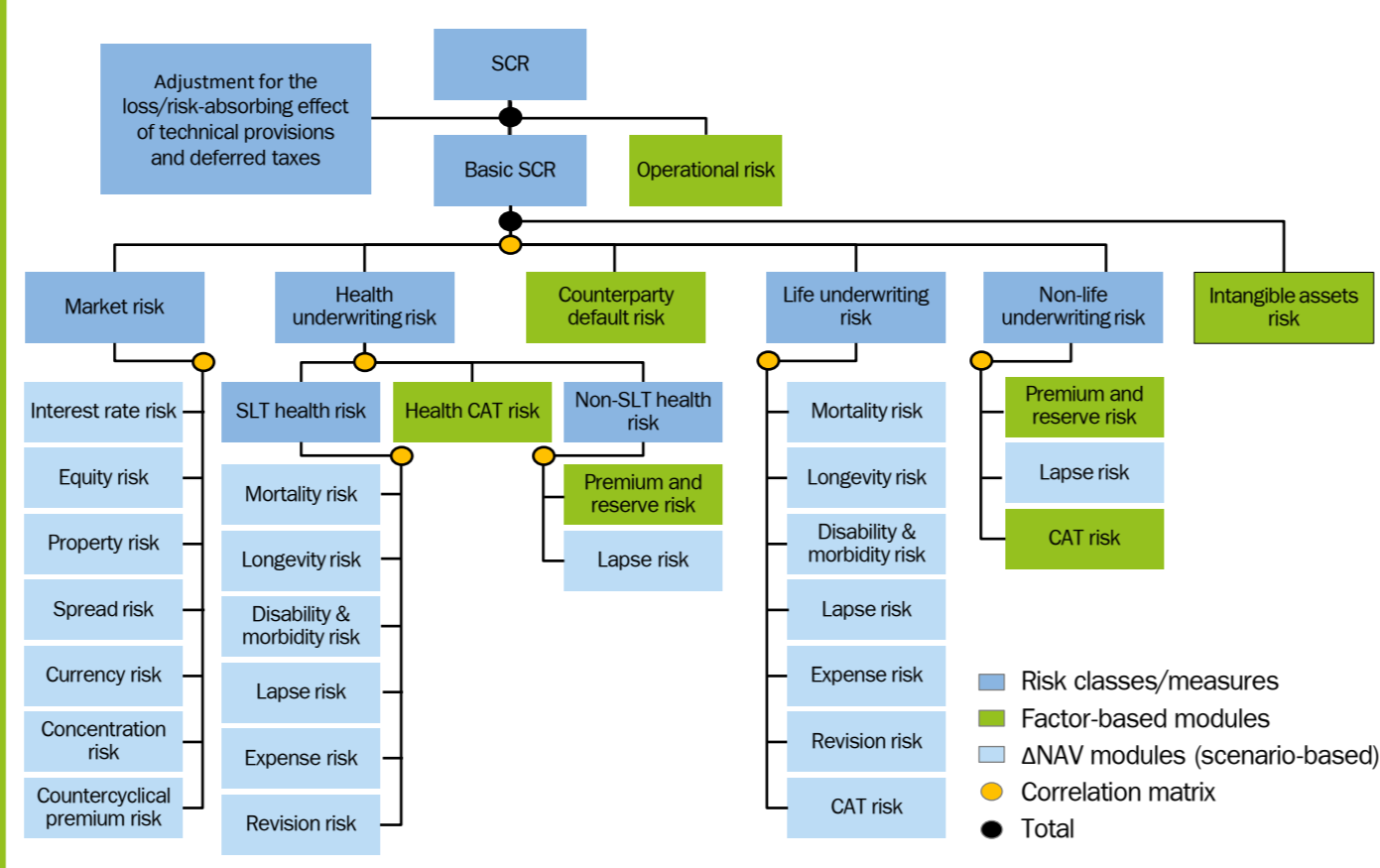
© zeb/ (Last update: October 2013)

### Requirements of the three Pillars

**1 Goal** Comparison of solvency capital requirement (SCR) and minimum capital requirement (MCR) with available own funds

