



AEGON RISK MANAGEMENT

SOA Risk Management Task Force

20 July 2004

CONFIDENTIAL

- 1. Company Overview**
- 2. Risk Management Structure**
- 3. Risk Responsibilities**
- 4. Risk Coverage**
- 5. Risk Management Process**
- 6. Economic Capital Model**

1991

▪ Share Price	2.70
▪ Market Cap	2.5 bn
▪ Assets	32.4 bn
▪ Net Income	0.4 bn
▪ Life Premiums	1.9 bn
▪ Gross Deposits	1.8 bn
▪ Employees	11,090

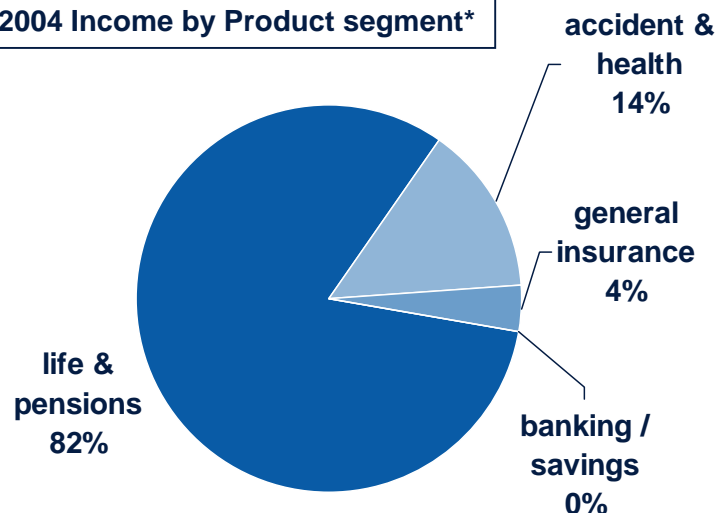
2003

▪ Share Price	11.73
▪ Market Cap	17.6 bn
▪ Assets	234.0 bn
▪ Net Income	1.8 bn
▪ Life Premium	16.2 bn
▪ Gross Deposits	21.5 bn
▪ Employees	27,708

