

The Evolution of Risk Management

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TOM WILSON



2008 – CRO, Allianz Group

2005 – 2008 CRO, ING Insurance

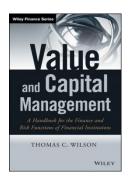
2002 – 2005 Global Head, Finance & Risk, Oliver Wyman

1998 – 2002 CFO, Swiss Re New Markets

1990 - 1998 Global Head, Risk Practice, McKinsey

1989 PhD Economics, Stanford

1984 BSc Business Administration, UC Berkeley



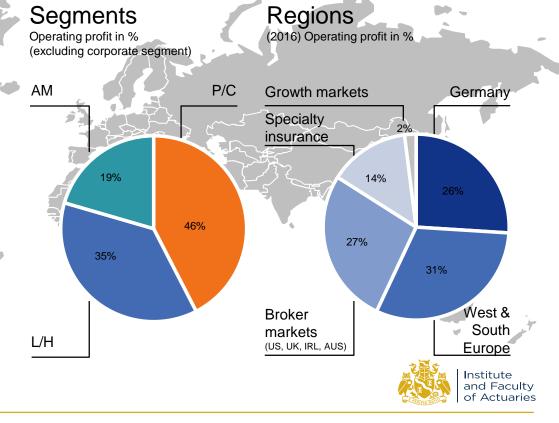
Value and Capital Management: A
Handbook for the Finance and Risk
Functions of Financial Institutions, 2015
Wiley Finance.

Also in Korean (2017), Chinese (2018, SUFE Press) and Japanese (forthcoming)



ABOUT ALLIANZ

- One of world's largest insurers and asset managers
- 85+mn insured customers
- EUR 125+bn total revenues
- EUR 1,960bn total AuM
- EUR 11.1bn operating profit
- 229% Solvency II capitalization
- EUR 83bn market cap (Feb 2018)





EVOLUTIONARY FORCES Regulatory changes, financia

Regulatory changes, financial market crisis, technological advancements and increasing stakeholder expectations have forced Risk Management to evolve from a regulatory compliance and model driven technical role to one supporting digital transformation, capital and value management.

ALIGNING RISK AND CAPITAL MANAGEMENT: LESSONS LEARNED

The alignment of risk, capital and value management is especially challenging under more volatile, risk-based capital (SII, C-ROSS, etc.) and accounting (IFRS 17) regimes.

SUPPORTING DIGITAL TRANSFORMATION

Digital represents both a threat and an opportunity. Risk can support the transformation of the business while helping to ensure that the major risks are avoided.

BLUEPRINT FOR ENTERPRISE RISK MANAGEMENT

As a consequence, Risk has evolved a broader mandate, integrated and aligned with Finance, Actuarial and Business and requiring new skills and perspectives.



EVOLUTIONARY FORCES



Regulatory Pressure

- Risk-based capital
- Risk management

2001 Crisis: Solvency I "fails", Basle II "succeeds"

Solvency II modelled after Basle II requirements

- Risk-based capital & internal model
- Risk management
- Public disclosures

Looking forward

- IAIS ICS
- IFRS 17

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EVOLUTIONARY FORCES

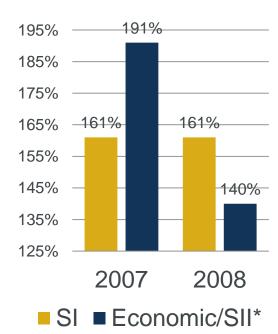




Economic Environment

- Anemic growth
- Low rates
- Market volatility





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^{*} Annual Report 2008. Economic capital was an Allianz internal pre-curser to SII before long-term guarantee adjustments were made.

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Economic Environment

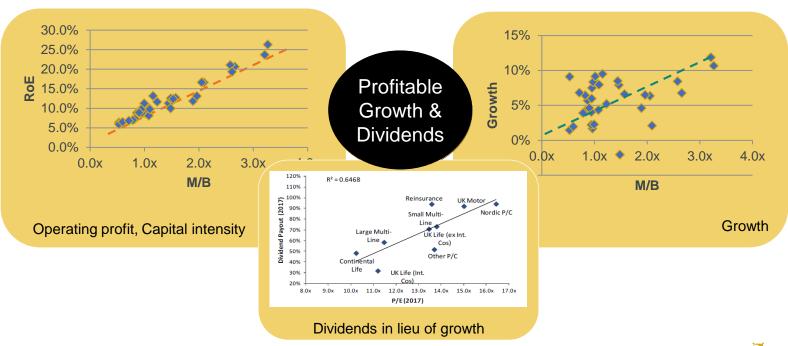
- Anemic growth
- Low rates
- Market volatility

Paradigm Shifts

- Consumers
- FinTech
- Shareholders

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WHAT DRIVES SHARE VALUE?



