

ERM from Principle to Practice

OIC Risk Management Seminar

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Enterprise Risk Management Challenges



Global Risk 2016





Economic

-  Asset bubble in a major economy
-  Deflation in a major economy
-  Failure of a major financial mechanism or institution
-  Failure/shortfall of critical infrastructure
-  Fiscal crises in key economies
-  High structural unemployment or underemployment
-  Illicit trade (e.g. illicit financial flow, tax evasion, human trafficking, organized crime, etc.)
-  Severe energy price shock (increase or decrease)
-  Unmanageable inflation



Global Risk

Technological

-  Adverse consequences of technological advances
-  Breakdown of critical information infrastructure and networks
-  Large-scale cyberattacks
-  Massive incident of data fraud/theft


Societal

-  Failure of urban planning
-  Food crises
-  Large-scale involuntary migration
-  Profound social instability
-  Rapid and massive spread of infectious diseases
-  Water crises

Geopolitical

-  Failure of national governance (e.g. failure of rule of law, corruption, political deadlock, etc.)
-  Interstate conflict with regional consequences
-  Large-scale terrorist attacks
-  State collapse or crisis (e.g. civil conflict, military coup, failed states, etc.)
-  Weapons of mass destruction

Environmental

-  Extreme weather events (e.g. floods, storms, etc.)
-  Failure of climate-change mitigation and adaptation
-  Major biodiversity loss and ecosystem collapse (land or ocean)
-  Major natural catastrophes (e.g. earthquake, tsunamis, volcanic eruption, geomagnetic storms)
-  Man-made environmental catastrophes (e.g. oil spill, radioactive contamination, etc.)

Source: The Global Risks Report 2016 11th Edition / World Economic Forum / <http://wef.ch/risks2016>

The Most Likely Global Risk 2016



Source: Global Risks Perception Survey 2015.

Note: Respondents were asked to select the three global risks that they believe are the most likely to occur in their region. For legibility reasons, the names of the global risks are abbreviated; see Appendix A for the full name and description. Oceania is not displayed because of the low number of respondents.

The Evolving Risks Landscape: Likelihood

	2011	2012	2013	2014	2015	2016
1st	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Interstate conflict with regional consequences	Large-scale involuntary migration
2nd	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events
3rd	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate change mitigation and adaptation
4th	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict with regional consequences
5th	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Source: The Global Risks Report 2016 11th Edition / World Economic Forum / <http://wef.ch/risks2016>

