

Risk Management of Life Insurance Companies

For Uzbekistan-OLIS Life Insurance Seminar

24 April, Tashkent

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What risks are insurers exposed to?
Some lessons learnt from the crisis

2

Supervision and risk management:
Comparison with banks/securities

3

Risk management and
supervisory tools

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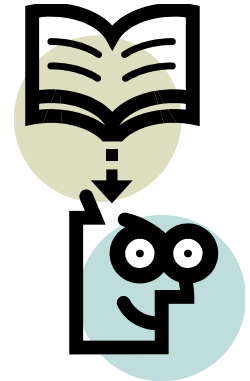
An overview of Risk Management
in Nippon Life Group

- Market risks
- Credit risks
- Underwriting risks
- Liquidity risks
- Operational risks



- Definition of solvency

Ability of an insurer to meet its obligations under all contracts at any time



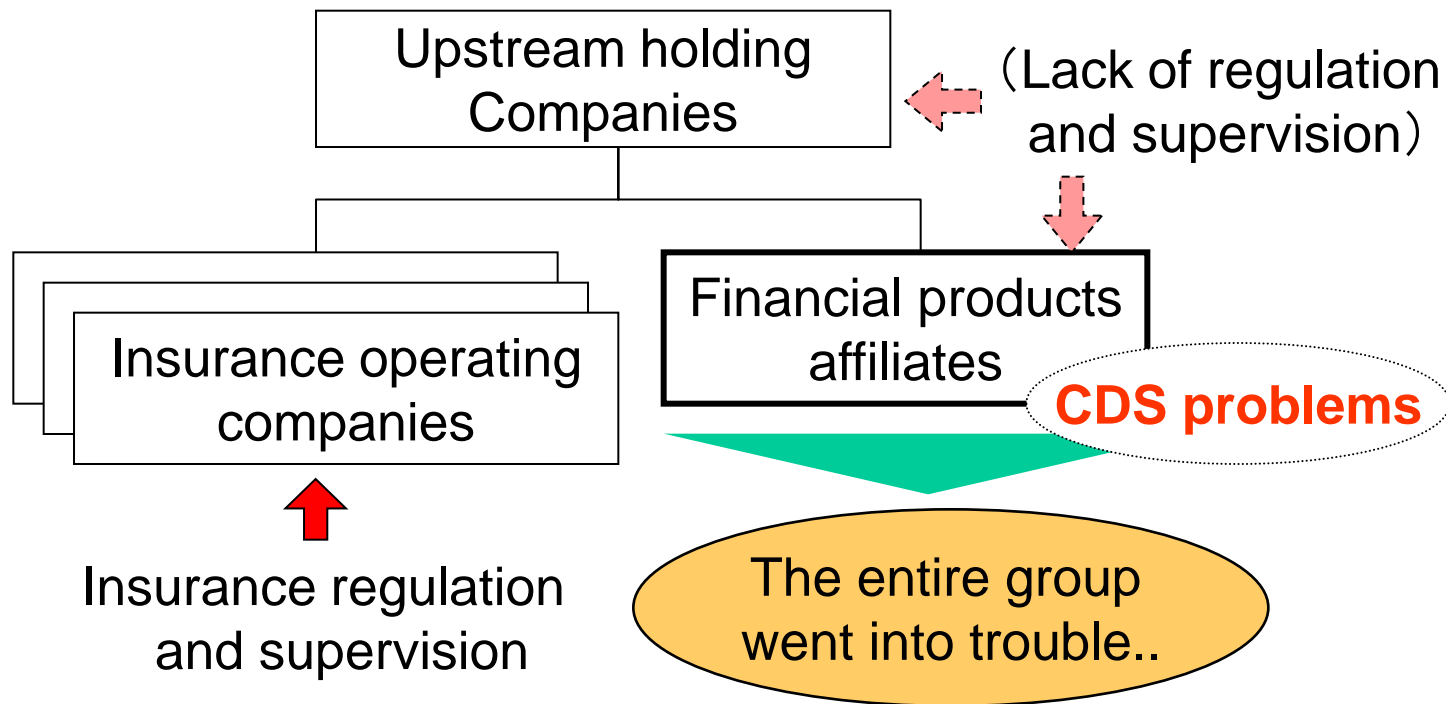
- To remain solvent an insurer must:
 - Manage its risks
 - Ensure asset cash flows are available to meet liabilities when payable
 - Maintain a safety margin of assets over liabilities