Aegon Ageas ASR NN Group AXA SCOR Allianz Hannover Re Munich Re Generali Mapfre Poste Italiane Giensidige Sampo Storebrand Swiss Life Swiss Re VIG ZIG Aviva L&G Phoenix Prudential Std Life Abdn Direct Line Hiscox Lancashire RSA Saga



^{*} BofA Merrill Lynch European Insurance Valuation Sheet, Feb 2018, Allianz analysis
RoE = Return on Equity, M/B = Market to Book valuation multiple, P/E = Price to earnings valuation muptiple

REQUESTED BY SHAREHOLDERS

'Earnings analysis is of limited use ... We prefer composites that i) generate strong cash flow after 'maintenance capex' ..., ii) have high growth capex that supports future earnings and iii) ... surplus cash generation, driving financial flexibility and the ability to redeploy capital for growth."

'(Investors need to understand how) ... capital is spent. We are supportive of investment in new business ... (at) IRRs above the company's cost of capital and with reasonable payback periods ... (but) business at or sub 9% IRRs which takes 9 years to break even ... is not a viable source of value for shareholders."

Barclays 2011

"Surplus capital deployment to become a key driver of sector performance

We forecast earnings growth ... with a headwind from low yields. With scope for positive earnings revisions limited, deployment of surplus capital could become a key driver of sector performance. Those with strong Solvency II positions, and strong capital generation, can deploy / return excess capital to drive EPS"

UBS 2017



Morgan Stanley 2012



EVOLUTION OF RISK MANAGEMENT

A PERSONAL PERSPECTIVE

Crisis Mgmt Value & Capital Mgmt

Regulatory Driven

2000-2008

2008-2014

2015-2020





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01

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02

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04

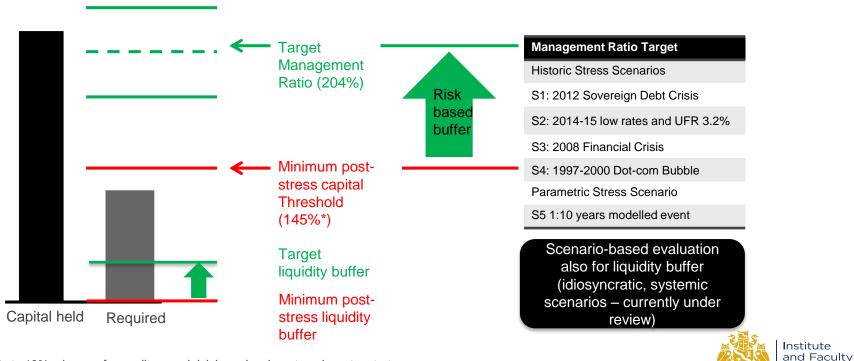
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DETERMINING SOLVENCY RATIOS

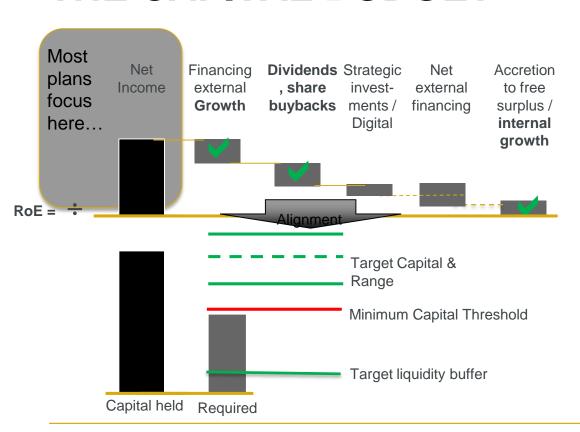


^{*} Up to 10%-p leeway for credit spread risk based on long-term investor strategy