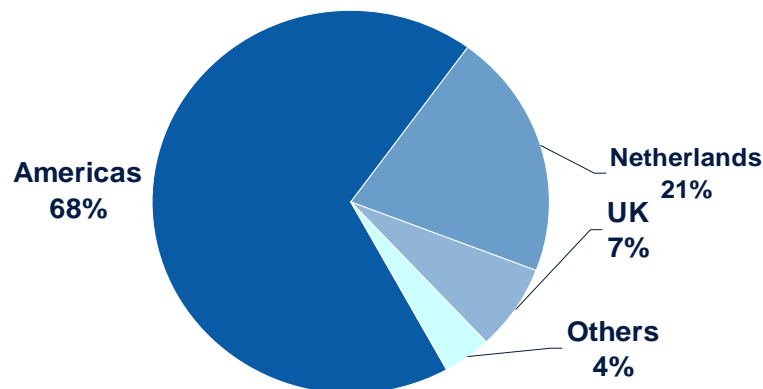
Amounts in Euros

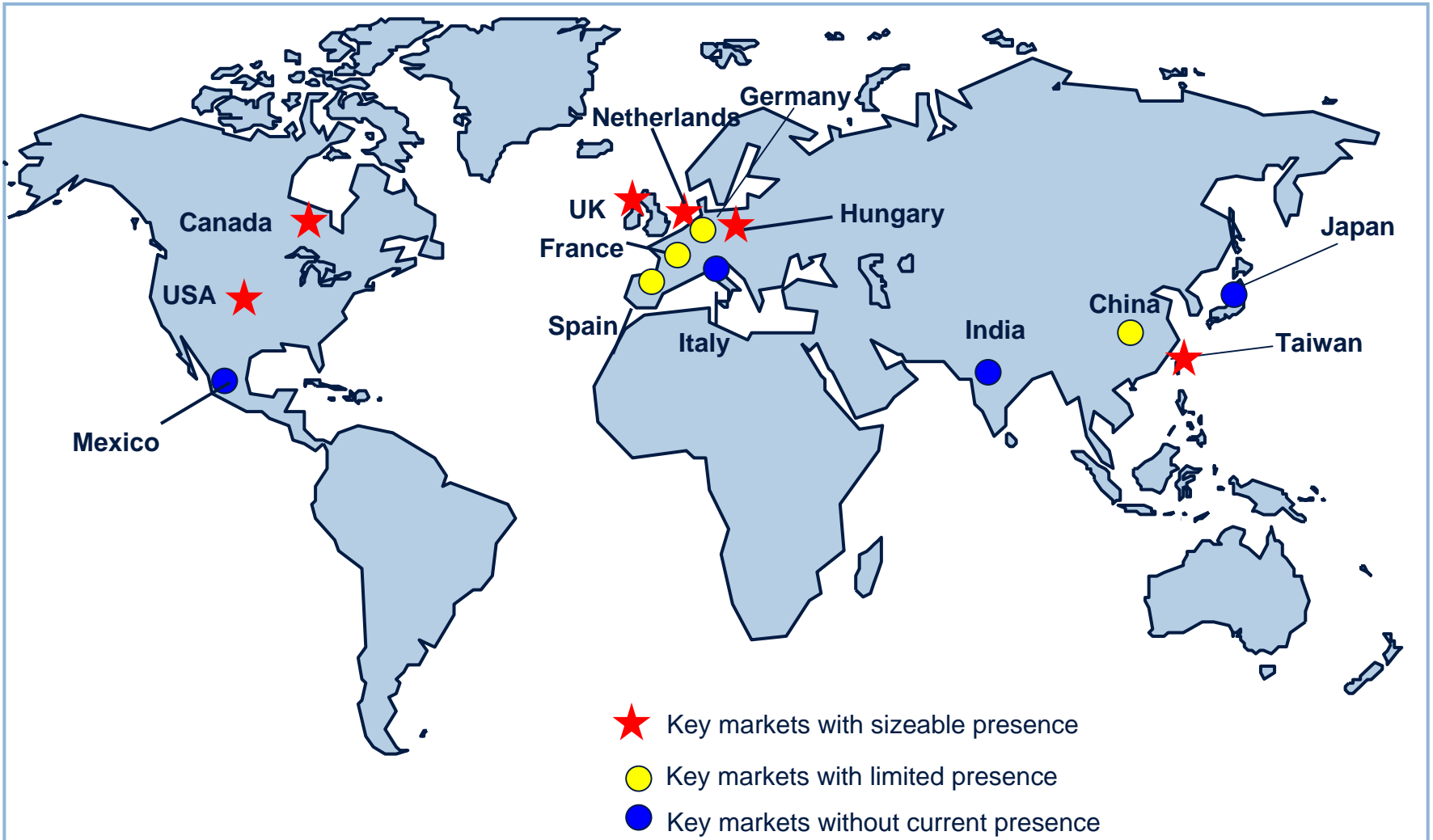
- We concentrate on our core business: Insurance, with a strong emphasis on life insurance, pensions and related savings and investment products
- We are active in health insurance in the US, the Netherlands and Spain, and offer no major medical coverage. Health business in the US consists mainly of accidental death and supplemental health insurance; and in the Netherlands of disability business
- We only engage in general insurance when it supports distribution channels in selling our life insurance and pension products and when it meets our targets for profitability.
- We expand our operations with selective acquisitions in countries where we already have presence in order to benefit from economies of scale and enhance our distribution