- The financial crisis has shown the need to strengthen risk management and governance.
 - Credit default swaps (CDS), CDOs, structured products, intra-group transactions, etc.
 - Use of credit ratings
 - Liquidity risks
 - Systemic risks



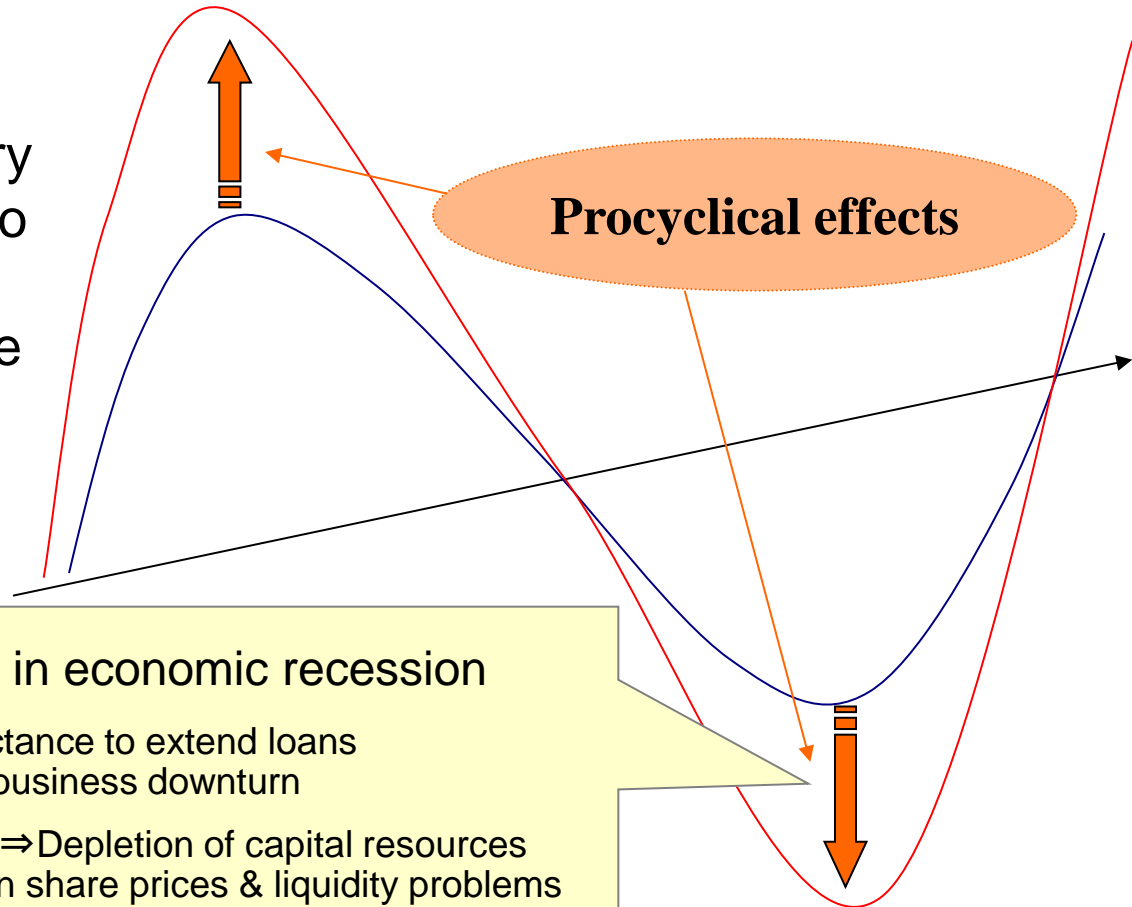
Lessons learnt : need for global supervision

- The crisis has confirmed the need to regulate and supervise the whole financial sector.
 - Holding companies
 - Non-regulated entities, SPVs, etc.



- The crisis has highlighted the need to address the issue of procyclicality.

