



Insurance Market and Actuarial Profession in Japan

Presentation at
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November 16, 2004



Part 1:

The Non-Life Insurance Market in Japan



Part1

Non-Life Insurance Market in Japan

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1. Statistical Overview of the Non-Life Insurance Market in Japan



Key Statistics

- Numbers of the Non-Life Insurance Companies and Agents
- Gross Written Direct Premiums and Net Written Premiums by Line of Business
- Loss Ratio, Expense Ratio and Combined Ratio
- Business results : Ordinary P&L and After-tax P&L

Numbers of Non-Life Insurance Companies and Agents (as of March 31, 2004)

- # of the licensed non-life insurance companies

| | | |
|-------------------|---|----|
| Total | : | 54 |
| Domestic insurers | : | 29 |
| Foreign insurers | : | 25 |

(Note)

- Domestic insurer: Licensed as domestic insurer, including foreign insurers' subsidiaries incorporated in Japan
- Foreign insurer: Licensed for a branch operation or through general agent

- # of companies' employees (incl. directors)
: 85,655
- # of agents : 305,836
- # of sales staff of agents
: 1,716,006

Numbers of the Non-Life Insurance Companies and Agents (cont'd)

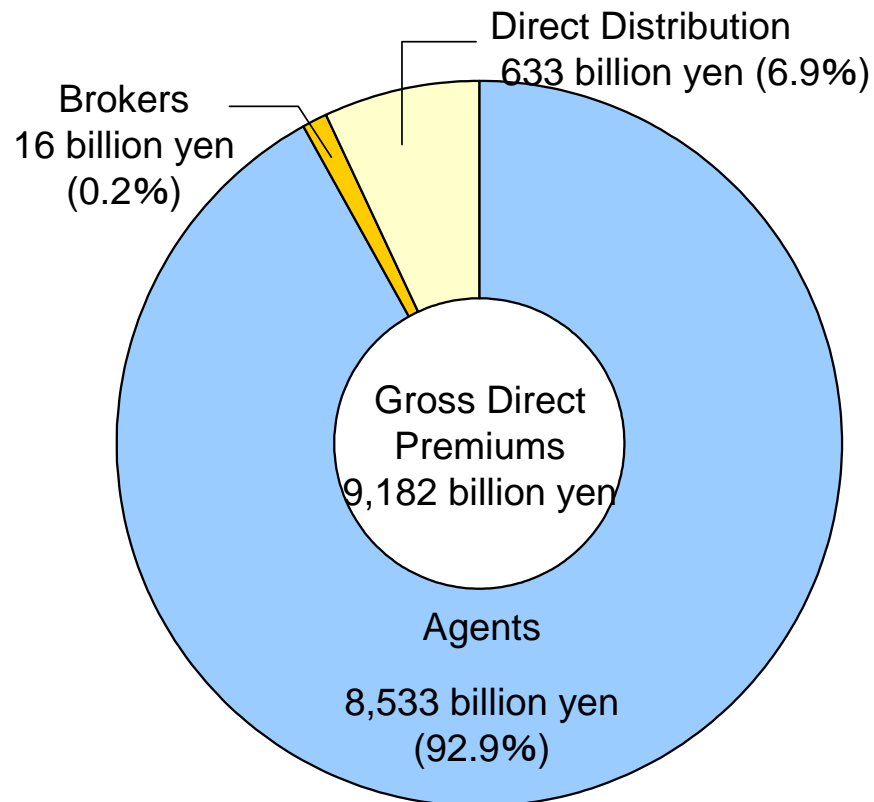
<Chart 1> Number of Non-life Insurance Companies, Agents and Brokers

| Fiscal Year | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Domestic Companies | 26 | 33 | 33 | 35 | 36 | 36 | 33 | 30 | 29 |
| Foreign Companies | 30 | 31 | 29 | 27 | 27 | 26 | 26 | 24 | 25 |
| Total | 56 | 64 | 62 | 62 | 63 | 62 | 59 | 54 | 54 |
| Agents | 476,217 | 623,741 | 592,126 | 593,872 | 570,919 | 509,619 | 342,191 | 323,139 | 305,836 |
| Full-time (share) | 96,931 20.4 | 90,567 14.5 | 85,544 14.4 | 79,126 13.3 | 73,353 12.8 | 60,264 11.8 | 58,557 17.1 | 55,438 17.2 | 51,283 16.8 |
| Part-time (share) | 379,286 79.6 | 533,174 85.5 | 506,582 85.6 | 514,746 86.7 | 497,566 87.2 | 449,355 88.2 | 283,634 82.9 | 267,701 82.8 | 254,553 83.2 |
| Number of sales staff in Agents | 1,086,264 | 1,181,865 | 1,170,497 | 1,180,784 | 1,154,511 | 1,145,252 | 1,575,195 | 1,642,271 | 1,716,006 |
| Brokers | - | 15 | 45 | 54 | 55 | 54 | 53 | 50 | 50 |

note : The above figures stand for the total of domestic and foreign insurance companies.

Gross Direct Premiums by Distribution Channel (Fiscal Year ending in March 2004)

<Chart 2> Percentage of Gross Direct Premiums collected by Distribution Channel
(for Domestic and Foreign non-life Insurance Companies combined)



(Note)
"Direct Distribution"
includes sales through
employed sales staff.