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THE CAPITAL BUDGET



... often missing is the Capital Budget, a multiyear plan aligning business-, capitaland & riskstrategies



FOCUS ON SUSTAINABLE VALUE CREATION

Corporate Context

3yr Business Planning

Financial Targets
Risk Appetite



Corporate Aspiration
Competitive position
Mission statement



Strategic pillars

- Balance sheet
- Operating excellence
- People
- Reputation



Financial Aspiration

- Return on equity
- Operating profit & KPIs
- EPS Growth
- Capital/dividend policy



Strategic initiatives

- Digital
- Growth
- Profit enhancement



RISK IN PLANNING PROCESS

Corporate Context

3yr Business Planning

Finanical Targets
Risk Appetite

Top Down Indications (TDI)

Input on key risk areas for each subsidiary

Startegic

Dialog (SD)

 Validation of TDI from a solvency perspective

Input on key risk

issues for Group

- Definition of planning scenarios, e.g. de-risk, stable, re-risk
- Indications for limit resources

Planning Dialog (PD)

- Standardized risk, capital and solvency charts for ORSA* and capital management
 - Solvency projection
 - Reverse stress tests
 - Limit utilization
- Final limit approval

Regular monitoring

- Quarterly risk and limit reporting
- Coordinated with Monthly or Quarterly Business Reviews

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RESULTING IN RISK APPETITE

Corporate Context

3yr Business Planning

Finanical Targets
Risk Appetite

Risk appetite expressed in a formal limit framework designed to

- Allocate capital and minimum (target) capital ratios
- Risk limits for risks which accumulate across entities or represent large concentrated exposure relative to our risk appetite
- Ensure that other quantifiable risks are well covered

Types of limits	Group and Subsidiary Limits	
Capital limits	Solvency target & corridor (Regulatory, Internal Model, Rating Agency), stress scenario limits	
Concentration limits		
Financial / ALM limits	Strategic Asset Allocation & leeways, Duration, Financial VaR, Sensitivities (IR, EQ, etc.)	
Cumul limits	Group-wide Nat Cat, Man-Made Cat limit, Single Peril Exposure Limits	
Credit limits	Limits for all individual credit exposures, including sovereign issuers and counterparties; country limits	
Additional perspectives	Earnings at Risk, Liquidity at Risk, etc.	

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01

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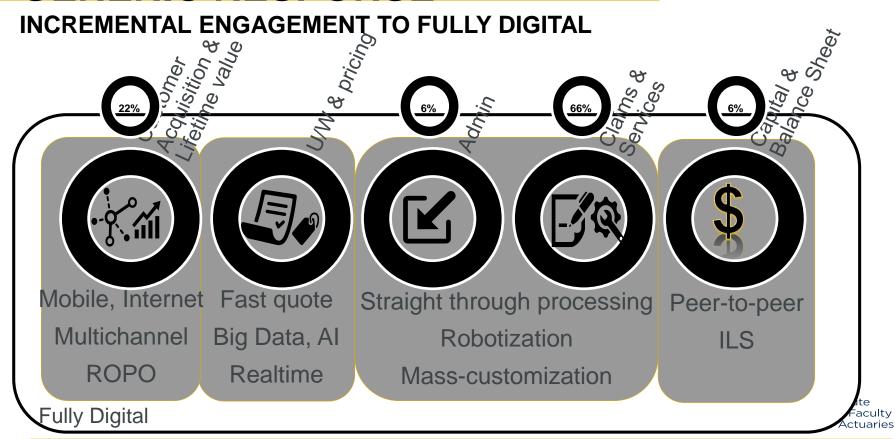
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GENERIC RESPONSE –



DISRUPTION RULES OF THUMB

- Innovation is deliberate and predictable: Expect attacks where the greatest customer friction meets the largest profit pools
- Platform based, data intensive and capital light business models are likely to have the greatest impact
- Incumbents employ parallel strategies: Compete with new entrants, leverage legacy assets, provide entrants with infrastructure and access to services
- Disruption is continuous and not a one-time event. It shapes customer behavior, business models and the long-term structure of the industry

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PERITIA RATIO

UNLOCKING THE POTENTIAL

- Fear of cannibilization
- Long-term economics

2 Aversion to risk

Culture: non-conformist, fail fast, fail small and learn

- Wedded to the past, no vision of the future
- Flexibility: test and roll-out fast, optimize later

Locked by incentives

Incentivize collaboration & results, not input



01 CONTENT 02 03

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HOW RISK MANAGEMENT ADDS VALUE?

