

This English translation of “2019 Annual Report” of the Institute of Actuaries of Japan is an unofficial translation. Only its original Japanese texts have effect, and the translation is to be used solely as reference material to aid in the understanding of the original one.

この「2019年度事業報告」の翻訳は公定訳ではありません。効力を有するのは日本語の資料であり、翻訳はあくまでその理解を助けるための参考資料です。

## 2019 Annual Report

From April 1, 2019 to March 31, 2020

### 1. Matters concerning Annual General Meeting of Members

The General Meeting of Members was held on June 14, 2019 at the main conference room of the Institute of Actuaries of Japan, and

“Report on a summary of business activities in 2018”

was presented, and the following proposal was put before the meeting and approved as proposed:

- Item 1: 2018 Approval of a Balance Sheet and Net Assets Variation Statement as well as Inventory of Properties
- Item 2: Election of the Directors and Auditors

### 2. Movement of members

Movements of members during the current year were as follows: for corporate members, 1 member was newly admitted; for individual members, 295 members were newly admitted, and 219 members withdrew from the IAJ. The number of members as of the end of March 2020 is as shown in the table below.

Fellows	1,844	persons
Associates	1,333	persons
Students	2,069	persons
Semi-total	5,246	persons
Corporate members	110	corporations
Total	5,356	persons/corporations

### 3. Business report

[A. Related to examination]

#### (A1) Implementation of qualification examination

A 3-day qualification examination was held from December 9 to 11, 2019 in Tokyo (at TOC Gotanda) and Osaka (at Temma Training Center) and the successful examinees were announced on February 14, 2020.

The total number of examination subjects for the primary examination was 3,714 subjects and the total number of subjects passed was 858 subjects. There were 109 examinees who passed all basic subjects.

Primary examination (Basic subjects)	Mathematics	Life Insurance Mathematics	Non-life Insurance Mathematics	Pension Mathematics	Accounting, Economics and Investment Theory
Number of examinees	1,136	774	637	442	725
Number of successful examinees	272	248	103	75	160
Passing Rates	23.9%	32.0%	16.2%	17.0%	22.1%

The total number of examination subjects for the secondary examination was 1,187 subjects and the total number of subjects passed was 181 subjects. There were 90 examinees who passed all the subjects.

Secondary examination (Advanced subject)	Life Insurance 1	Life Insurance 2	Non-life Insurance 1	Non-life Insurance 2	Pension 1	Pension 2
Number of examinees	362	353	163	131	82	96
Number of successful examinees	49	64	20	22	13	13
Passing Rates	13.5%	18.1%	12.3%	16.8%	15.9%	13.5%

#### (A2) Implementation of CERA examination

The CERA examination was held on September 25, 2019 in Tokyo (at TKP Tokyo Station Nihonbashi Conference Center) and the successful examinees were announced on January 20, 2020. There were 54 examinees and 7 examinees passed the examination (Passing Rates 13.0 %).

### [B. Related to education, training, and research presentation]

#### (B1) Implementation of actuary courses

The actuary courses were offered for a period from May 17, 2019 to October 8, 2019. Details are as follows.

	Subject	Number of students
Basic courses (12 Subjects)	<ul style="list-style-type: none"> <li>▪ Probability</li> <li>▪ Probability Exercise</li> <li>▪ Life Insurance Mathematics</li> <li>▪ Non-life Insurance Mathematics</li> <li>▪ Accounting</li> <li>▪ Life table</li> <li>▪ Statistics</li> <li>▪ Statistics Exercise</li> <li>▪ Pension Mathematics</li> <li>▪ Economics</li> <li>▪ Investment Theory</li> <li>▪ Modeling</li> </ul>	150 people
Intermediate courses (7 Subjects)	<ul style="list-style-type: none"> <li>▪ Risk Selection Theory</li> <li>▪ Population Theory</li> <li>▪ Insurance Supervision Law</li> <li>▪ Pension Practice Regulations</li> <li>▪ Finance Mathematics</li> <li>▪ Social Insurance Theory</li> <li>▪ Risk Management Theory</li> </ul>	32 people

The additional actuary exercise courses were offered for a period from September 24, 2019 to November 29, 2019. Details are as follows.