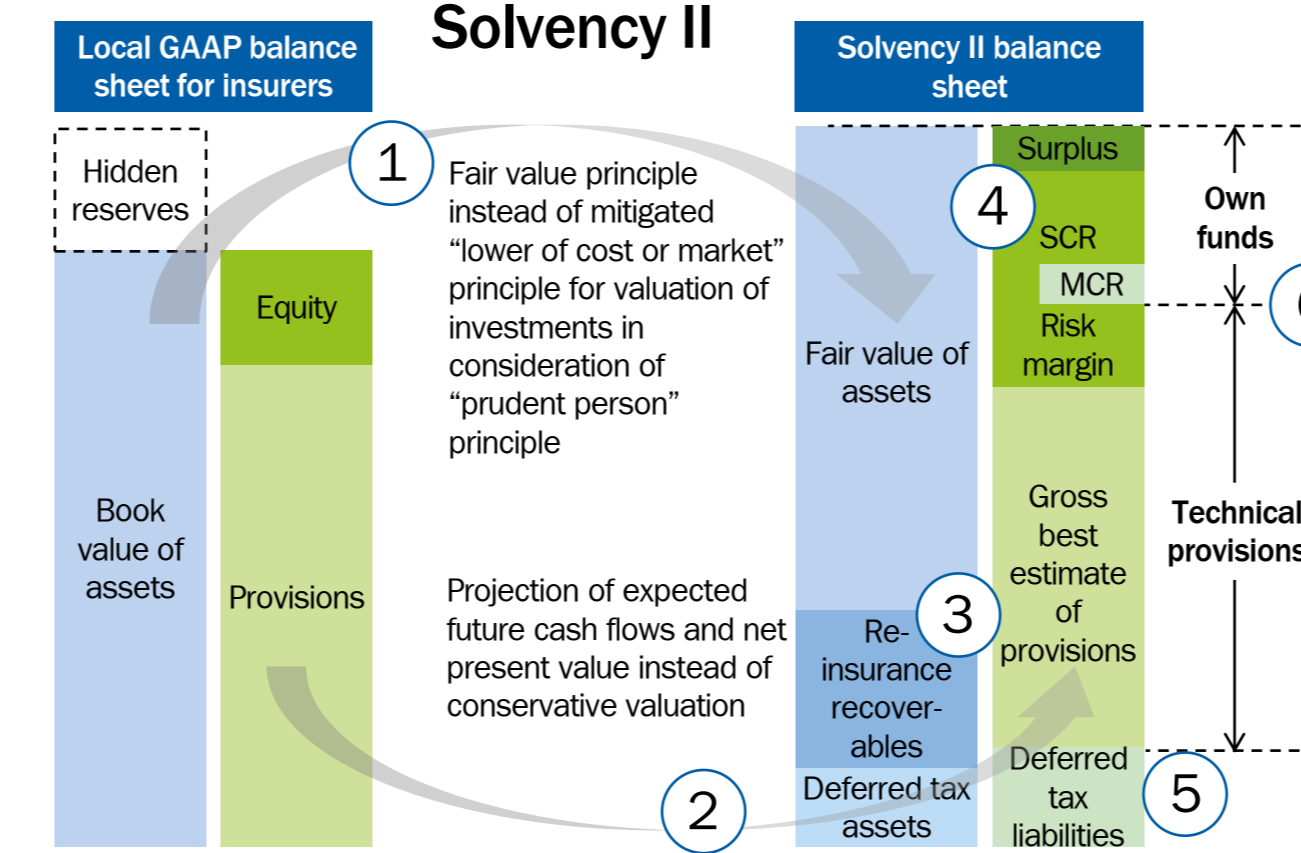
- Preparation of solvency balance sheet to determine own funds
- Interventions by supervisory authority upon SCR or MCR shortfall

#### Solvency capital requirements by risk modules



Risk quantification of individual risks through statutory standard model or (partially) internal model  
Adequate consideration of expected/unexpected losses upon quantification of risks

#### Solvency balance sheet (fair value B/S) as core element and starting point for all calculations in Solvency II



#### Regulatory consequences of SCR and MCR shortfall

- OF < MCR**: Creation of short-term funding plan for, at least, MCR compliance and prohibition of free disposal of assets or withdrawal of approval
  - SCR > OF > MCR**: Creation of restructuring plan, reduction of risk profile and restriction of free disposal of assets and decision on return to standard formula
  - SCR < OF**: Pillar 1 requirements are met
- SCR = value at risk of loss distribution with 99.5% confidence level and 12-month time frame  
MCR = linear function of net provisions and premiums of the last year or capital at risk  
Risk margin = amount that another insurance company would claim on top of the best estimate of insurance-related provisions to assume  
Best estimate = present value of the expected future gross cash flows discounted with the current risk-free yield curve  
OF = own funds of the insurance company

#### 1 Market valuation of investments

Look-through approach for funds

#### 2 Determination of gross best estimates vs. provisions

Segmentation of insurance contracts (unbundling in regulatory defined segments)  
Delineation of insurance contracts according to economic contract limits  
Application of actuarial statistical procedures  
Consideration of future developments, implicit and explicit securities and insurance policy holder behavior