Q1 2004 Income by Product segment*



Q1 2004 Income before tax Geography

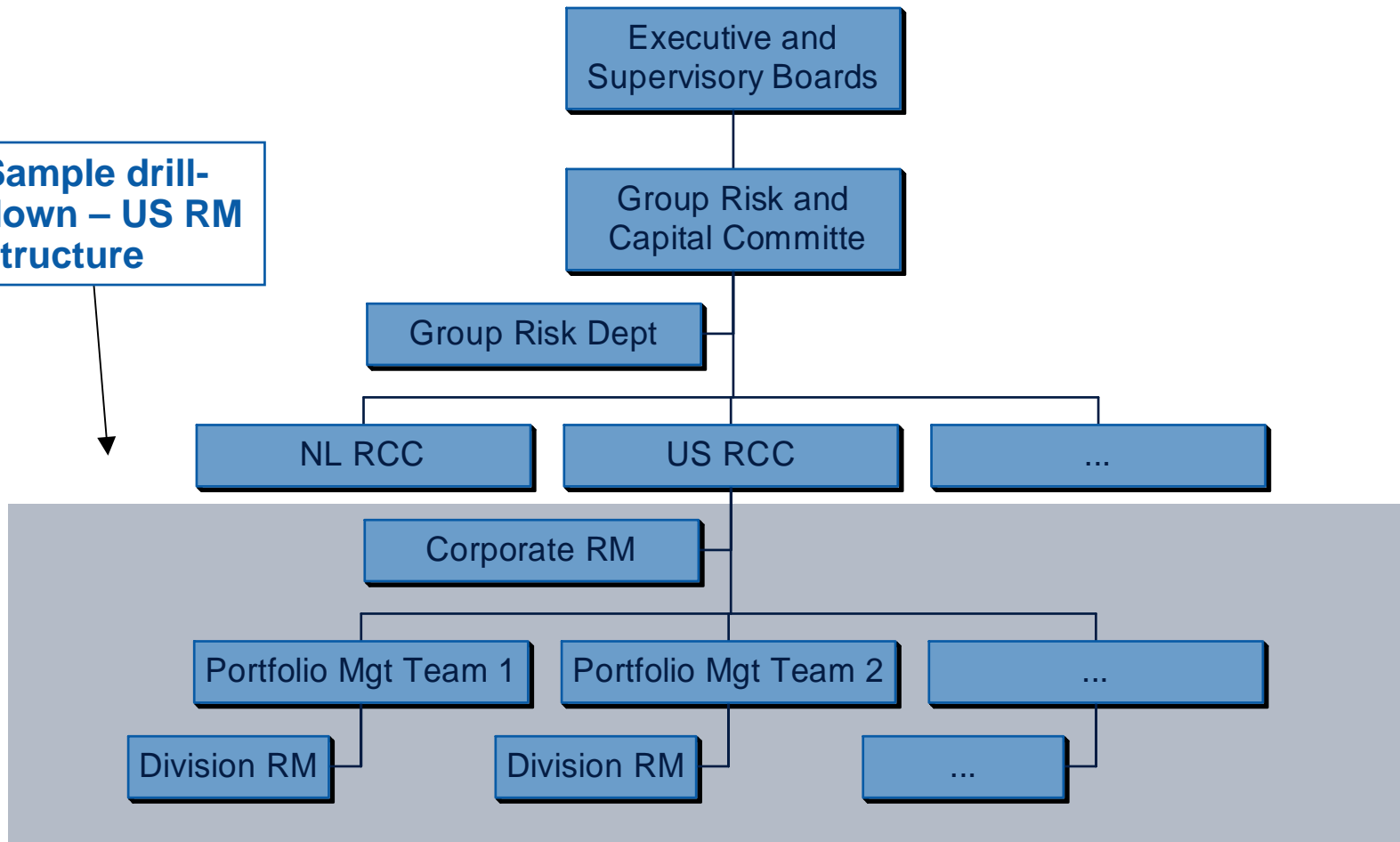


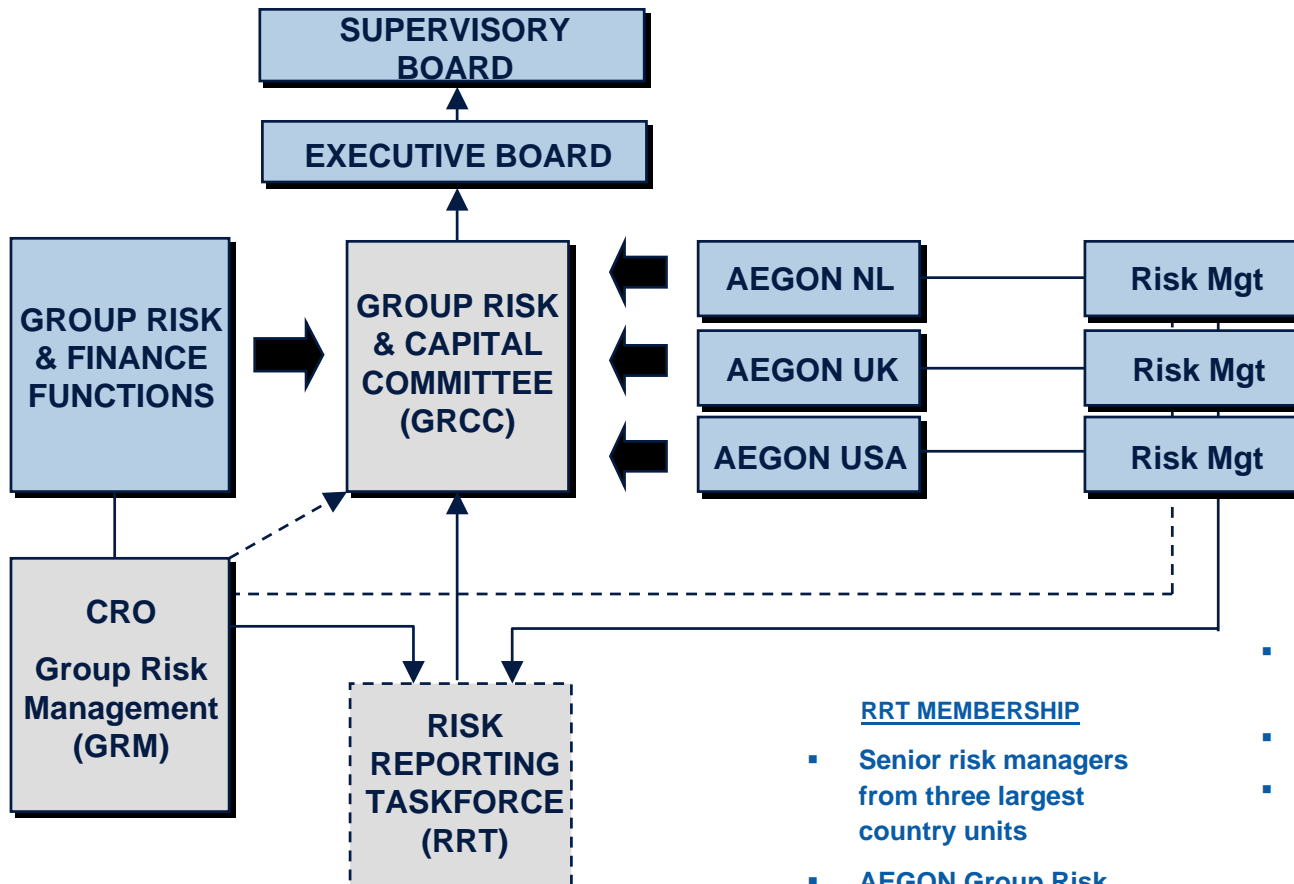




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Sample drill-down – US RM structure