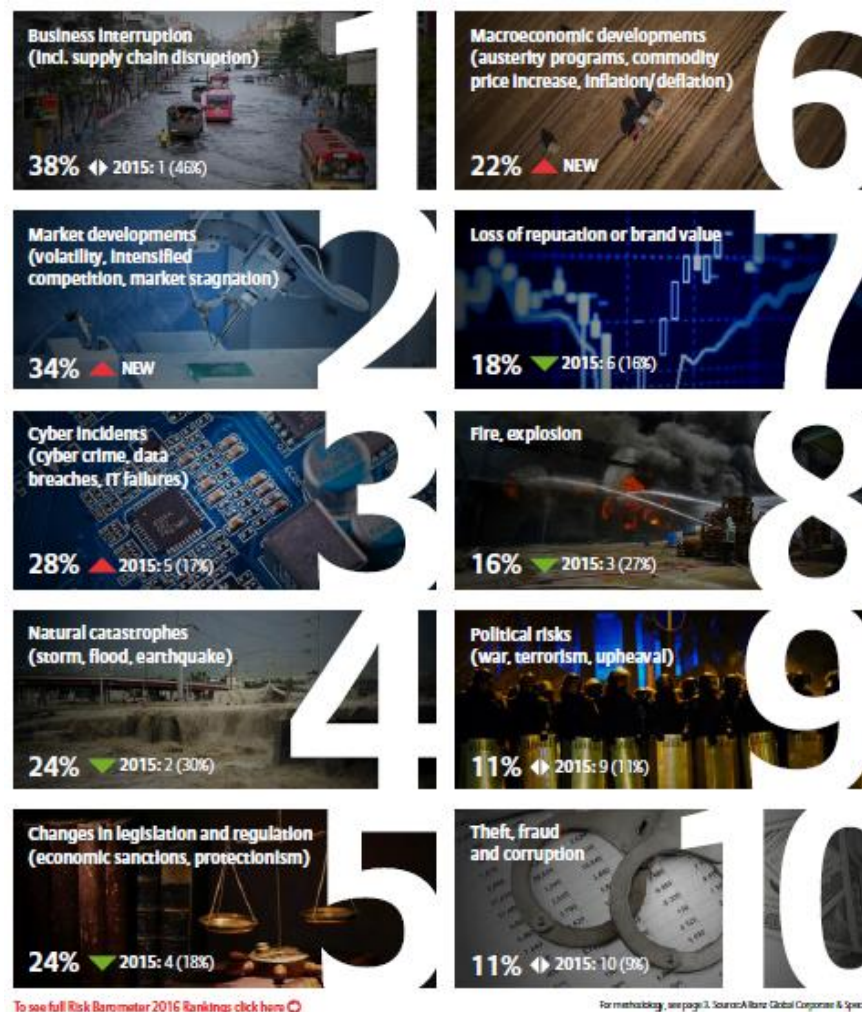
The Evolving Risks Landscape: Impact

	2011	2012	2013	2014	2015	2016
1st	Fiscal crises	Major systemic financial failure	Major systemic financial failure	Fiscal crises	Water crises	Failure of climatechange mitigation and adaptation
2nd	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction
3rd	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises
4th	Asset price collapse	Chronic fiscal imbalances	Diffusion of weapons of mass destruction	Unemployment and underemployment	Interstate conflict with regional consequences	Large-scale involuntary migration
5th	Extreme energy price volatility	Extreme volatility in energy and agriculture prices	Failure of climatechange mitigation and adaptation	Critical information infrastructure breakdown	Failure of climatechange mitigation and adaptation	Severe energy price shock

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Source: The Global Risks Report 2016 11th Edition / World Economic Forum / <http://wef.ch/risks2016>

Allianz Risk Barometer : Top 10 Global Risk 2016



Source: ALLIANZ RISK BAROMETER



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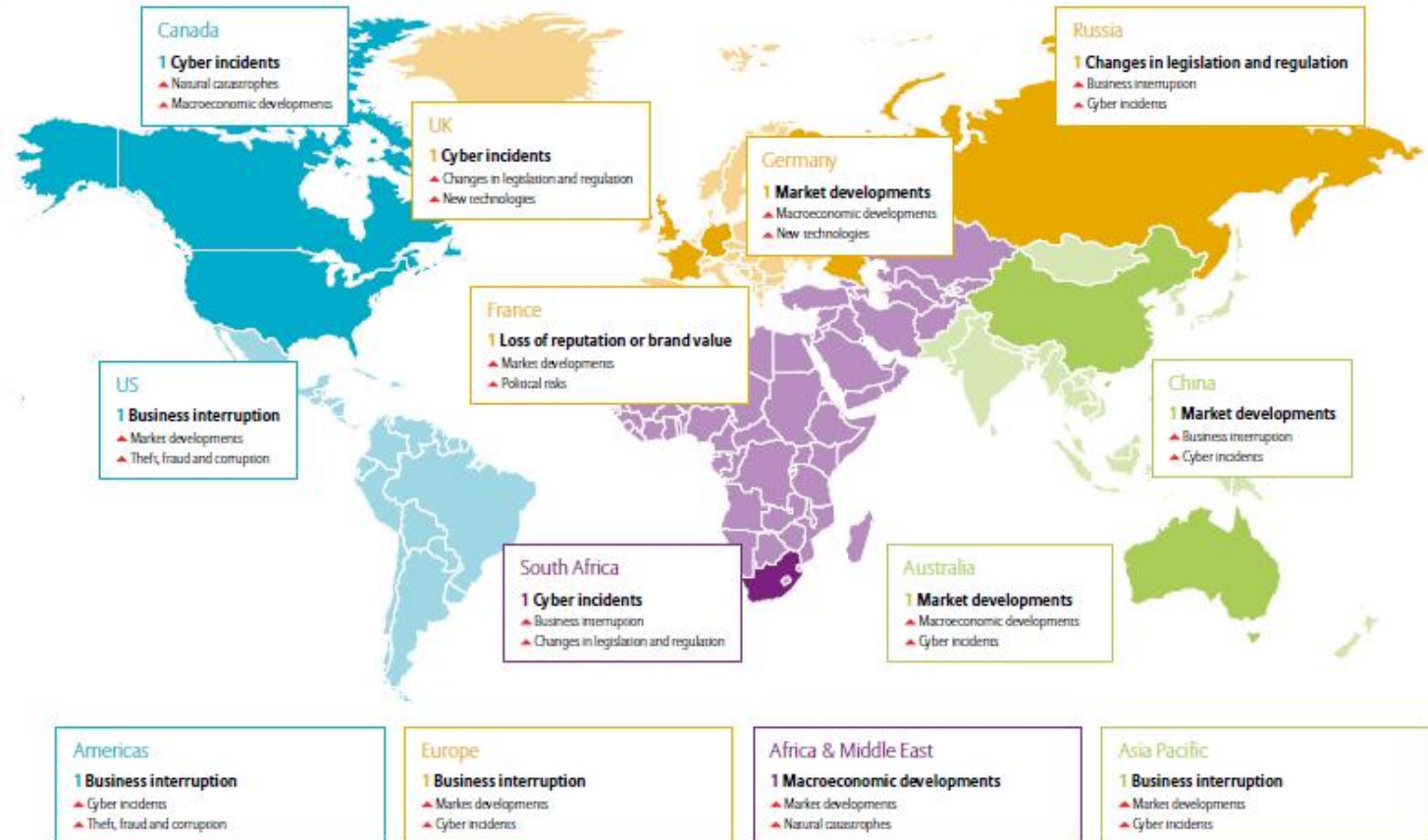
Allianz Risk Barometer Around the World