#### 3 Determination of reinsurance recoverables

Limited availability of historical reinsurance contract data in database format  
Adequate selection of a procedure for deduction of risk mitigation through reinsurance

#### 4 Risk calculation (SCR) and projection (risk margin)

Iterative procedure for determining the risk-mitigating effect for counterparty default risks  
Adequate selection of a procedure for determining the risk margin

#### 5 Determination of deferred taxes

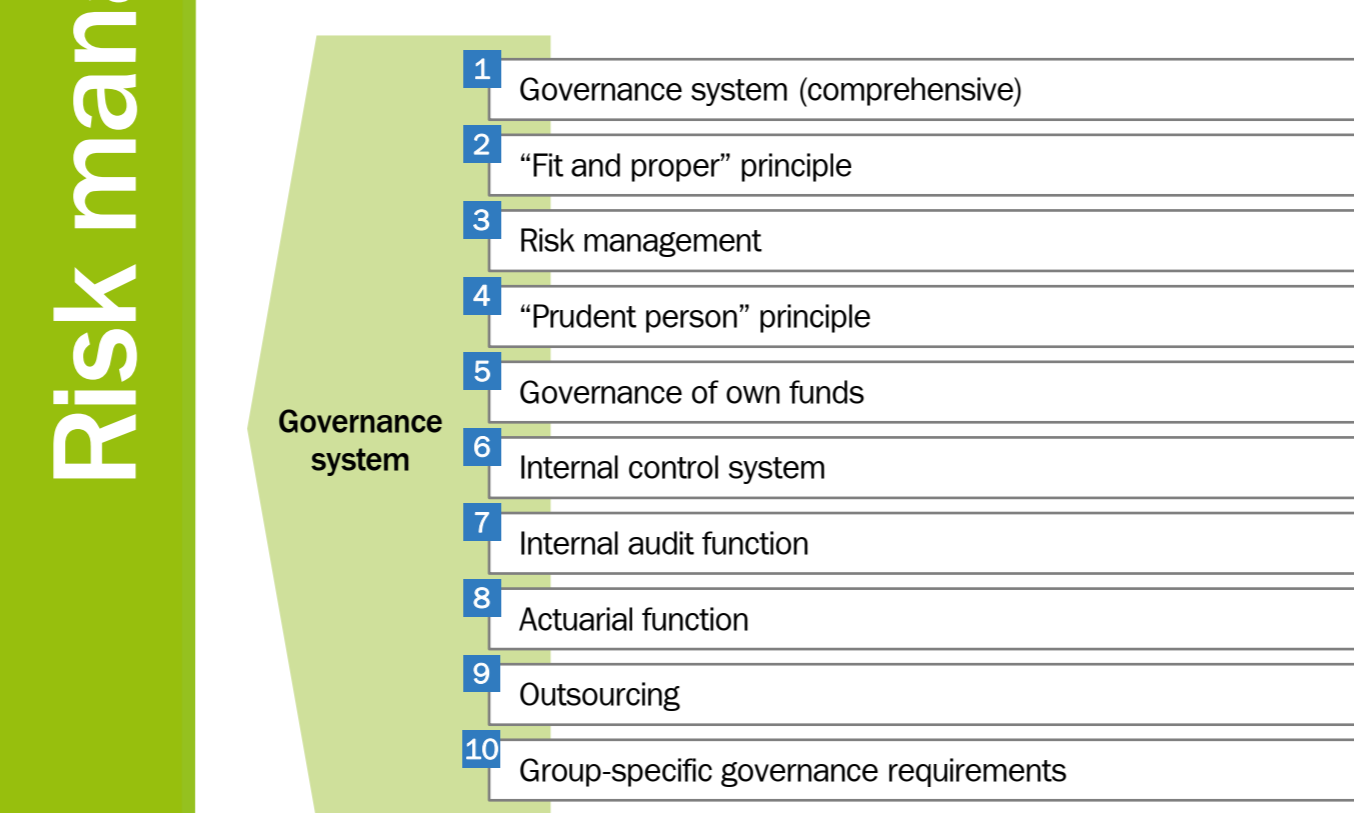
Obligation to disclose fair value of deferred tax assets