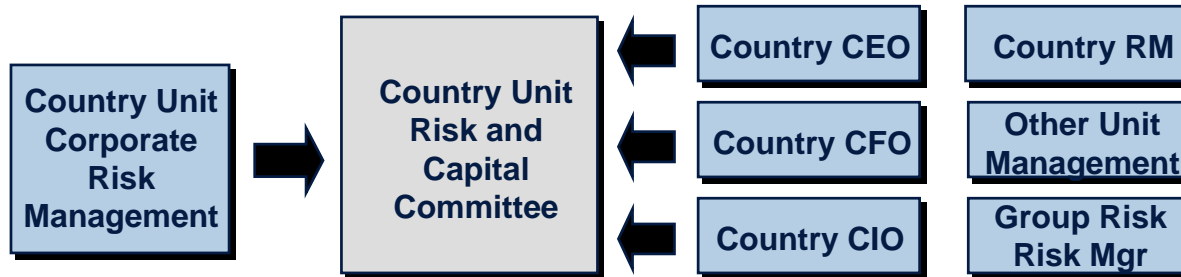
GRCC MEMBERSHIP

- NV: CFO (Chair), CRO, Group Treasurer
- CFOs of AEGON US, NL, UK
- By invitation:
 - CFOs of smaller country units; Chief Actuaries; Local risk managers; Group Corporate Development; Group Compliance Officer

RRT MEMBERSHIP

- Senior risk managers from three largest country units
- AEGON Group Risk Department

Country Risk and Capital Committee



Division Portfolio Management Team



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OVERALL AIM

To ensure risks are well managed and controlled within AEGON

SPECIFIC OBJECTIVES

1. Monitor AEGON's overall risk exposures & recommend and oversee remedial action where exposures are deemed excessive
2. Ensure that risks are well measured and managed within the country units
3. Communicate aggregate risk position to AEGON Executive & Supervisory Boards & support communication with external stakeholders
4. Facilitate the sharing of best practice risk measurement and management across the Group

- **Ensure the highest risk management standards are maintained in the company. This includes but is not limited to approving of the qualifications and effectiveness of risk management staff, the appropriateness of risk methodologies and the scope of risk coverage.**
- **Ensure risk exposures are within pre-defined risk limits and within Unit Management's risk tolerance given the current economic environment**
- **Set pricing and risk limit policies**
- **Responsible for promoting strong risk management as part of organizational culture**

- **Develop asset strategy appropriate to liability risks**
 - Liquidity
 - Term structure
 - Competitive environment
 - Credit appetite
- **Monitor and assist in division's ALM processes**
- **Review rate setting and pricing practice**
- **Support product development**
- **Optimize ALM results**
 - Profit maximization
 - Risk minimization
 - Monitor results; take action

- **Relationships & Knowledge**

- Build relationships with key risk and business professionals within the country units
- Develop an understanding of AEGON's businesses, products and risk management processes