Lines of Business of Non-Life Insurance in Japan

- Fire
- (Voluntary) Automobile
- Personal Accident
 - : Accident, Medical Treatment, Cancer etc.
- Miscellaneous Casualty
 - : Liability, Workers' Compensation etc.
- Marine & Inland Transit
 - : Hull, Cargo & Inland Transit
- CALI (Compulsory Automobile Liability Insurance)

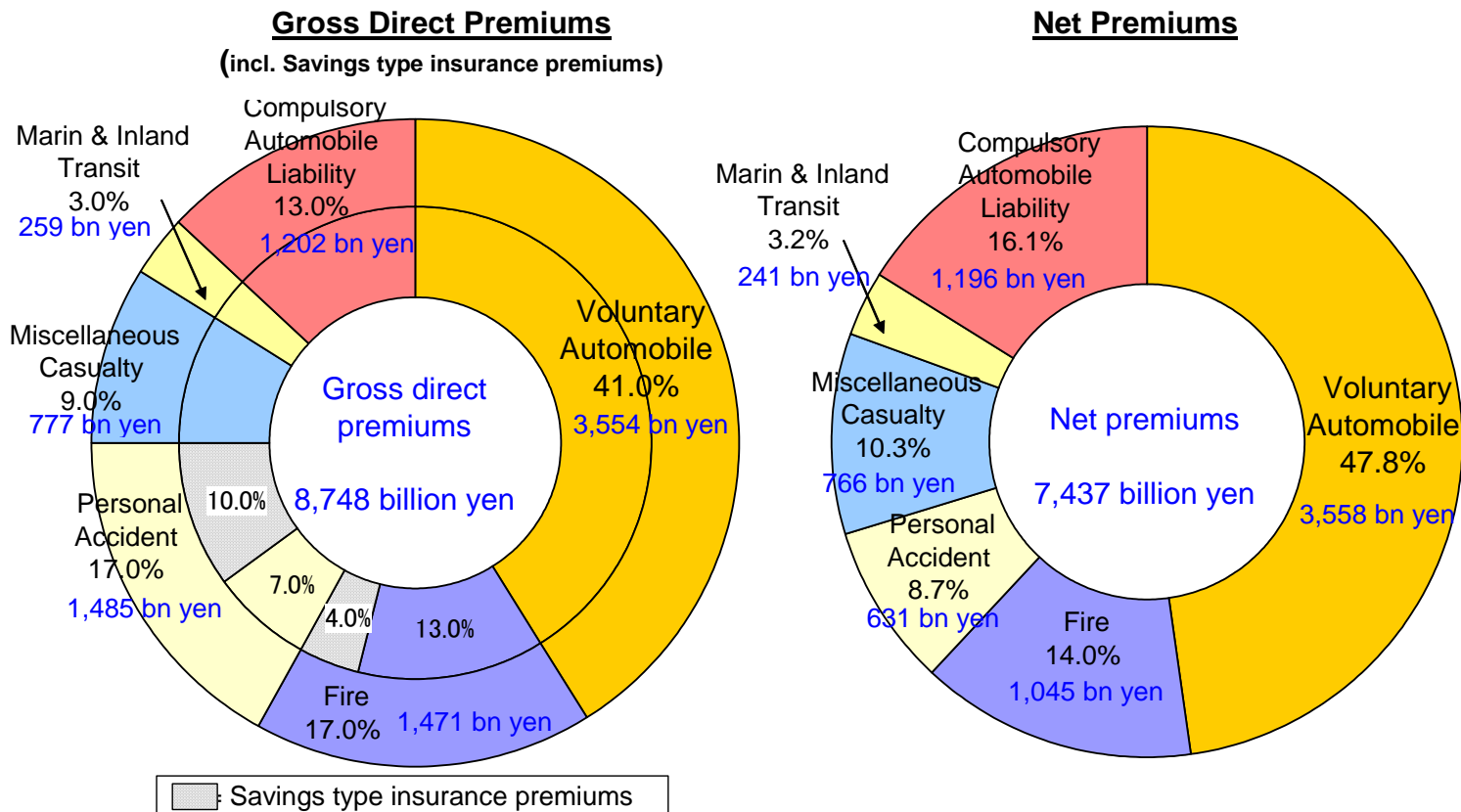


Line of Business of Non-Life Insurance in Japan (cont'd)

- **Third-Sector : Medical, Cancer, Nursing Care etc.**
 - Not necessarily classified to life or non-life
 - Benefits : Disease, Accident, Nursing Care
 - In 2001, both life and non-life insurance companies were allowed to start selling all kind of third-sector insurance products.
- **Saving Type (Maturity-Refund-type) Insurance**
 - This type of policies have been in the market since early 1960s
 - These policies are unique (mostly) to the Japanese market
 - Having combined function of both indemnity and savings
 - At the maturity of the policy term, policyholders receive guaranteed amount of refund