#### 6 Determination of own funds

Evaluation of the quality of capital components

**2 Goal** Increased risk awareness through minimum requirements for risk management

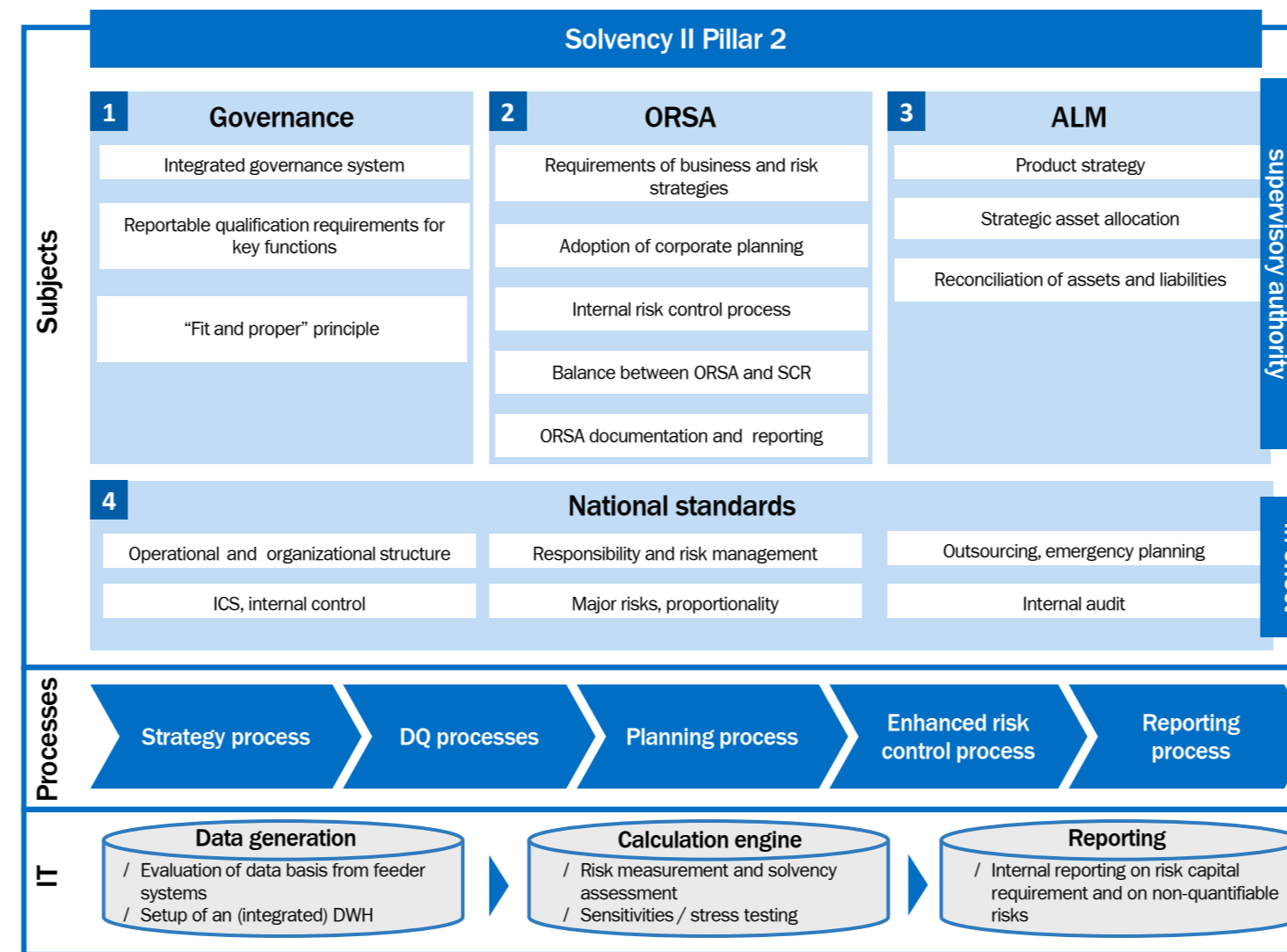
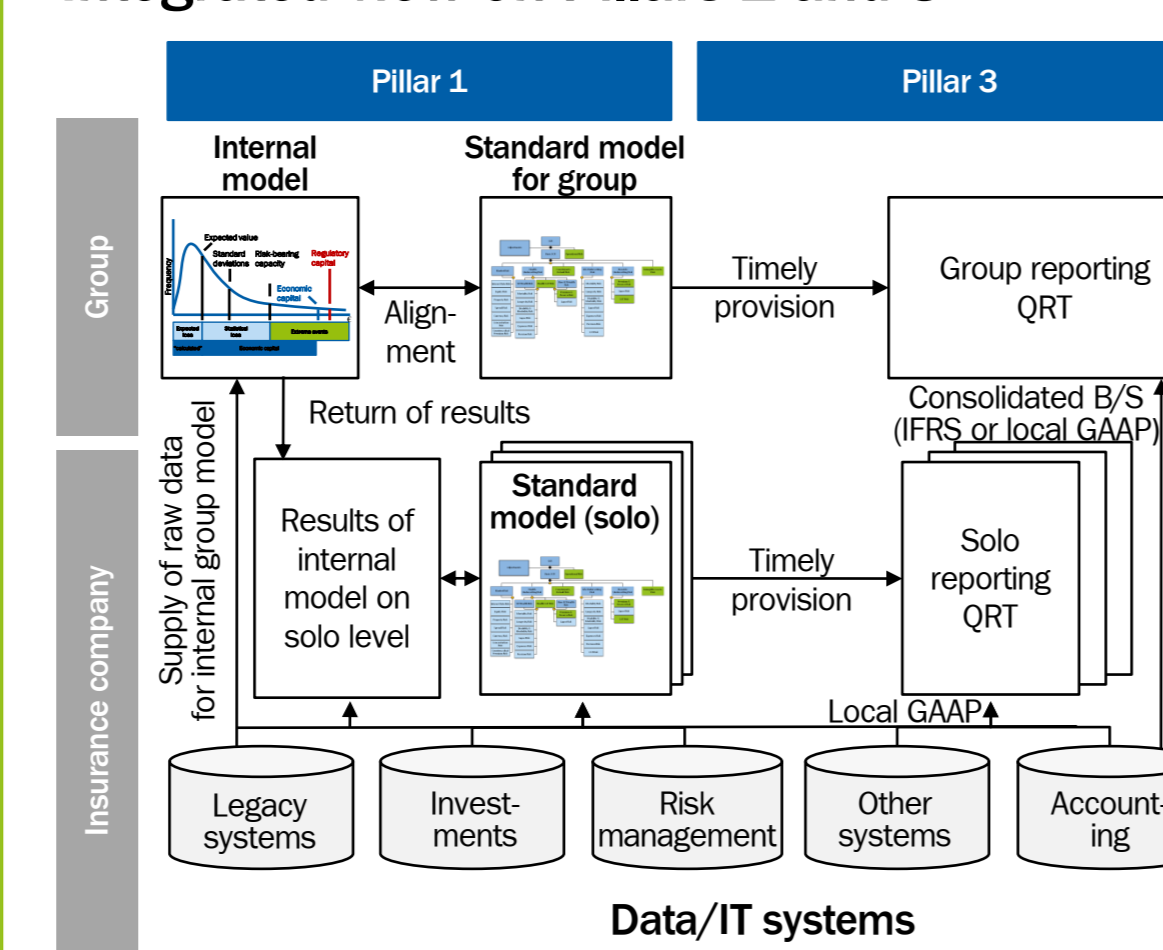
- Qualitative requirements for a company's operational and organizational structure
- Integration of business and risk strategy
- Regular assessment of risk-bearing capacity (ORSA)