- What is procyclicality?:
an effect that supervisory intervention or marked to market accounting amplify the volatility of the financial cycle



■ Examples of procyclicality in economic recession

- Asset Deterioration ⇒ Reluctance to extend loans
⇒ Credit crunch ⇒ Further business downturn
- Downturn in share markets ⇒ Depletion of capital resources
⇒ Sales of shares ⇒ Drop in share prices & liquidity problems
- Recognition of unrealised losses in net income or impairment
⇒ Sales of assets ⇒ Drop in asset prices & liquidity problems



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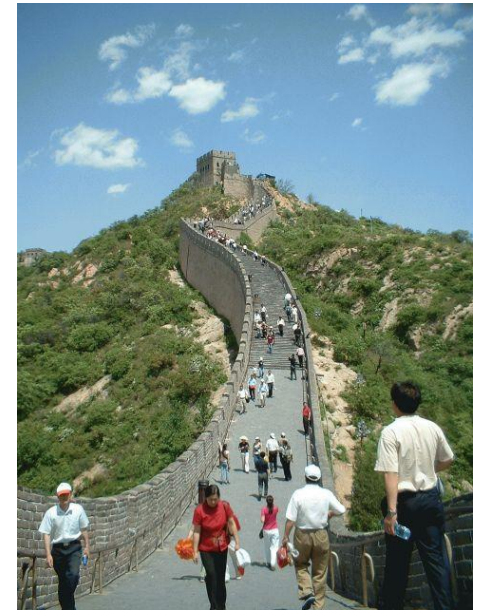
General characteristics of banking supervision and risk management

- Emphasis on systemic stability
- Main risk – credit risk
- Importance of asset valuation
 - Loan valuation and provisioning
- Time scale for risk management
 - Shorter than for insurance
- Uniform risk-based capital
 - Basel II
- Consolidated supervision



General characteristics of insurance supervision and risk management

- Main risk – liabilities risk
- Importance of liabilities valuation
- Time scale of risk management
 - Long term
(cf. life insurance)
- Ring-fence supervisory approach



General characteristics of securities supervision and risk management

- Enforcement power and market surveillance
 - More than institutional supervision
- Main risk – funding liquidity risk and market risk
- Time scale of risk management
 - Short term
- Importance of disclosure



■ Different business models

- Long term nature of insurance business
- Disincentives to surrender insurance

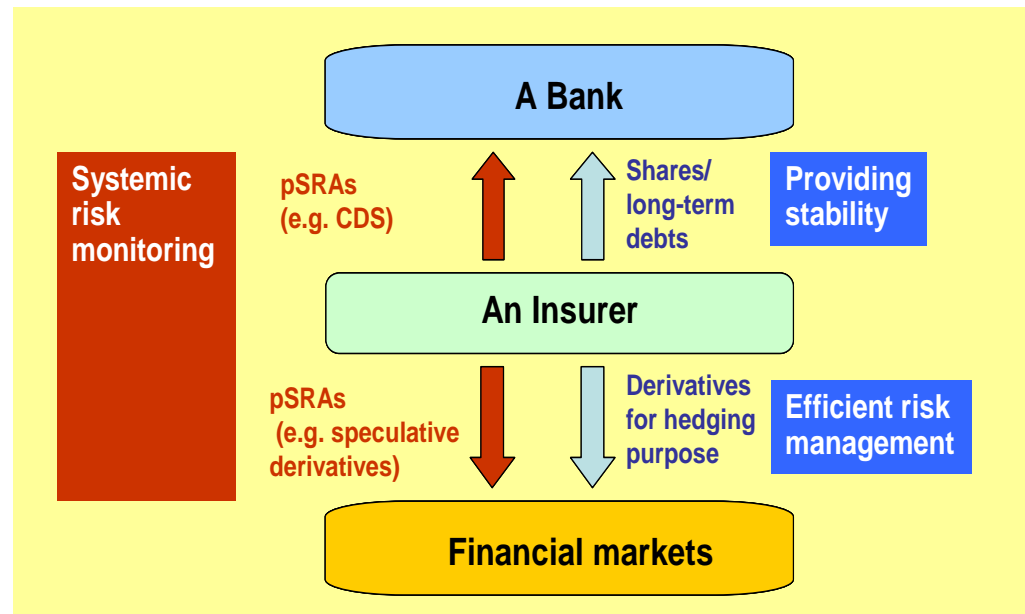
■ Different regulatory models

- Relative importance of risk management for insurers, and that of capital requirements for banks



■ Systemic risks

- Macro-prudential Framework should be designed in a way that insurers are given incentives to stabilize and disincentives to destabilize the system or the markets



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RISK MANAGEMENT AND SUPERVISORY TOOLS