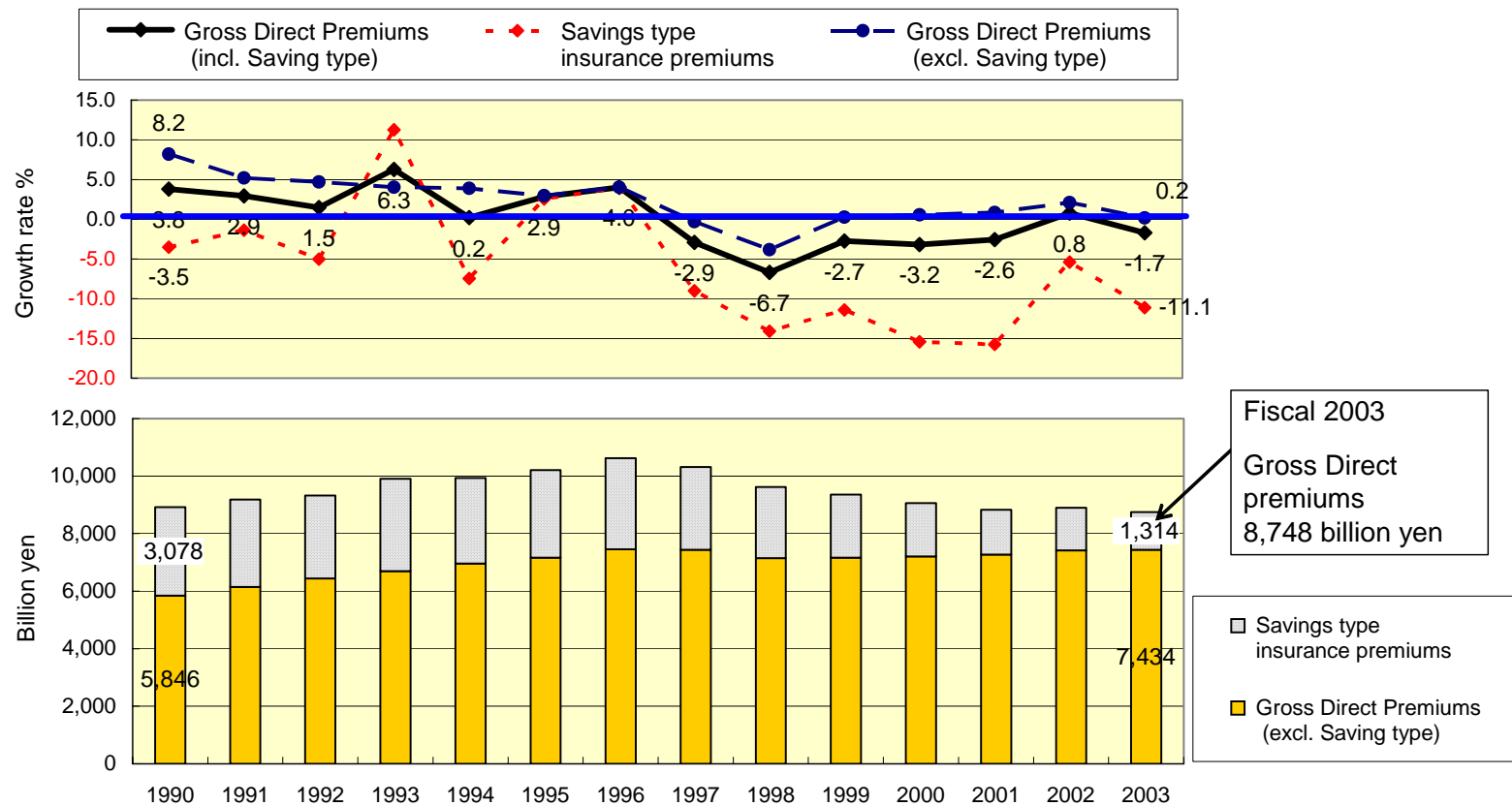
Premiums by Line of Business (Fiscal Year ending in March 2004)