- **Risk Reporting**

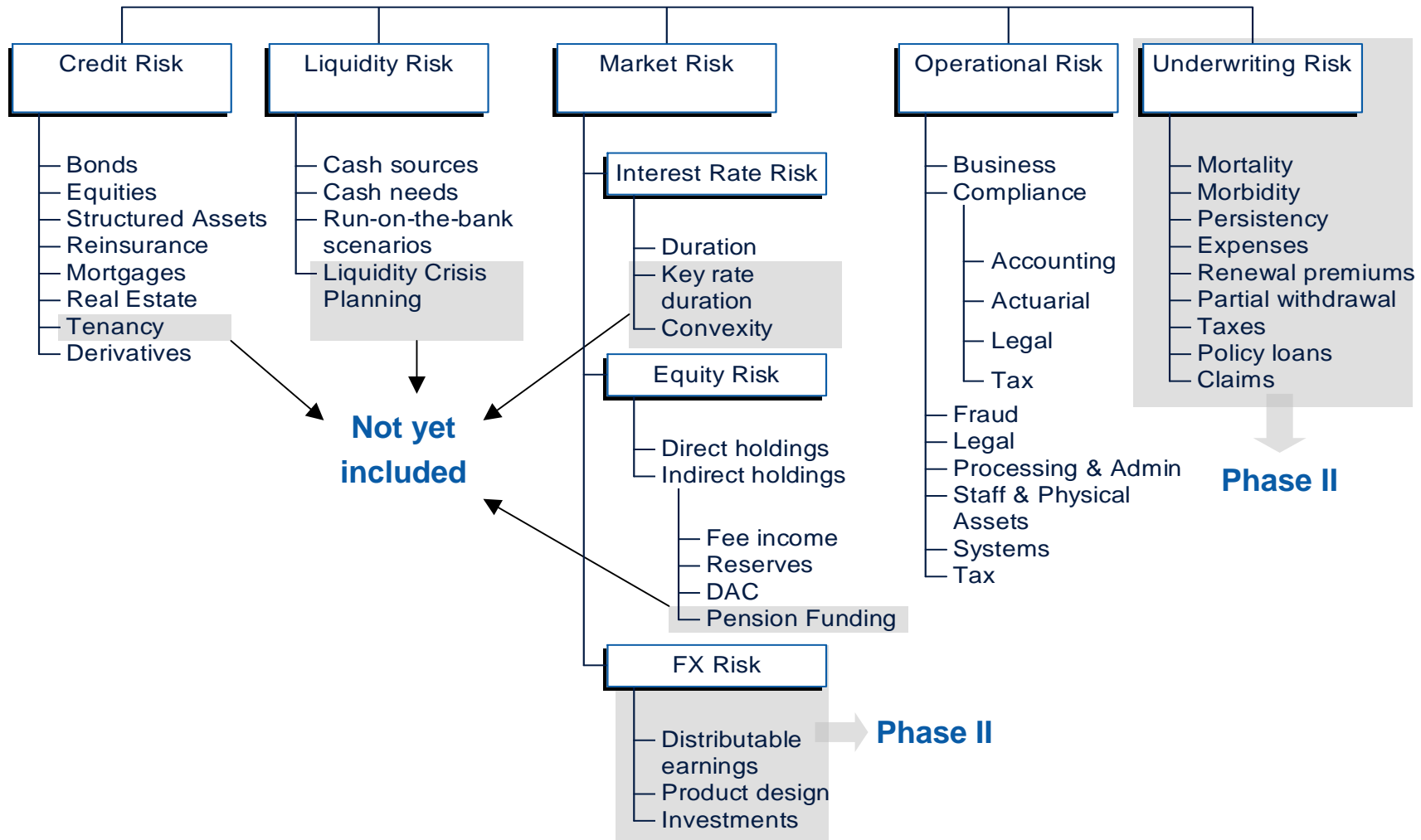
- Lead discussions and build consensus in adopting a common set of methodologies across country units
- Build an AEGON wide comprehensive risk report aggregating company exposure to market, credit, liquidity, operational and underwriting risks.