MITIGATION TECHNIQUES

- Policies and guidelines
- Transparency and market discipline

REGULATORY CONTROLS

- Regulations
- Supervisory review
- On-site inspection
- Supervisory actions

CAPITAL REQUIREMENT

- Minimum capital requirement
- Early warning system

Market risks: The risk to an insurer's financial condition arising from adverse movements in the level or volatility of market prices

Market risks include:

- Interest rate risk
- Equity and real estate risks
- Currency risk



(Source: IAIS)

Market Risks (the risks of market value fluctuations)

Mitigation Techniques

- Asset – Liability matching
- Monitoring of market risk trends and net market exposures
- Immunization strategies

Regulatory Controls

- Investment regulations (market-sensitive assets)

Capital Requirement

- Volume by Asset type & risk classification
- Financial impact of the market value reduction

Credit risks: The risks of financial loss resulting from default or movement in the credit quality of issuers of securities, debtors, or counterparties and intermediaries, to whom the company has an exposure

Credit risks include:

- Default risk
- Downgrade risk
- Indirect credit or spread risk
- Concentration risk and correlation risk



(Source: IAIS)

Credit Risks

(the risks of counterparties becoming unable to meet commitments)

Mitigation Techniques

- Diversification
- Investment policy to limit credit risk exposures
- Credit scoring
- Monitoring and evaluation of creditors and credit risks

Regulatory Controls

- Investment regulations (credit limit / diversification)
- Supervision, analysis and on-site inspection

Capital Requirement

- Volume by Asset type & credit risk class
- Formula recognizing the expected value of losses

Underwriting risks: The various kinds of risk that are directly or indirectly associated with the technical or actuarial bases of calculation for premiums and technical provisions, as well as excessive growth.

Underwriting risks include:

- Claims risk
- Pricing risk
- Reserving risk
- Catastrophe risk
- Reinsurance risk



(Source: IAIS)

Claims Risk

(the risk of future claims in excess of the expected level)

Mitigation Techniques

- Skills and sound practice
- Reinsurance
- Diversification of insured
- Pooling with other insurers
- Financial modeling

Regulatory Controls

- Regulations on contracts
- Exclusionary clauses
- Reinsurance regulations
- Valuation of liabilities

Capital Requirement

- Unexpected claims cost
- Prudent case scenarios

Pricing Risk

(the risk of inadequate pricing due to errors in judgment)

Mitigation Techniques

- Sound product pricing and product design

Regulatory Controls

- Valuation of liabilities that recognizes premium deficiencies
- Pricing regulations to impose appropriate pricing

Capital Requirement

- Pricing risk should be covered by the value of liabilities.
- Not rely on capital for shortfalls

Catastrophe Risk

(the risk that rare events result in a abnormal level of claims)

Mitigation Techniques

- Reinsurance to cover the risk in excess of preset loss
- Securitization
- Geographic diversification
- Financial modeling

Regulatory Controls

- Regulations and funding mechanism
- Special pool for cat risks
- Requirement of provisions and reinsurance

Capital Requirement

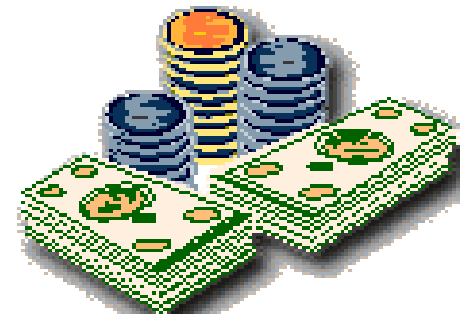
- Catastrophe risk factors
- Not merely rely on capital

Liquidity risks: The risks that an insurer, though solvent, has insufficient liquid assets to meet its obligations when they fall due

- Liquidity profile of an insurer is a function of both its assets and liabilities

Liquidity risks include:

- Matching risk
- Liquidation value risk
- Affiliated investment risk
- Capital funding risk



(Source: IAIS)

Liquidity Risks

(the risk that cash payment demand exceed cash resource)

Mitigation Techniques

- Investment policy with action target for liquidity
- Monitoring and managing claims in relation to the cash
- Contingency plans

Regulatory Controls

- Investment regulations
- Regulations and supervision over contract term and policy wording

Capital Requirement

- Capital is not an effective technique for this risk

Operational risks: The risks arising from failure of systems, internal procedures and controls leading to financial loss

- *direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events*

Operational risks include:

- Custody risk
- Technology risk
- Management risk
- Business disruption risk
- Fraud



(Source: IAIS)

Operational Risks

(the risk arising from failure of systems, people, management, and from external events)

Mitigation Techniques

- Corporate governance and policies; investments, claims, contingencies, technology, marketing, underwriting, disclosure, complaints, back-up facilities, code of conduct
- Sound internal control
- Business recovery strategy
- Sound internal standards for training and I.T.