<Chart 3> Premiums by Lines in Japan (Fiscal 2003)--- Domestic Companies only



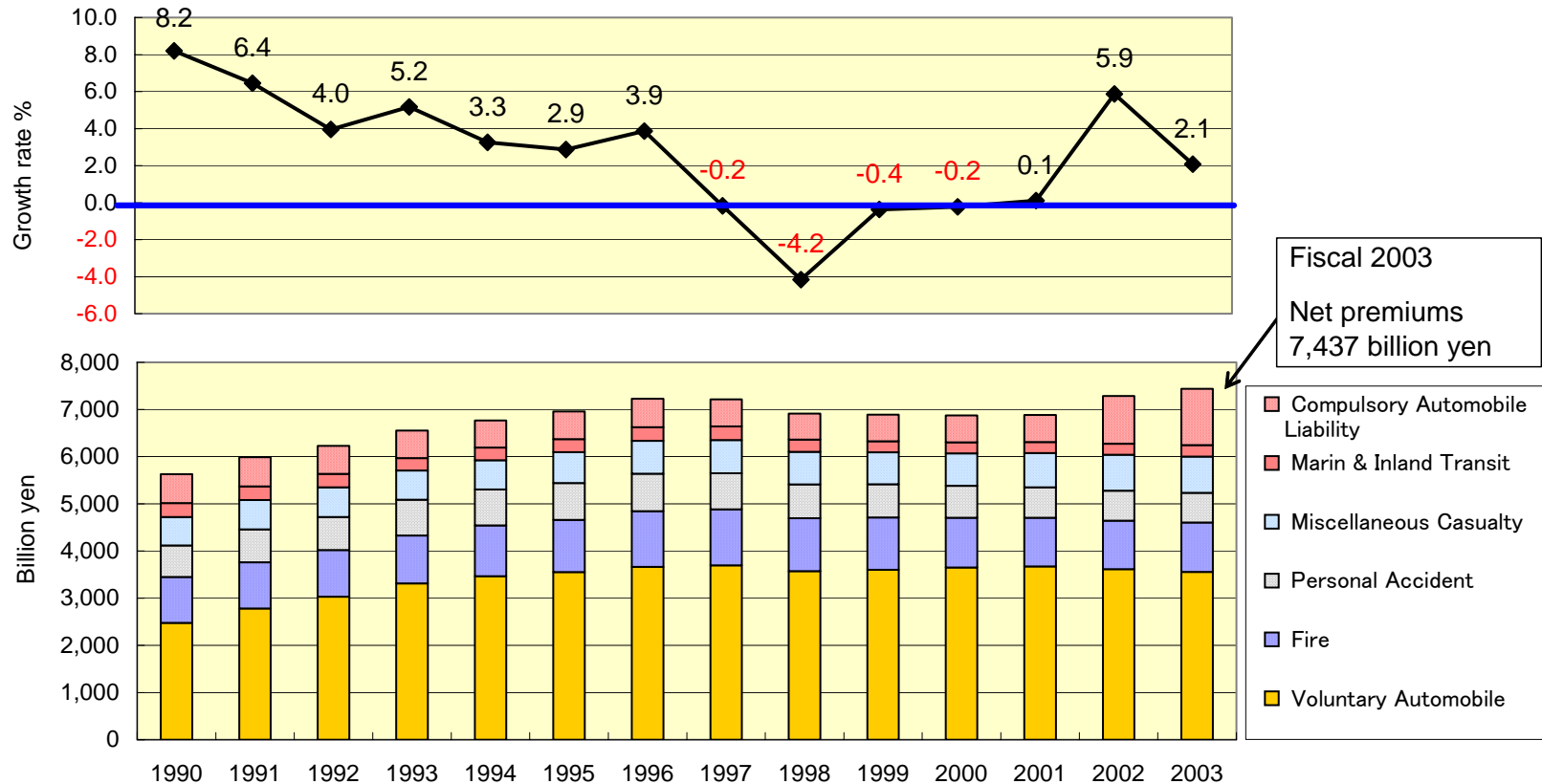
Gross Direct Premiums (Fiscal 1990 – 2003)

<Chart 4> Gross Direct Premiums (Fiscal 1990 – 2003)---Domestic Companies only



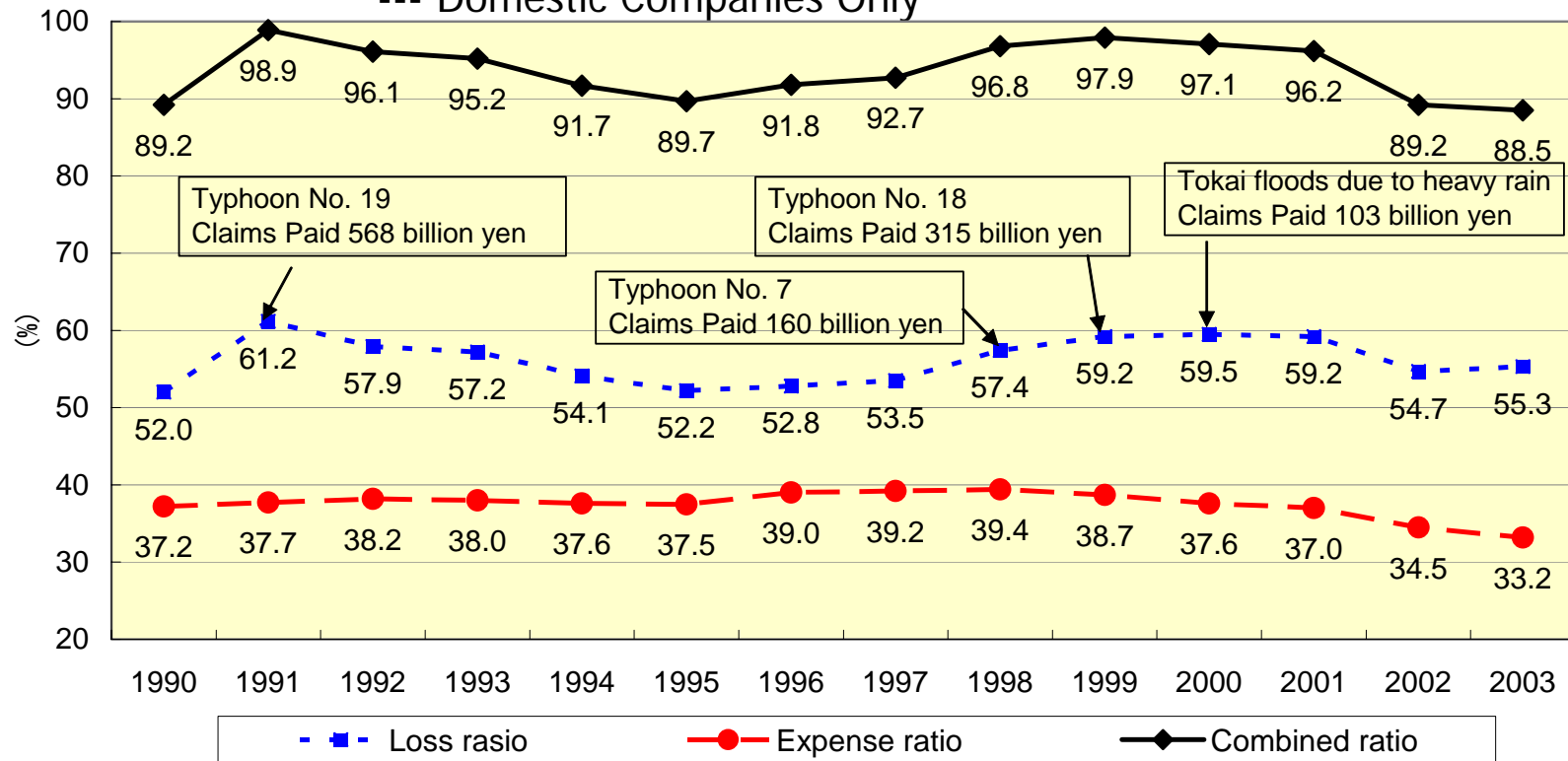
Net Premiums (Fiscal 1990 – 2003)