ALLIANZ RISK
BAROMETER:
BUSINESS RISKS
2016

Snapshot: Top Business Risks Around The World

[Click here to see the full list of top 10 business risks for each region and for 16 different countries](#)

[Click here to see the 2015 Snapshot: Top Business Risks Around The World](#)



This risk map shows the top risk for businesses per geographical region and in selected countries. It also shows some of the risks that are of increasing concern to businesses year-on-year.

Source: ALLIANZ RISK BAROMETER

Source: Allianz Global Corporate & Specialty

Top 10 business risks by region in 2016: Asia Pacific

Top 10 business risks

			2015 Rank	Trend
1	Business interruption (incl. supply chain disruption)	56%	1 (42%)	-
2	Market developments (volatility, intensified competition, market stagnation)	55%	NEW	▲
3	Natural catastrophes (storm, flood, earthquake)	36%	2 (34%)	▼
4	Macroeconomic developments (austerity programs, commodity price increase, inflation/deflation)	35%	NEW	▲
5	Cyber incidents (cyber crime, data breaches, IT failures)	32%	NEW	▲
6	Loss of reputation or brand value	26%	4 (23%)	▼
7	Changes in legislation and regulation (economic sanctions, protectionism)	25%	9 (10%)	▲
8	Fire, explosion	20%	3 (25%)	▼
9	Talent shortage, aging workforce	14%	8 (13%)	▼
10	Political risks (war, terrorism, upheaval)	12%	NEW	▲

Financial Services

			2015 Rank	Trend
1	Market developments (volatility, intensified competition, market stagnation)	44%	NEW	▲
2	Cyber incidents (cyber crime, data breaches, IT failures)	44%	2 (31%)	-
3	Changes in legislation and regulation (economic sanctions, protectionism)	37%	1 (33%)	▼
4	Macroeconomic developments (austerity programs, commodity price increase, inflation/deflation)	29%	NEW	▲
5	Loss of reputation or brand value	20%	NEW	▲

Source: ALLIANZ RISK BAROMETER

Allianz 

Aon Survey Global Risk Management Survey

Top Risks

1. Brand and damage and reputation.
2. Economic recovery
3. Regulatory change
4. International competition
5. Talent

Highlights

- Cyber security
- Interconnectivity between the risks

Risk in 60 Seconds with John Hulsman

Top Risks

1. Cyber risk management
2. InsureTech
3. Emerging risk 2016
4. Shifting demographic
5. The future of conduct risk
6. Telematics
7. Regulation
8. Disruption to insurer
9. Embedding risk management
10. The future of operational risk
11. Longevity risk
12. The CRO's role
13. The future of risk modelling
14. Big data
15. Hiring risk manager of the future
16. ORSA
17. ERM of the future
18. Macro issues for CRO
19. ALM of the future
20. AI and learning machine

Source: RiskMinds Insurance 2016

Challenge # 1

Dynamic risks

Keeping up with the dynamic changing risk landscape and new emerging risks.