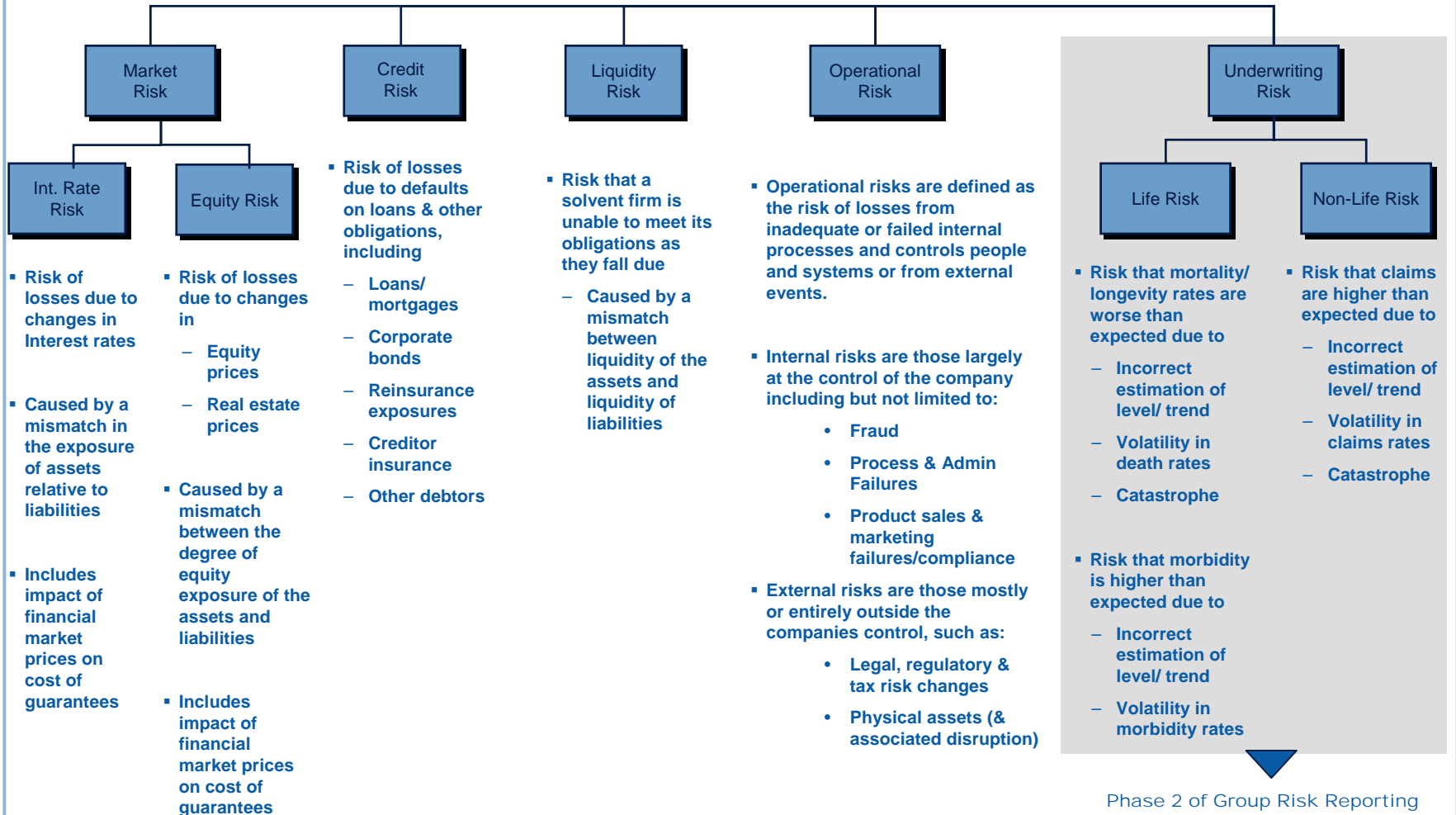
- **Risk Management**

- Carry out the mandate of the GRCC
- Provide risk management services to AEGON's smaller country units
- Strive to imbed strong risk management in the culture throughout AEGON for

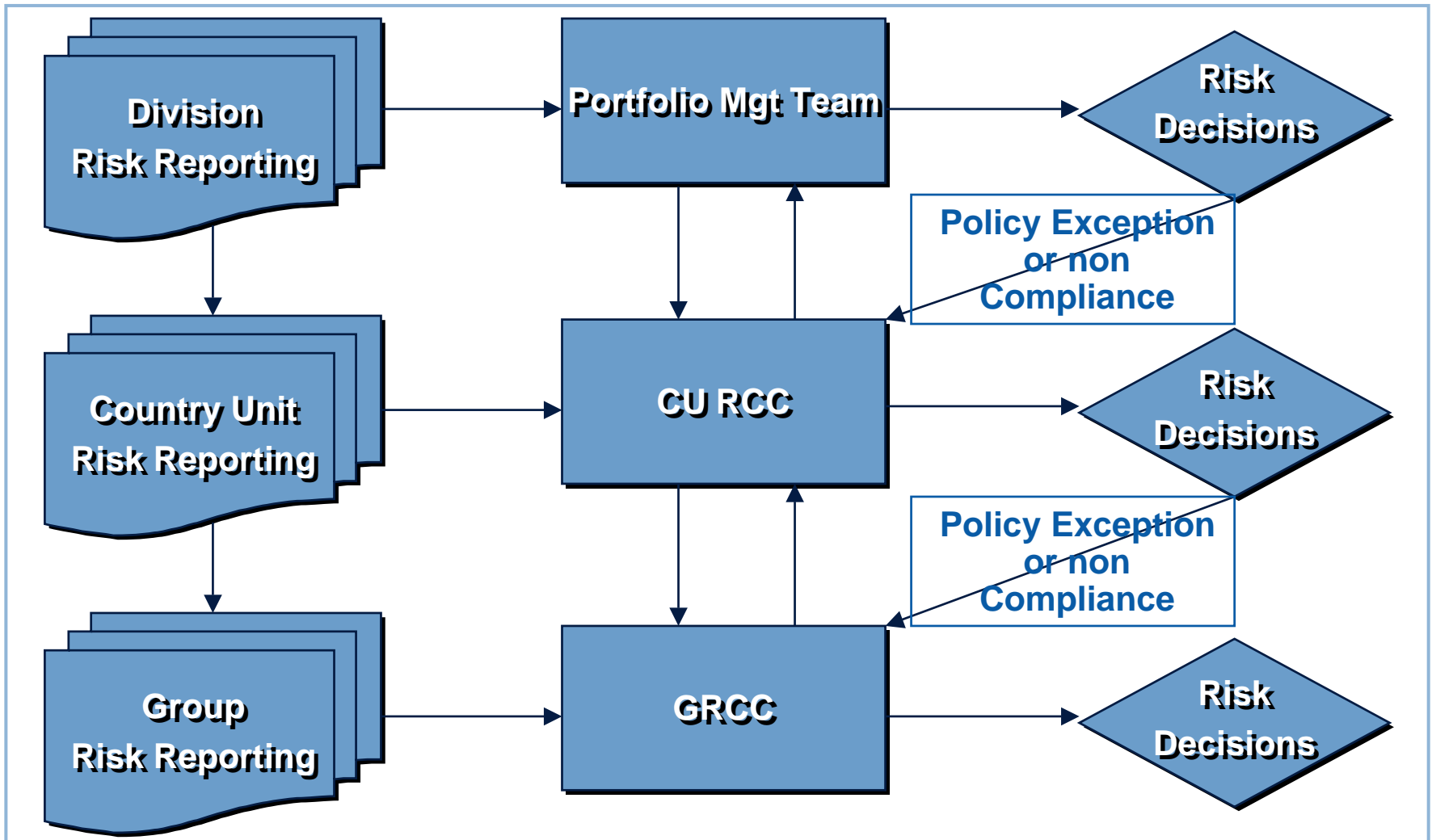
- **Carry out the mandate of their risk and capital committee. The responsibilities of the RCC extend to the risk manager.**
- **Responsible for producing a comprehensive and accurate risk assessment of the Unit's business with a frequency that is suited for the risk taken**
- **Responsible for bringing to the attention to the CEO and RCC any activity in the company that poses a significant risk to the organization that is not consciously and deliberately taken and priced for. If the risk manager is not satisfied with remedies, he/she must take the issue to the Group Chief Risk Officer.**
- **Responsible for aggregating and ensuring the accuracy and timeliness of all risk related information shared with Group Risk.**