<Chart 5> Net Premiums (Fiscal 1990 – 2003) --- Domestic Companies only



Loss Ratio, Expense Ratio and Combined Ratio (Fiscal 1990 – 2003)

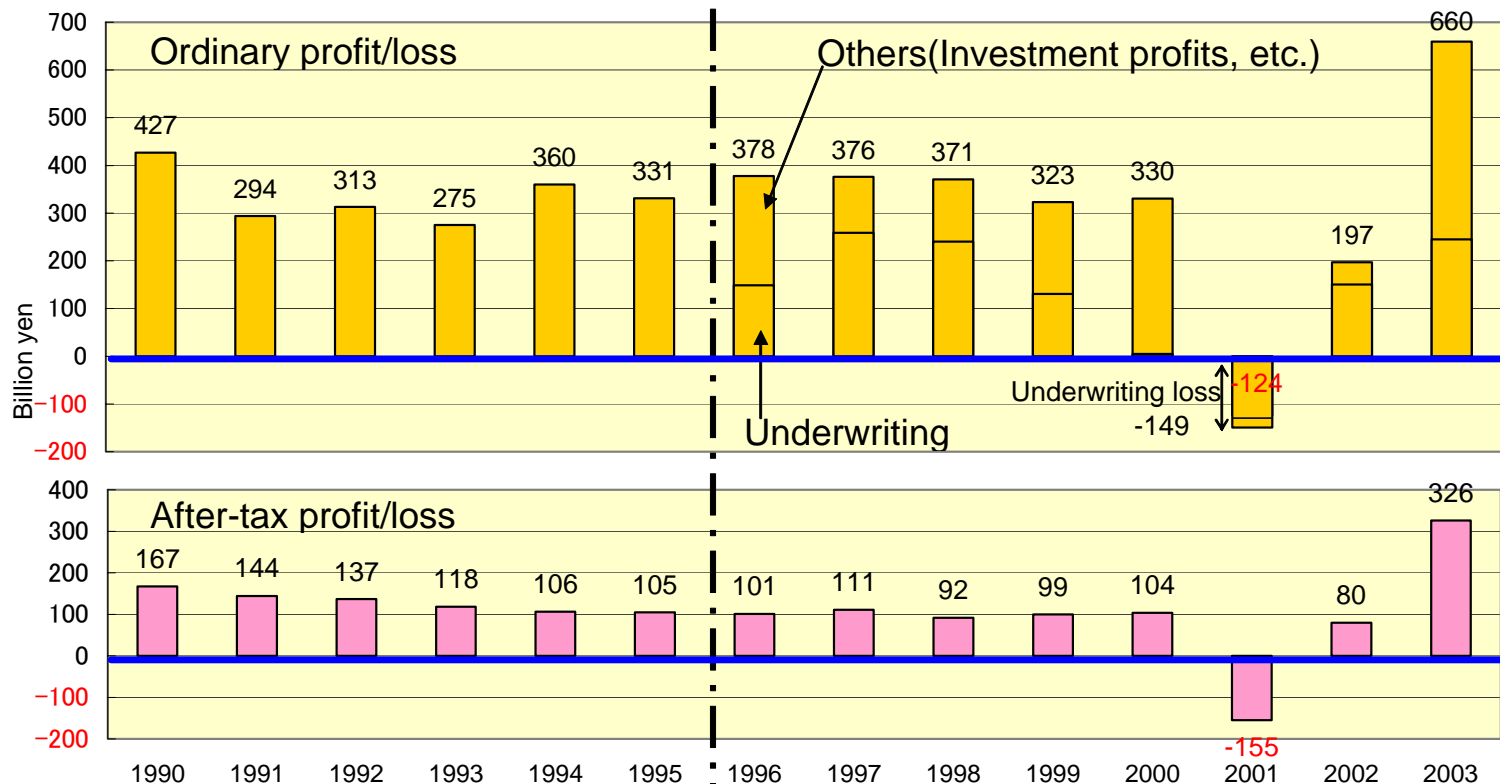
<Chart 6> Loss Ratio, Expense Ratio and Combined Ratio (Fiscal 1990 – 2003)
--- Domestic Companies Only



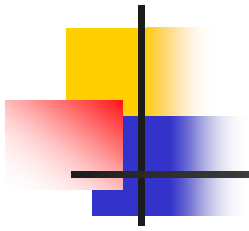
(Note) Loss Ratio : The ratio of claims paid plus loss adjustment expenses to net premiums written
Expense Ratio : The ratio of agent commissions and brokerage plus operating and general administrative expenses on underwriting to net premiums written

Business Results (Fiscal 1990 – 2003)

<Chart 7> Business Results : Ordinary P&L and After-tax P&L (Fiscal 1990 – 2003)
 --- Domestic Companies Only



note: Method of calculation of ordinary profits was revised in line with the revision of Enforcement Regulation of the new Insurance Business Law



2. Development of Deregulation and Liberalization of the Non-life Insurance Market in Japan



Background of the deregulation

- Non-life insurance industry had gone through a period of stable growth for nearly fifty years.
 - Japanese economic growth
 - Price control by the authorities
- These business circumstances started to change when the deregulation began in 1996.