Challenge # 2

Tone at the top

World's top corporate scandal happened from top executives.

Tone at the top is critical to embedding risk culture.



Challenge # 3

Who own the risk?

Risk Manager

VS

Line Manager



Challenge # 4

Simplify complexity

1. Make risk management simple.
2. Explain complex terminology.
3. Create tool for risk owner.
4. Risk as part of business as usual.



The ABC of RBC

Assets		Liability + Shareholder's Equity	
Assets		Short Term Liability	
House	5,000,000	Credit Card	10,000
Car	1,000,000	Long Term Liability	
TV	20,000	Home & Car Loan 4m	
Stock	500,000	Shareholder's Equity	
Receivable	50,000	Net Wealth 2,560,000	
Total	6,570,000	Total	6,570,000

If we liquidate
ourselves today

Our heir
would inherit

A net wealth of
2,560,000

The ABC of RBC

Assets		Liability + Shareholder's Equity	
<i>Assets</i>		<i>Short Term Liability</i>	
House	5,000,000	Credit Card	10,000
		<i>Long Term Liability</i>	
Car	1,000,000	Home & Car Loan 4m	
TV	20,000		
		<i>Shareholder's Equity</i>	
Stock	500,000	Net Wealth 2,560,000	
Receivable	50,000		
Total	6,570,000	Total	6,570,000

Fair Value

Asset

House value accurate?
Car value accurate?
Stock value accurate?

Liability

Value accurate?
Include interest?

Risk Charge Asset & Liability

Market Risk
Credit Risk

The ABC of RBC

Assets			Liability + Shareholder's Equity		
Assets		5,550,000	Short Term Liability		
House	5,000,000	4,000,000	Credit Card	10,000	12,000
Car	1,000,000	800,000	Long Term Liability		
TV	20,000	10,000	Home & Car Loan	4,000,000	4,100,000
Stock	500,000	700,000	Shareholder's Equity		-102,000
Receivable	50,000	40,000	Net Wealth		1,438,000
		-1,020,000			2,560,000
					-1,020,000
Total	6,570,000		Total	6,570,000	

Fair Value: PAD @ 75%

TCA = 1,438,000

The ABC of RBC

Assets			Liability + Shareholder's Equity	
Assets			Short Term Liability	
	5,550,000		Credit Card	12,000
House	5,000,000	4,000,000	Long Term Liability	
Car	1,000,000	800,000	Home & Car Loan	4,100,000 10%
TV	20,000	10,000	Shareholder's Equity	102,000
Stock	500,000	700,000	Net Wealth	1,438,000 410,000
Receivable	50,000	40,000		1,020,000
		231,000		
		1,020,000		
Total	6,570,000		Total	6,570,000

Risk Charge: PAD @ 95%

TCR = 641,000

Capital Adequacy Ratio (CAR)