**3 Goal** Increased transparency on European insurance market

- Regular solvency reporting (QRT) to supervisory authority
- Report on current solvency situation (RSR) for supervisory authority
- Report on solvency and financial situation (SFCR) for the public

#### Integrated view on Pillars 1 and 3



**Regulatory power**

Say and decision-making power for the following topics:

- Provision of all information necessary for supervision
- Staffing of positions with executive or key functions
- Possible actions to reduce identified risks

Reporting formats and content	
Quantitative reports	Qualitative reports
QRT: Quantitative Reporting Templates	SFCR: Solvency and Financial Condition
Business Activities: 7	Business & Performance: I
Own Funds: 4	System of Governance: II
Variation Analysis: 3	Risk Profile: III
SCR & MCR: 12	Valuation for Solvency Purposes: IV
Assets: 9	Capital Management: V
Technical Provisions: 15	
Reinsurance: 6	
Group Specifics: 9	

Reporting dates and frequency	
Qualitative reports	Annually: Solo: 20 weeks; Group: 26 weeks; Following end of financial year; First: 5/20/15; 7/1/15
Quantitative reports	Annually: Solo: 20 weeks; Group: 26 weeks; Following end of financial year; First: 5/20/15; 7/1/15
ORSA report	At least annually; Report due within two weeks after ORSA completion; 1st ORSA to be conducted in 2014
Qualitative reports	Complete reporting obligations (SFCR, RSR, QRTs, ORSA report); Additional three-year transition period with successively reduced reporting deadlines compared to preparatory phase
Quantitative reports	Final deadlines: Solo: 14 weeks (annually) or 5 weeks (quarterly); Group: 20 weeks (annually) or 11 weeks (quarterly)
ORSA report	At least annually
Financial stability reports	Annually: Solo: 6 weeks; Group: 6 weeks; Following end of financial year
	Quarterly: Solo: 5 weeks; Group: 6 weeks; Following end of quarter