Regulatory Controls

- Supervisory process and on-site inspection

Capital Requirement

- Size and nature of risk

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Risk Management Framework

- Risk Management Committee, a consultative body to Managing Directors' Meeting, is responsible for Risk management of each risk category.
- Reporting system is structured between Management and underlying committees, related departments and offices.

Board of Directors

Managing Directors' Meetings

Risk Management Committee

Investment Risk Management Subcommittee

Administration Risk Management Subcommittee

Computer System Risk Management Subcommittee

Insurance underwriting risk

Liquidity risk

Investment risk

- Market risk
- Real estate risk
- Credit Risk

Administration risk

Computer system risk

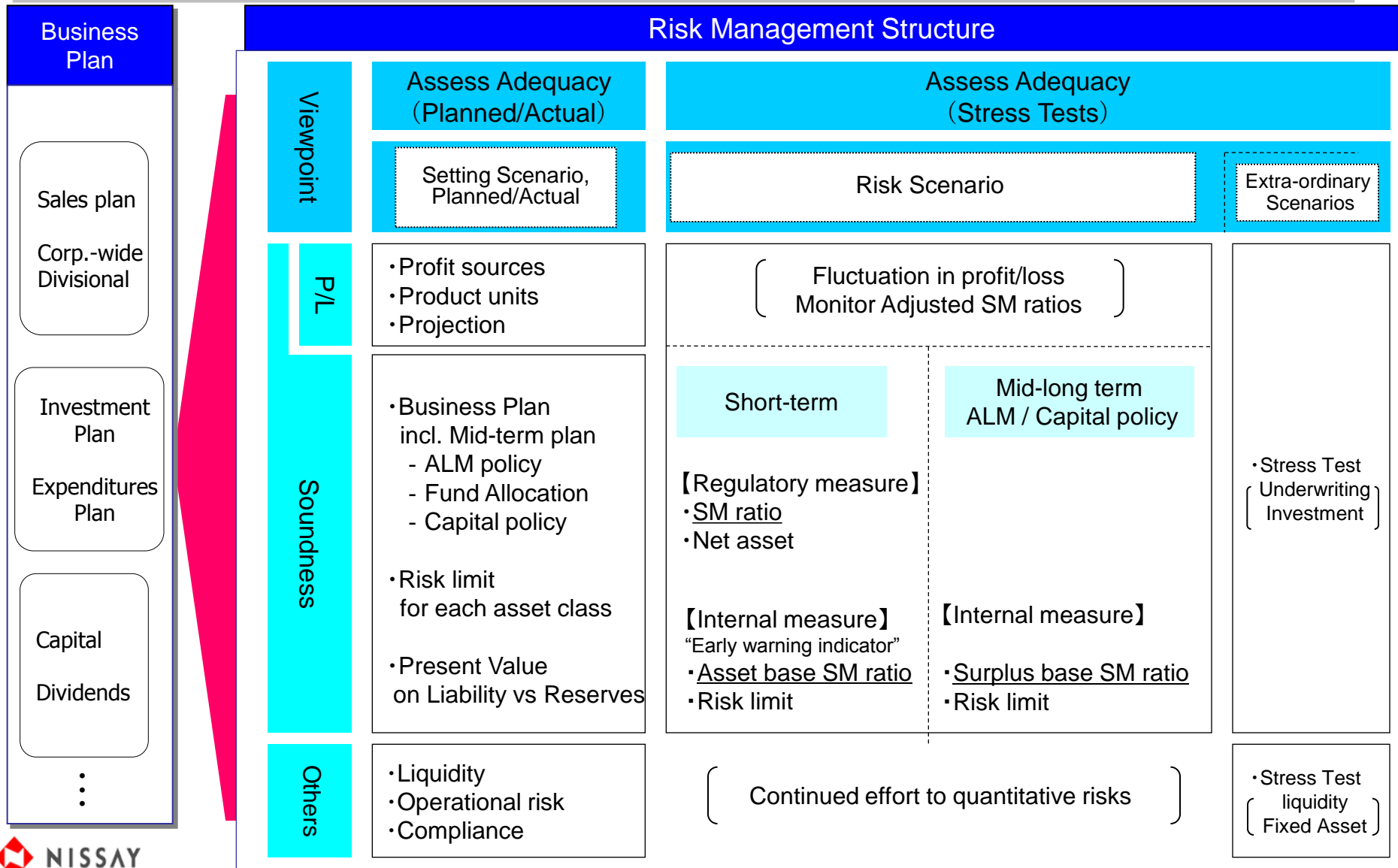
Enterprise Risk Management

- Risks are identified and classified.
- Each risk management section measure, monitor and manage each risk exposure classified below.
- We take an integrated risk management approach to the risks enterprise-wide.

Risk classification		Definitions	
Enterprise Risk Management	Insurance risk	➤ The probability of losses when factors such as economic conditions, frequency of occurrence of insured events, asset management results, and operational expenses, do not match the predictions made when premiums were set.	
	Investment risk	Market risk	➤ The risk of losses incurred when the market value of assets in investment declines due to such factors as fluctuations in interest rates, stock prices, or exchange rates.
		Credit risk	➤ The risk of incurring losses when the value of assets, primarily loans and bonds, declines or disappears due to deterioration of the financial condition of the party to whom credit has been extended.
		Real estate Investment Risk	➤ The risk of reduced returns caused by such factors as rent fluctuation as well as losses when real estate values decline due to market deterioration.
	Liquidity risk	➤ The risk that an unexpected funds outflow due to decreased premium reserve, large amount or number of cancellations, large-scale disaster, or market disturbance, could cause cash flow to deteriorate to the extent that we would be forced to dispose of assets at extremely low prices.	
	Administration risk	➤ The risk of incurring losses from administrative and processing errors.	
	Computer system risk	➤ The risk of losses from computer system failure, incorrect or defective operation, and illicit use.	