Factors of the deregulation

(1) Change of the economic and social environments

- Progress of economic globalization and diversification of consumer preference
- Advisory council of MOF issued reports suggesting a grand design of the reform plans

(2) New Insurance Business Law (IBL)

- New IBL became effective in April 1996
- Enable non-life and life insurance companies to compete through establishing a life/non-life insurance subsidiary (mutual entry)



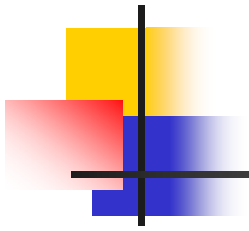
Factors of the deregulation

(3) The Japan-US Insurance Talk

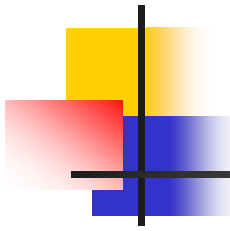
- Abolition of the compulsory use of tariff rating
- Acceleration of differentiated premium rates for automobile insurance

(4) Financial System Reform (Japanese Big Bang)

- The Government of Japan announced to implement the comprehensive reforms of Japan's financial system by 2001
- Key words: "free", "fair" and "global"
- Restructure of the rating organization system affected non-life insurance industry



3. Transition of the Non-life Rating Organization (SAN-TEI-KAI) System



Former Rating Organization (SAN-TEI-KAI) System (1)

- Rating Organization (SAN-TEI-KAI) calculates gross premiums and applies for an approval from the authorities.
 - Members of SAN-TEI-KAI had legal obligation to use the premium including loading.
 - All non-life insurance companies were members of SAN-TEI-KAI.
- Thus, all companies were selling the same coverage charging the same premium for major lines of business.

Former Rating Organization (SAN-TEI-KAI) System (2)

- SAN-TEI-KAI had annually reviewed the current rates and revised them if necessary.
 - Loss ratio increase → raise premium rates
 - Loss ratio decrease → decrease insurance rate or broaden the coverage
- SAN-TEI-KAI system had brought stable growth.
 - Little need to retain many in-house pricing actuaries!
- SAN-TEI-KAI system had prevented price competition and service diversification.



Revision of the Law

(the Law Concerning Non-Life Insurance Rating Organizations)

- One of the most remarkable points of “Japan-US Insurance Talks” and “Japanese Big Bang” was the reform of the SAN-TEI-KAI System.
- The Law was revised in June 1998.
- FROM “gross premium rates to observe”
TO “advisory pure risk premium rates”
 - **Essential, Revolutionary, Symbolic event!**



Rating system after the revision of the Law (cont'd)

(1) Reference Loss Cost Rates(RLCR)

- RLCR are calculated for the reference of the members.
 - No obligation to use
- Scopes
 - a. fire insurance
 - b. personal accident insurance
 - c. voluntary automobile insurance
 - d. medical expense insurance
 - e. nursing care expense insurance



Rating system after the revision of the Law (cont'd)

- RLCR are calculated based on more experience data
 - More reliable outcome can be obtained than the rate calculated by an individual company
- When RLCR is used as pricing basis, the authorities examine the basis rate in a simplified manner.
 - Shorten the timeframe of the approval process and reduce R&D cost



Rating system after the revision of the Law (cont'd)

(2) Standard Full Rates (SFR)

- SFR are premium rates (incl. loading) used for lines with high public interest.
- Subject products
 - a. Compulsory automobile liability insurance
 - b. Earthquake coverage of household insurance
- Practically compulsory nature and risk pool mechanism
 - Affordability and availability are secured



Non-Life Insurance Rating Organization

- “The Property and Casualty Insurance Rating Organization of Japan” and “the Automobile Insurance Rating Organization of Japan” were merged in July 2002.
- Members periodically submit their experience data.
- The organization provides services for members and play a role of data bank.
 - Calculate RLCR and SFR
 - Analyze and advise individual company data



Influences of the revision of the Law

- The revision of the Law fundamentally reformed the way in which non-life insurance company operates.
- Competition started to take place in all aspects.
 - Wider coverage and Lower price
 - Enhance additional services
- Insurance companies are required to reform their cost structure to survive.
 - Mergers and reorganizations



Influences of the revision of the Law

- After the deregulation, the demand for non-life insurance actuaries is increasing.
 - Ratemaking
 - Risk management
 - Accounting
- Deregulation has brought competition to Japanese non-life insurance companies, bringing professional opportunities to Japanese non-life insurance actuaries.