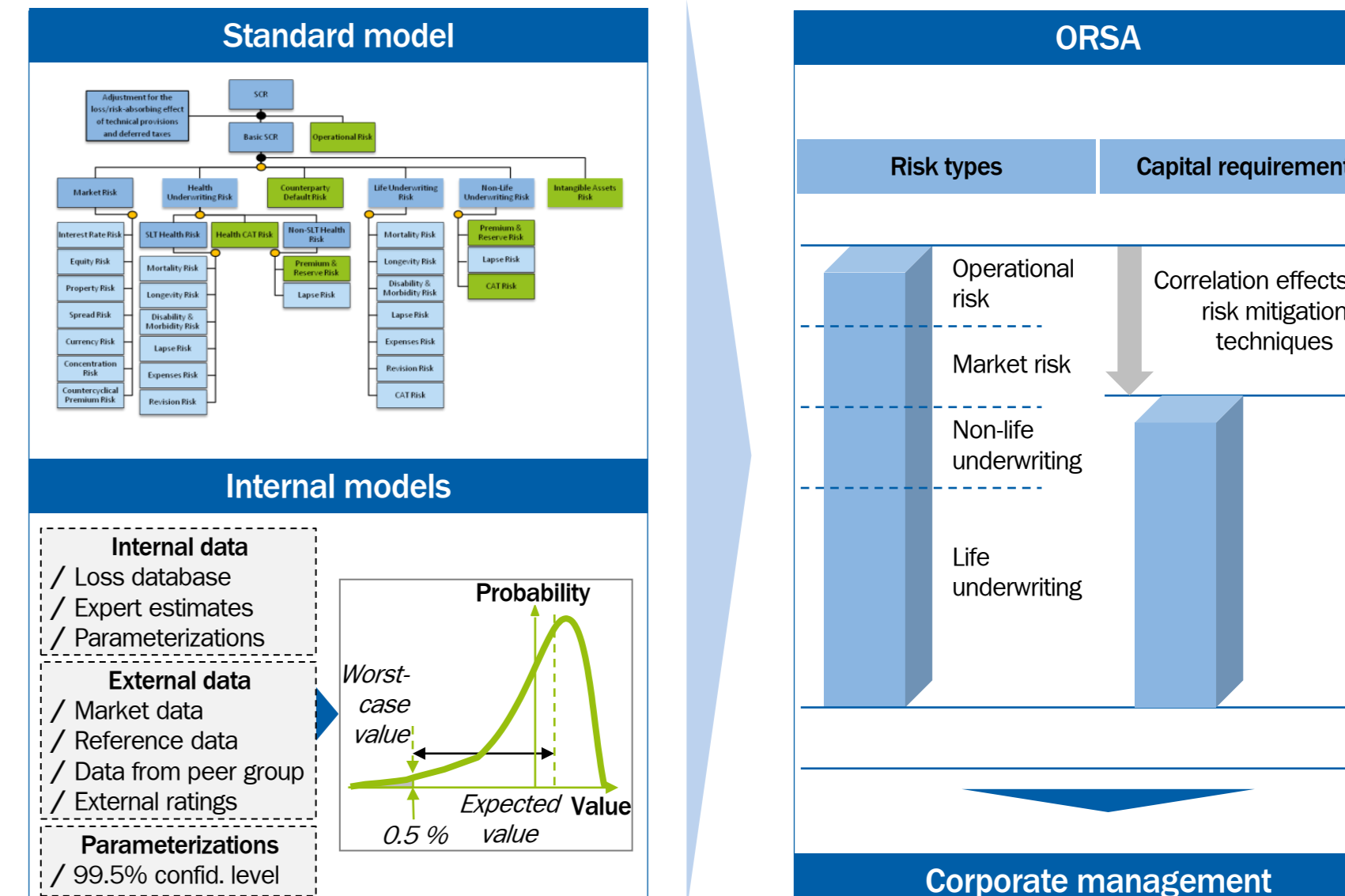
#### Extract of QRT Excel form for solvency B/S reporting: BS-C1

Assets	Solvency II value	Statutory account value
Goodwill	A1	AS1
Intangible assets	A2	AS2
Defined tax assets	A3	AS3
Investments (other than assets held for index-linked and unit-linked funds)	A4	AS4
Equities	A5	AS5
Bonds	A6	AS6
Investment funds	A7	AS7
including equities in invested funds	A8	AS8
including property in invested funds	A9	AS9
including derivatives in invested funds	A10	AS10
Reinsurance recoverables	A11	AS11
Non-life/health	A12	AS12
Life-excluding health and index-linked and unit-linked	A13	AS13
Deposits to creditors	A14	AS14
Insurance & reinsurance recoverables	A15	AS15
Total assets	A16	AS16
Liabilities	B1	BS1
Technical provisions: non-life (including health)	B2	BS2
Best estimate	B3	BS3
Risk margin	B4	BS4
Technical provisions: health (similar to non-life)	B5	BS5
Best estimate	B6	BS6
Risk margin	B7	BS7
Technical provisions: life (including health and index-linked and unit-linked)	B8	BS8
Best estimate	B9	BS9
Risk margin	B10	BS10
Pension benefit obligations	B11	BS11
Deferred tax liabilities	B12	BS12
Total liabilities	B13	BS13
Excess of assets over liabilities	B14	BS14