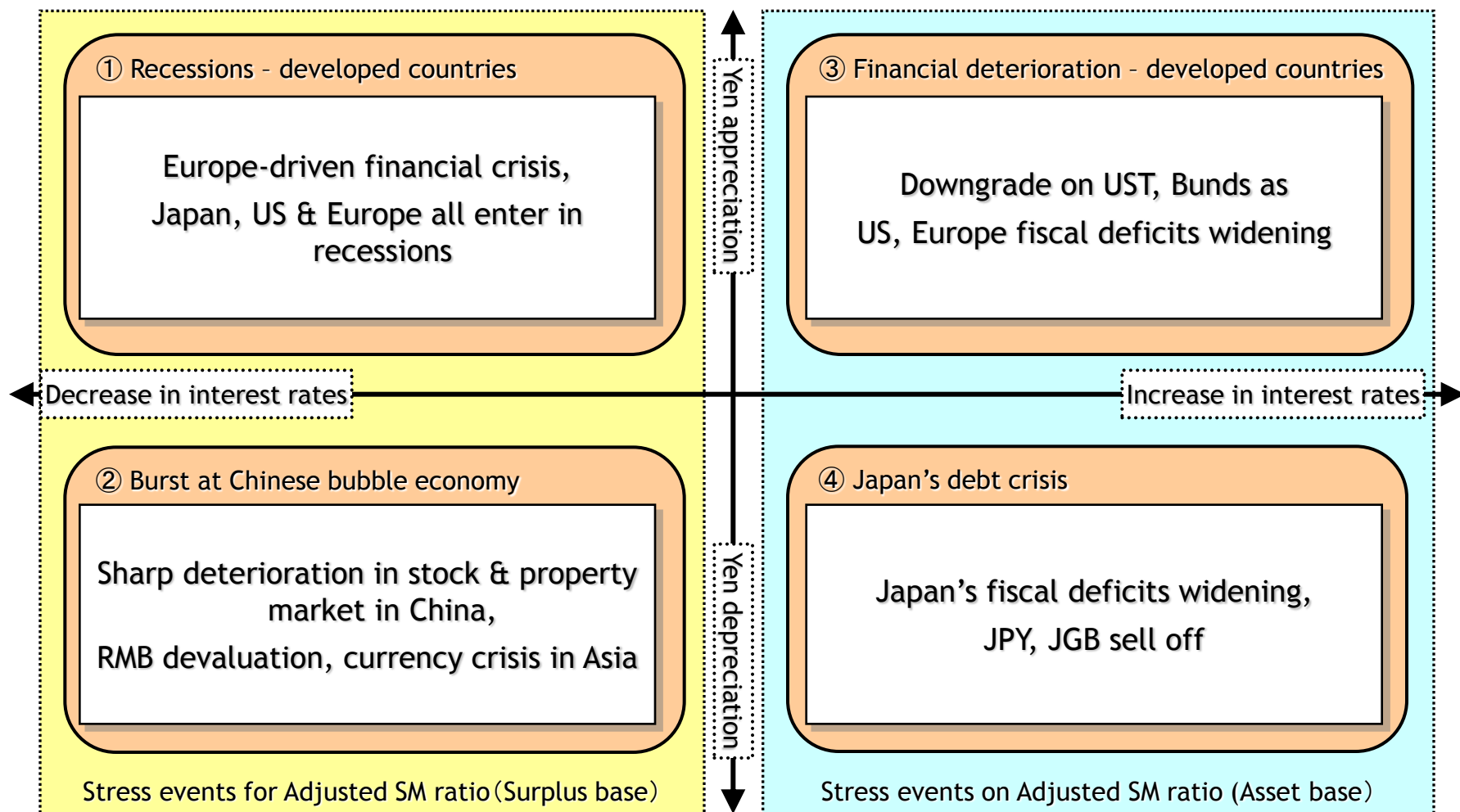
Enterprise Risk Management Structure

■ We review, monitor and assess our business plan's adequacy by checking its result vs. projection, Solvency Margin (SM) ratios with stress tests and the extra-ordinary scenarios.



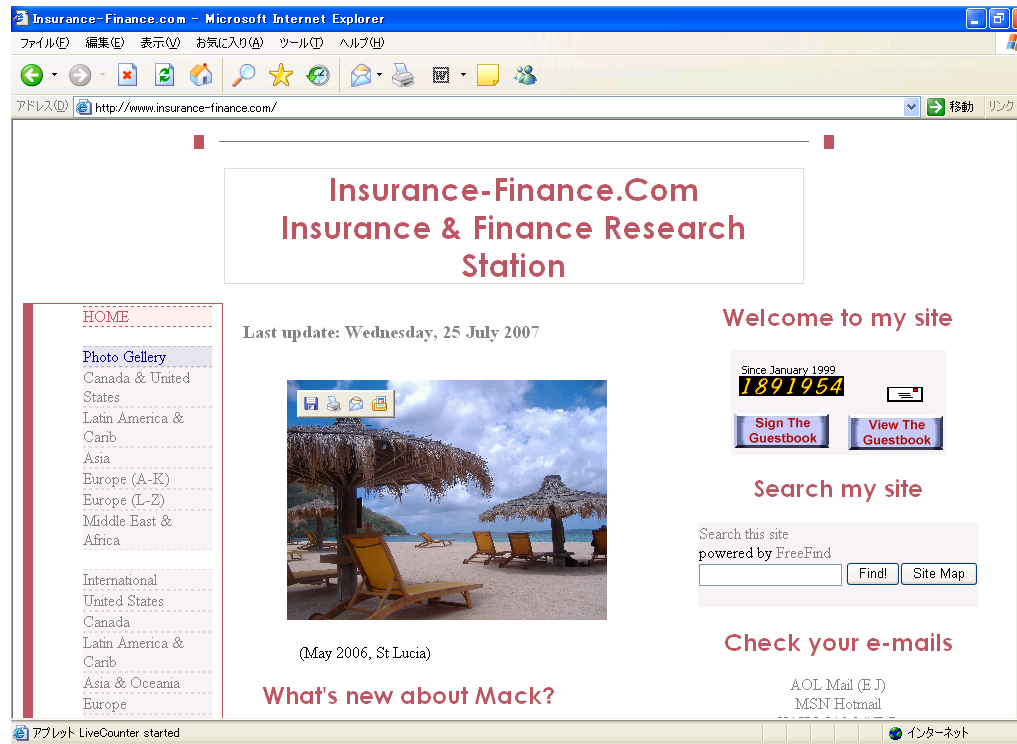
Stress Test – Risk Scenarios

- Although they are unlikely events occur within a year, below are the events which impact our portfolio with interest rates/currency fluctuation. Stock market slumps in all scenarios.



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