4 Automobile Insurance in Japan



The influence of deregulation and liberalization

- Diversification of the products
- Diversification of the sales network
- Diversification of the services
- Price competition



Diversification of the products

- Expansion of coverage
 - (First Party) Bodily Injury Indemnity Coverage
 - Extra Coverage to pay in Lawyer's Fee
 - Coverage for damage to personal belongings
 - Coverage of expenses for a temporary substitute car and so on
 - Coverage for miscellaneous expense



Diversification of the products

- Expansion of coverage
 - (First Party) Bodily Injury Indemnity Coverage
 - Introduction of first-loss insurance
 - Earlier receipt of all indemnity including the amount of comparative negligence
 - A negotiation with a faulty party by insurer



Diversification of the products

- Introduction of New product
 - Product of more risk-differentiated rates
 - Separation of products into commercial use and personal use
 - Products with Good-Record Refund or a maturity refund



Diversification of the sales network

- Start-up of Direct Response (by Telephone)
- Emergence of Online Sales



Diversification of the services

- Emergency wrecker service
- Roadside assistance service
- Lodging, returning, and removal compensation in case of disorder
- Information service
- Puncture repairing service
- Fuel delivery service



Price competition

- Emergence of the product of risk-differentiated rates
 - Reduction of premium for drivers of less claim expectancy
- Competition for fleet contracts
 - Reduction of premium level
 - Reduction of premium by an appliance of individual treaty



Part 2:

Actuarial Profession in Japan



History of Japanese Actuary (1)

around 1880

Modern insurance companies were formed in Japan

1898 Insurance regulation was included in old Commercial Law

1899 Establishment of the Institute of Actuaries of Japan

1936 IAJ started the qualifying examination for fellowship



History of Japanese Actuary (2)

1939 Revision of Insurance Business Law (IBL)

→ Introduction of the Appointed Actuary (“Hoken-keiri-nin”) system

Article 89 of IBL (hoken-keiri-nin)

Life insurance companies shall appoint hoken-keiri-nin as set forth in applicable orders, and these individuals shall be responsible for actuarial matters.



History of Japanese Actuary (3)

- 1964 Eight Trust Banks joined IAJ as supporting members
- 1967 Number of members exceeded 1000
- 1970 Non-life Ins. Cos. Joined IAJ as supporting members
- 1976 20th ICA held in Tokyo
- 1990 15 Commercial Banks joined IAJ as supporting members



History of Japanese Actuary (4)

- 1996 Drastic Revision of the Insurance Business Law
- 1998 Revision of the Law Concerning Non-Life Insurance Rating Organization
- 1999 Centennial Anniversary of IAJ
 - IAJ Centenary Convention
 - IAA Tokyo meeting
 - ASTIN / AFIR Colloquia
- 2000 IAJ was entitled to “designated corporation” as specified Article 122-2 of Insurance Business Law
- 2001 Start selling medical insurance by non-life insurance companies

Drastic Revision of the Insurance Business Law 1996 (1)

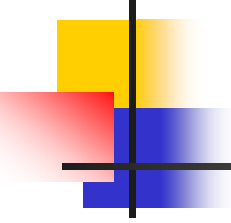
1. Purpose

Half century after Revision of the Insurance Business Law

changes in the environment surrounding the insurance system

Require ensuring the soundness of the insurance industry

Drastic Revision of the Insurance Business Law



Drastic Revision of the Insurance Business Law 1996 (2)

2. Items closely related to actuaries and IAJ

(1) Improvements to the hoken-keiri-nin system

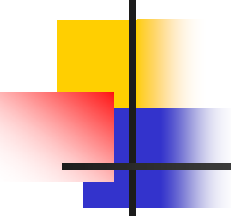
(a) Appointment of hoken-keiri-nin

(b) Duties of hoken-keiri-nin

(c) Confirmation items of hoken-keiri-nin

(2) Introduction of provisions in regard to standard liability reserves (Life insurance)

(3) Introduction of confirmation provisions in regard to policyholder dividends



The background of introduction of the “Hoken-Keiri-nin” system into the non-life insurance in Japan

Started sale of

- (1) maturity-refund-type non-life insurance
- (2) nursing care insurance.



became important

- the savings level of reserves
- the rates of dividends to policyholders



The “Hoken-keiri-nin” system was introduced to the non-life insurance regulation in 1996.

Organizational Chart of the IAJ





The qualifications for “Hoken-Keiri-nin”

- “Hoken-Keiri-nin” must meet at least one of the below qualifications.

| | Title | Required years of Actuarial Experience |
|----|-----------|--|
| 1. | Fellow | longer than 5 Years (for life insurance) 5 years about life |
| 2. | Associate | longer than 10 years (for life insurance) |
| 3. | Fellow | longer than 7 Years and longer than 3 years about life |



The role of “Hoken-Keiri-nin” (1)

The hoken-keiri-nin have to commit

1. Calculation method of premium
 2. Calculation method of policy reserve
 3. Calculation method of dividend to policyholder and distribution of surplus
 4. Calculation method of surrender value
 5. Calculation of outstanding premium
 6. Calculation of reserve for outstanding claims
 7. Plan about offer to sell insurance
 8. Plan about agency salary regulation
- etc.