### Our solution portfolio

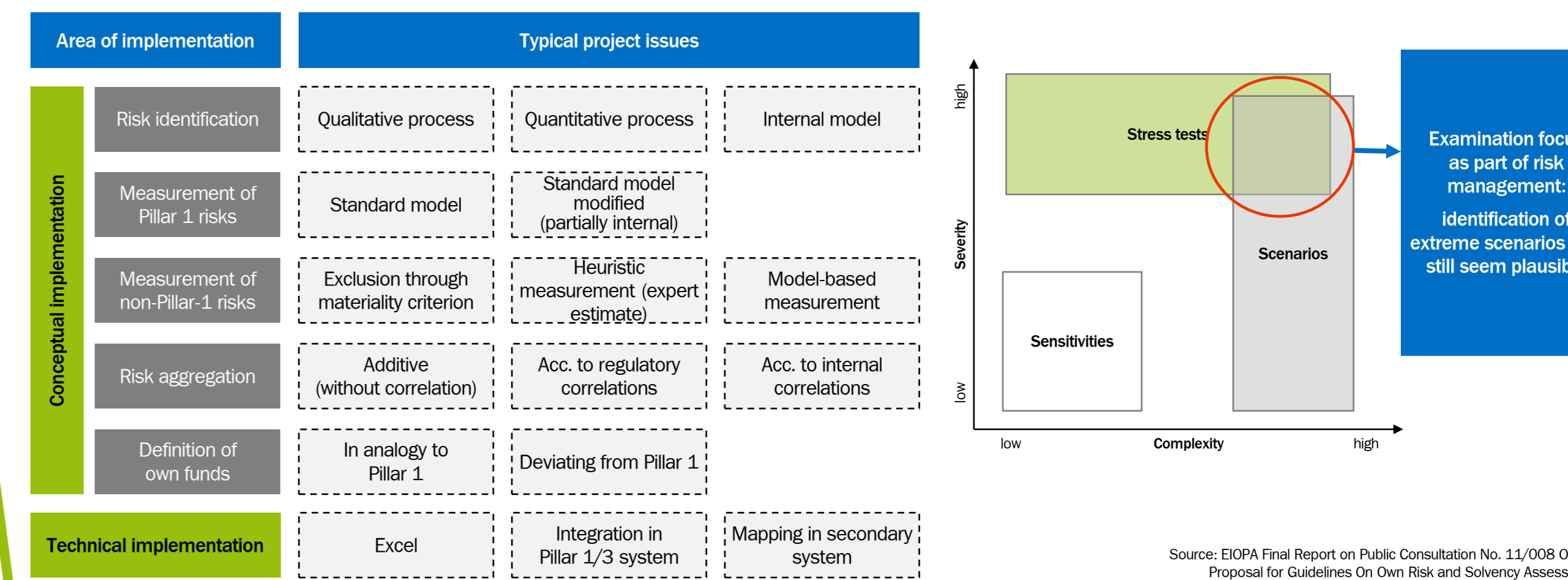
- zeb/ has detailed knowledge of the legal and regulatory requirements for Solvency II implementation (assistance for QIS studies, implementation support)
- Support of numerous Solvency II implementation projects (e.g. regulatory reporting)
- IT implementation expertise from large international projects with various IT infrastructures
- Regular exchange of information with EIOPA and local financial services authorities

#### Definition of risk measurement approach for ORSA (Pillar 2)



**Guideline 8**: "For this, and where appropriate, the undertaking should subject the identified risks to a sufficiently wide range of stress test/scenario analyses to provide an adequate basis for the assessment of the overall solvency needs."