Asking the right questions ... In practice ...

Risk Communication	Is our risk profile and strategy understood by market analysts and reflected in our valuation multiple and required capital?	Mandatory disclosuresComplementary disclosures
Risk Strategy	 Do we optimize our risk / reward profile for the benefit of shareholders and policy holders? Are delegated authorities set consistent with this strategy? 	 Risk appetite & strategy Capital strategy Delegation of authorities Risk governance
Risk Controlling	Is our risk profile transparent to management?Is it within delegated authorities?	 Internal capital model Limit system: cumul, operational Risk & limit reporting
Risk Underwriting	 Are the risks we want appropriately structured, underwritten and priced? Are all other risks (e.g. operational / reputational risk) appropriately identified and managed? 	 Underwriting policies Asset/Liability Management (Rorac) pricing New product approvals Risk Control Self-Assessment (RCSA)

ENTERPRISE RISK MANAGEMENT

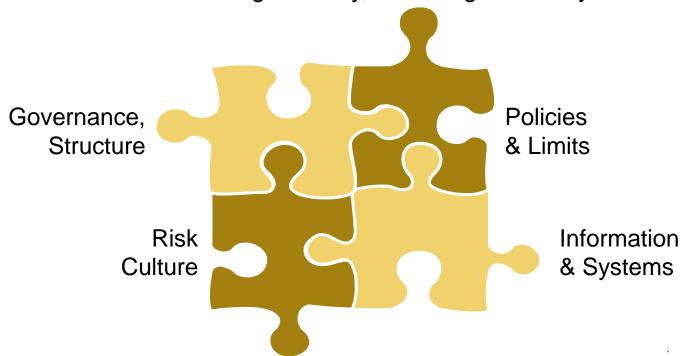
Asking the right questions ... answering correctly, executing effectively

Risk Communication

Risk Strategy

Risk Controlling

Risk Underwriting



RISK GOVERNANCE – THREE LINES

First-Line	Second-Line	Third-Line
Business responsible for both profit and loss, risk and returns	Independent functions define ERM framework within which the business operates	Ensure that the framework is adhered to
Business Units	Risk, Legal, Compliance	Audit

- Models are abstractions of reality and will be wrong in the next crisis
- Frameworks can be arbitraged
- Framework may not adapt to new business needs

Risk Controlling

- Define frameworks within which business can be done
- Control risk and limits and provide transparency
- Provide technical analysis to support business decisions

Risk Management

- Have a deep, professional understanding of the business (not just the models!)
- Be close to the business, discussing key decisions before they are taken
- Encourage profitable growth but exercise professional judgement when framework inadequate
- In case of veto, allow the right to escalate up the chain of command

I would rather have
A rated risk
managers and a C
rated model than
an A rated model
and C rated risk
managers
D. Mudge, Bankers



Trust

A TEAM SPORT

Strategy Information Execution CEO

Strategic vision, stakeholder promises

CRO

Aligning Risk and Business Strategy

Performance Steering, Capital Allocation

CFO

Innformation and independent advice

CA

CUO CIO Business Heads

Deliver sustainable economic outperformance

Treasury
/ Capital
Mgmt

Financing & Liquidity



NEW SKILLS AND CAPABILITIES

- Senior partner in the business "tone at the top"
- Focus on long-term sustainable value creation
- Aligned objectives
- Provide technical information, advice and an opinion
- Balance between IQ, EQ and leadership



EXAMPLE RISK MISSION STATEMENT

Risk Management

is a competent business partner providing forward-looking information, assessments and recommendations to impact risk-return and capital management decisions which support our financial objectives

- Protect the company and achieve a competitive advantage through better risk information, risk & capital management
- 2 Support better business decisions and an effective risk culture through trust-based business partnerships
- Continuously improve our global risk network, leadership and technical skills as well as the interaction with the business
- Provide effective, independent risk oversight, comprehensive governance system and risk control framework
- 5 Efficiently meet external requirements and be the industry benchmark for enterprise risk management



Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



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