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- **Credit risk is the risk of economic loss due to deterioration in the financial condition of counter parties to the company**
- **Credit risk is often thought to only exist in general accounts whereas it also exists in separate accounts, reinsurance contracts and derivatives.**
- **AEGON uses a current plus potential exposure methodology for separate accounts, reinsurance and derivatives to take into account the non active trading approach taken with these forms of credit exposure**
- **Credit risk is managed at the local level by investment professionals but various forms of limits such as name limits, rating limits, asset class limits, reinsurance and derivative rating restrictions need to be in place.**

- Risk reporting is comprised of credit trends, AEGON's current credit risk position and “what if” scenarios
- Credit trends include ratings, credit loss, credit spreads, high credit risk allocations, etc for both the market and AEGON
- Current credit risk is viewed by asset class, section, ratings distribution, watch lists, downgrades, defaults, derivative exposures and top of lists for name concentration, reinsurance, high yield, sovereign etc.
 - Also included is the full credit loss distribution for AEGON
- “What if” scenarios included for earnings, capital and embedded value
 - Scenarios include 1 in 10 year, year 2002 and year 1932

- **Liquidity can be a significant profit source and drain on the company**
- **Although liquidity risk is not effectively mitigated by reserves or capital, no other risk can impact the financial condition of a company as quickly. Therefore it is very important to have a sound liquidity management strategy including modeling and crisis planning.**
- **Crisis planning**
 - **Pre-formed liquidity crisis management teams**
 - **Two modes: “heightened awareness” and “liquidity crisis”**
 - **Questions to be answered in the Crisis Planning document**
 - **Who has right to declare, who must be notified, how often does the team meet**
 - **What are the action steps, what crisis reporting is needed and what do samples look like, What are the measures we are trying to manage, How do crisis management teams coordinate**

▪ Modeling

- Liquidity modeling/testing completed quarterly
- We estimate our liquidity needs by liability type over various scenarios and timeframes with the focus on the “run on the bank” and “impaired markets scenarios”
- We estimate our ability to raise cash through asset sales with estimates differing by asset class and we assume we sell assets at close to fair value
- Cash sources are compared to cash needs to determine the excess coverage at various points in time (\$'s and ratio). Test is a coverage ratio > 1 .
- Divisions, legal entities, country units must pass the test
- Liquidity is tested and priced for in the product development process
- Not included in base case modeling
 - Liquidity lines, surplus assets, future sales, support from parent or other business lines, other management actions

- **Market risk is the risk of economic loss due to changes in market variables including interest rates, equity markets and foreign exchange**
- **Market risk management**
 - **Local ALCOs, pricing actuaries and local management have front line responsibility for managing market risk through product design and managing the risk position within predefined limits**
 - **Country unit management must establish a pricing policy for units to follow that is consistent with the corporate standard. Country units also establish market risk limits.**
 - **Group sets guidelines for interest rate and equity risk, high level pricing requirements and currency risk policy among other guidelines/policies**

- Risk reporting is comprised of market trends, AEGON's current market risk position and “what if” scenarios
- Market trends include yield curves, market volatility, currency and equity market trends and portfolio MV to BV trends
- Current market risk is viewed by duration reports, distribution of interest rate and equity guarantees, equity return assumptions used in valuations, foreign currency holdings relative to unit functional currency in both assets and liabilities
- “What if” scenarios included for earnings, capital and embedded value include
 - 5 yield curve shocks
 - 3 equity and foreign exchange shocks

“Operational risk is the risk of losses resulting from inadequate or failed internal processes and controls, people and systems or from external events”.