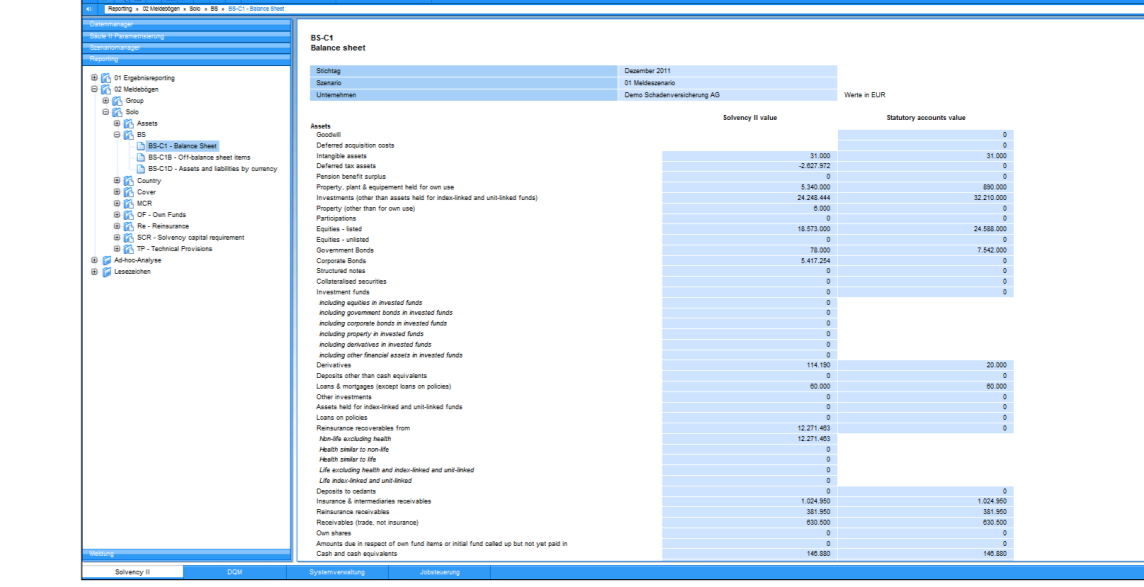
**Guideline 9**: "The undertaking's assessment of the overall solvency needs should be forward-looking."



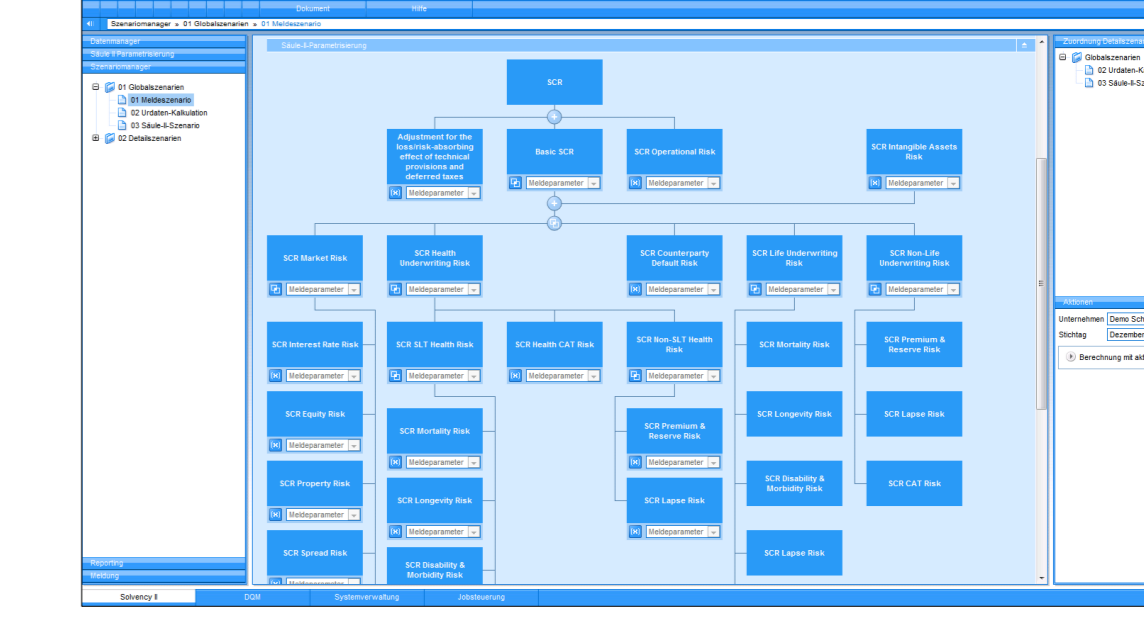
### zeb//control solvency II

- Integrated solution covering all three Pillars:
- Use of Solvency II standard model to calculate SCR requirements for solo and group (Pillar 1)
  - Preconfigured and audit-proof reporting process including comprehensive assessment and correction options for the QRTs (Pillar 3)
  - Flexible Scenario Manager to simulate risk parameter shifts for all risk types (Pillar 2)
  - Automated reporting by means of XBRL format
  - Integration of partial internal models
  - Modular setup and open architecture, system can be gradually expanded
  - Open and standardized input and output interfaces
  - Reuse of results

#### QRT reporting (BS-C1)



#### SCR/Scenario Manager



#### Standardized reporting process with comprehensive assessment and correction options