The role of “Hoken-Keiri-nin” (2)

Role of the Hoken-Keiri-nin

⇒ Fiscal year end review

- Adequacy of reserve valuation
- Fairness and equity of policyholder dividends
- Continuity of the insurance business

The Hoken-Keiri-nin must

- submit opinion letter to the board of directors
- prepare supplementary report to the opinion letter
- submit copy of these documents to the supervisory authority

Number of Members

| Fiscal Year | 1965 | 1975 | 1985 | 1995 | 2000 | 2001 | 2003. July.31 |
|-----------------------|------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Fellows | 200 | 310 | 507 | 773 | 952 | 985 | 1,008 |
| Honorary | 3 | 5 | 6 | 9 | 6 | 7 | 8 |
| Associates | 347 | 596 | 801 | 899 | 772 | 784 | 801 |
| Students | 217 | 600 | 664 | 1,674 | 1,667 | 1,637 | 1,703 |
| Supporting Members | 32 | 58 | 69 | 106 | 131 | 118 | 109 |
| Total | 799 | 1,569 | 2,047 | 3,461 | 3,528 | 3,531 | 3,629 |

IAJ Membership by types of industry

| 2003. July.31 | Honorary | Fellows | Associates | Students | Subtotal□ | Supporting Members | Total |
|-----------------------|----------|---------|------------|----------|--------------|-----------------------|-------|
| Life | 8 | 422 | 327 | 658 | 1,415 | 41 | 1,456 |
| Non-Life | □ | 148 | 120 | 254 | 522 | 27 | 549 |
| Trust Bank | □ | 160 | 92 | 142 | 394 | 6 | 400 |
| Others | □ | 278 | 262 | 649 | 1,189 | 35 | 1,224 |
| Total | 8 | 1,008 | 801 | 1,703 | 3,520 | 109 | 3,629 |



Qualification examinations of the IAJ

- Candidate (university graduate or higher)

Complete Level One Examinations

- Associate

Complete Level Two Examinations

Complete Professionalism Course (2005-)

- Fellow



Qualification examinations of the IAJ

- Level One Examination(Basic subjects)

| Subject | Contents |
|--|---|
| Mathematics | Probability,statics |
| Life insurance mathematice | Basic principles and applications of life insurance mathematics |
| non-Life insurance mathematice | Basic principles and applications of non-life insurance mathematics |
| Pension mathematics | Basic principles and applications of pension mathematics |
| Accounting,economics and investment theory | Basic principles and applications of accounting,economics and investment theory |



Qualification examinations of the IAJ

- Level Two Examination(Advanced subjects)

| Field | Subject | Contents |
|----------------------------|----------------------|---|
| Life insurance courses | Life Insurance 1 | Life insurance products and development. |
| | Life Insurance 2 | Life insurance accounting. Settlements of accounts. |
| non-Life insurance courses | non-Life Insurance 1 | non-Life insurance products and development. |
| | non-Life Insurance 2 | Life insurance accounting. Settlements of accounts and asset management. |
| Pension courses | Pension 1 | Tax qualified pension plan scheme and pension-related tax and accounting. |
| | Pension 2 | Public pension system and employees' pension fund scheme |

Number of successful candidates

- Number of new fellows

| Year | 2001 | 2002 | 2003 |
|-----------------------|------|------|------|
| Number of New Fellows | 49 | 46 | 53 |

- Pass rates (2003)

| LEVEL 1 | |
|---|-----|
| Mathematics | 18% |
| Life Mathematics | 23% |
| non-Life Mathematics | 18% |
| Pension | 12% |
| Accounting, economics and investment theory | 30% |

| LEVEL 2 | |
|-----------------|-----|
| Life Ins. 1 | 16% |
| Life Ins. 2 | 21% |
| non-Life Ins. 1 | 22% |
| non-Life Ins. 2 | 19% |
| Pension 1 | 20% |
| Pension 2 | 21% |



Education system of the IAJ (1)

- University education
 - ✓ Several universities offer intensive lectures for students in mostly mathematics
 - ✓ IAJ fellows' lectures
- Courses of study for actuaries offered by IAJ
 - ✓ Actuarial education course for examinees
 - ✓ Actuarial student recruitment forum for undergraduate students



Education system of the IAJ (2)

- Continuing education system

An outline of the continuing education system is given below.

| Target | Fellows |
|--|--|
| Format | Voluntary participation format |
| Activities | Activities that are useful to improve the professional abilities of actuaries <ol style="list-style-type: none">1. Attendance at group study and conferences sponsored by the IAJ2. Self-study3. Authoring of publications and theses4. Teaching at study meetings and the like |
| Time Requirement | Fifty hours or more per year |
| Reporting and Recording | Report once per year, recording and storing of results performed by the IAJ |
| Publication of names of those who completed the requirements courses | Publication in the IAJ journal |

- Others
 - ✓ ASTIN Research-group of IAJ
 - ✓ New subject for Level One Examination: "Modeling" (scheduled after FY2005)



The role of Actuary in non-life insurance

- The recent trend of the non-life insurance
 - ✓ Increase in the number of insurance products and the type of covered risks
 - ✓ Uniting finance and insurance
 - ✓ Various risks undertaken other than traditional insurance risk (e.g. Credit Derivatives , Weather Derivative, ART, etc)

- Main fields of actuaries
 - ✓ Production Dept.
 - ✓ Underwriting Dept.
 - ✓ Accounting Dept.
 - ✓ Asset management Dept.
 - ✓ Computer system Dept. etc.



Significant theme of Actuary in Japan

- International Financial Reporting Standards
- International cooperation with other overseas actuarial organizations (IAA, CAS, IAIS, etc.)



Thank you for your attending.

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