Four Causes of Operational Risk (= the Risk Factors)

Processes

People

Systems

External Events

Eight Risk Categories

- | | |
|---|---|
| <ul style="list-style-type: none">▪ Business▪ Legal▪ Compliance▪ Tax | <ul style="list-style-type: none">▪ Fraud▪ Processing and Administration▪ Systems▪ Staff and Physical Assets |
|---|---|

Categorization Supports Three Objectives

- **Alignment with existing categories**
- **Mutually exclusive of one another and exhaustive of operational risk**
- **Each category should have a natural “problem owner”**

“Building blocks” used for ORM:

- **Process descriptions**
- **Key risk indicators**
- **Risk self-assessment**
- **Event loss database**
- **Quantitative techniques (future)**

- **Risk of economic loss resulting from experience varying adversely from assumptions used in product pricing**
- **Mortality and lapse risk are greatest due to the nature of our business**
- **Risk management**
 - Experience studies
 - Volatility studies used to determine size of margins required
 - Balance granularity for reduction in anti-selection versus administrative complexity
 - Diversification benefits and the impact on pricing and sales strategy

- **Risk reporting**
 - **Current trends include expenses, market mortality improvement, company mortality and lapse experience**
 - **Current position reporting includes distribution of business by technical provisions for**
 - **Each type of mortality**
 - **Degrees of lapse risk**
 - **Health and P&C business**
 - **What if reporting on earnings, capital and embedded value including**
 - **Mortality, lapse and expense stress**
 - **Mortality improvement trends**
 - **Health pandemic risk**

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Strengths

- Easy to understand and apply for all of AEGON
- Aligns internal requirements with S&P methodology and constraint

Weaknesses

- Not all risks are covered
- For risks covered, appropriateness of capital assessment would be a coincidence
 - As a consequence, unless economic risk is otherwise priced in, products are not priced economically
- Generally no credit or incentive for strong risk management
- Does not create a level playing field internally

Comprehensive

All material forms of credit, market, operational and underwriting risk will be included

Consistent

The model will be consistently applied across AEGON

Adaptive

The model will be module based allowing for adaptation to new risks as they emerge

- **The model will be based upon dynamic models and a recurring assessment process**
 - Modeling standards will be developed by Group Risk for each risk type and sub-type
 - All else equal, the more frequent the risk measurement and management, the lower the capital charge
 - Models and model results subject to review/audit by Group Risk
- **Diversification benefit across risk types will be will be measured at the group level**
- **ECM will be used for:**
 - Pricing
 - Unit performance measurement
 - Business growth funding decisions

Internal Auditor

- **Assesses whether appropriate policies and procedures exist and where they do, whether they have been implemented and adhered to as intended**
- **Independence is crucial in that the auditor can not have any operational responsibility nor reporting conflict**
- **Assist risk management in identifying areas of concern and evaluating the effectiveness of policies and procedures from a position of independence**

Operational Risk Manager

- **Prepares operational risk methodology, creates operational risk awareness and prepares frequent risk reporting**
- **Assess the degree of operational risk an organization is running and communicates this information for the purpose of risk management planning and product pricing**
- **Assist by providing specific expertise that may be needed from time to time as requested by internal audit**



Biography

Tom is Senior Vice President and Chief Risk Officer for AEGON NV. Tom has over 10 years of experience in the insurance industry. Prior to his current role, he was Chief Actuary with AEGON in the Institutional Markets Division. Prior to joining AEGON in 2000, Tom worked as a consultant at Tillinghast – Towers Perrin and prior to that was an ALM manager for a block of business of a Canadian insurer.

As Chief Risk Officer, Tom is a member of AEGON's senior risk committee and manages AEGON's Group Risk department. These two groups have the responsibility for managing AEGON's aggregate risk and capital position, setting risk management standards for all units, setting risk policies, promoting sound risk management as part of culture and assisting smaller country units in their risk management needs.

Tom's areas of expertise include risk, asset and derivative management, pricing, actuarial appraisals, demutualizations, long-term asset/liability modeling, Canadian and U.S. financial reporting and valuation requirements.

Tom was a member of the SOA Finance and Investment Research Committee for several years and a member of the AAA UVS Numerical Subcommittee in 1999-2000. He also served 3 years on the finance education and exam committee. Tom was a member of the professional oversight group for the SOA 2000 Risk Position Report Survey of which he originated with an RFP in 1999.

Tom graduated with honors from the University of Windsor and furthered his studies in postgraduate work at the University of Western Ontario. He is a fellow of the Society of Actuaries and the Canadian Institute of Actuaries and a member of the American Academy of Actuaries.