=

Total Capital Available

TCA = 1,438,000

PAD @ 75%

+

Total Capital Required

TCR = 641,000

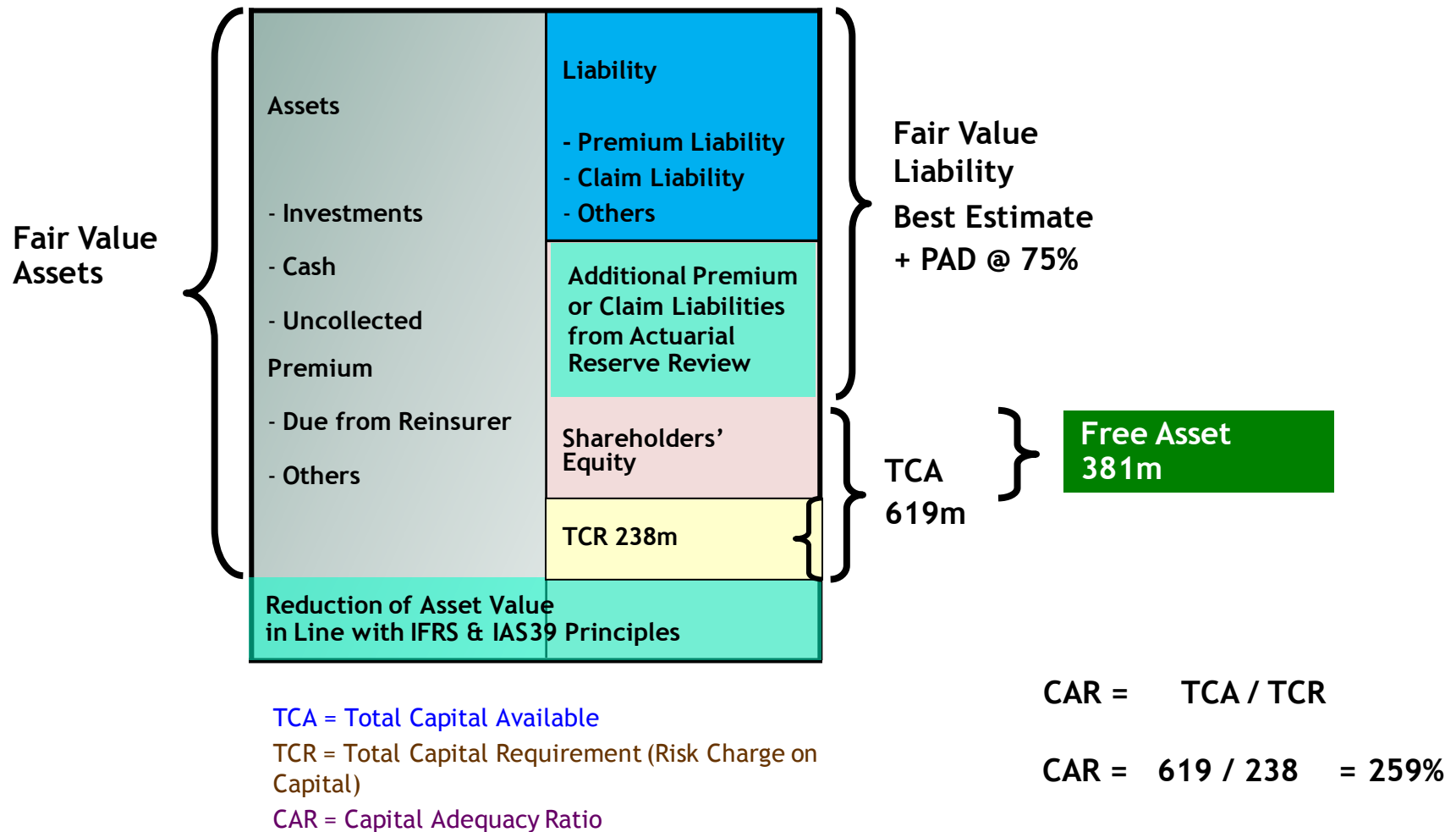
PAD @ 95%

1,438,000/641,000

=

224%

Capital Adequacy Ratio Concept



Challenge # 5

ERM in practice

1. Risk culture & education.
2. Risk appetite statement.
3. Risk register & dashboard
4. KRI vs KPI vs KCI.
5. Management report.
6. IT & MIS support
7. Incident report.
8. Internal control.
9. Internal audit.
10. Compliance.



Enterprise Risk Management

1. Corporate governance & policies.
2. Strategy and risk appetite statement.
3. Organisation design (check & balance).
4. Internal control program.
5. Internal audit.
6. Risk management infrastructure.

Key Control Activities

1. Product development
2. Premium rating
3. Underwriting
4. Claim
5. Reinsurance
6. Investment

ERM Committee

1. Member & composition
2. Term of reference
3. Agenda
 - Board of director's feedback.
 - Audit, compliance, incident report.
 - Risk management activity plan.
 - Regulatory update.
 - Risk discussion (current & emerging).

Challenge # 6

Regulatory compliance

1. Global trend IAIS / ICP.
2. Keeping up with regulatory requirement.



Challenge # 7

The right CRO

1. Experience
2. Critical thinking skills
3. Interpersonal skills
4. Keen business acumen
5. Strong process orientation
6. Cool under fire

How many in the market?

Can we afford?

Independent vs dual roles!





Thank You