	Subject (Number of students)
Additional actuary exercise courses	<ul style="list-style-type: none"> <li>▪ Life Insurance Mathematics Exercise (30 people)</li> <li>▪ Non-life Insurance Mathematics Exercise (30 people)</li> <li>▪ Pension Mathematics Exercise (23 people)</li> <li>▪ Modeling Exercise (17 people)</li> </ul>

A new specialized actuary course (ERM) was held and offered for the purpose of learning specialized knowledge and skills related to ERM, for the period of July 20 to August 29, 2019. Details are as follows:

	Subject	Number of students
ERM course (3 subjects)	<ul style="list-style-type: none"> <li>▪ Finance Mathematics</li> <li>▪ Risk Management Theory</li> <li>▪ ERM</li> </ul>	54 people

A new specialized actuary course (Data Science) was held and offered for the purpose of acquiring specialized knowledge and skills related to data science through practical training, for the period of January 11, 2020 to March 14, 2020. Details are as follows:

	Content		Number of students
Data Science course (First/Second parts)	<First part> <ul style="list-style-type: none"> <li>▪ Introduction of R and simple Regression Model</li> <li>▪ Linear Regression Model</li> <li>▪ Linear Discriminant Analysis</li> <li>▪ Decision Tree</li> <li>▪ Generalized Linear Model</li> <li>▪ Analyzing models by presenting data</li> </ul>	<Second part> <ul style="list-style-type: none"> <li>▪ Basic procedure for Predictive Modeling</li> <li>▪ Exploratory Data Analysis (EDA)</li> <li>▪ Example model for Predictive Modeling</li> <li>▪ Model selection and Model evaluation method</li> <li>▪ Practice in Regression Model</li> <li>▪ Practice in Classification Model</li> </ul>	47 people

Kansai Committee actuary courses were offered for a period from August to October 2019. 2 people took the life insurance mathematics course and 1 person took the pension mathematics course.

(B2) Holding of 120th Anniversary Annual Meeting

At the milestone, which marks the 120th anniversary of the IAJ's foundation in 1899, the annual meeting, which is held 2 days usually, was expanded to 3 days as the 120th anniversary and held with the following dates.

Date: November 22(Fri), 23(Sat), 25(Mon), 2019

Venue: (November 22, 23): Keidanren Kaikan

(November 25): JP Tower Hall and Conference

In commemoration of the 120th anniversary, the IAA Council and Committee Meetings were invited to Tokyo and were held just before the 120th anniversary annual meeting (November 18 to November 22). (Reference to International Relations (E2).)

The following special lectures were held in this meeting <DAY 1>.

” Insurance Company Management Based on Philosophy-Beyond Tradition-”

\* 120th anniversary special lecture

By Mr. Yoshihiro Kawai

(Adjunct Professor, Graduate School of Management, Kyoto University,  
Former Secretary General of International Association of Insurance Supervisors (IAIS))

“Experience of "Different Dimensional Mitigation" and Recent Emergence of Fiscal Focusing Theory including MMT”

By Mr. Hideo Hayakawa

(Executive Fellow, Economic Research Center of the Fujitsu Research Institute,  
Former Executive Director of Bank of Japan)

“IFRS 17 – Expected roles for actuaries

By Mr. Takatsugu Ouchi (Partner, Deloitte Touche Tohmatsu LLC

Former Executive Director of International Accounting Standards Board (IASB))

On the second day, a session “Special Meeting” was planned and held as an English only program throughout the day. The meeting was planned as a joint session with IAA meeting participants, and Mr. Tan Suee Chieh (IFoA President-Elect) and Mr. Andrew Rallis (SOA President) were invited as speakers for their special lectures. Also, “Parallel Sessions” were held at 3 venues by CGA (CERA Global Association), IAA sections (ASTIN&CAS) and International relations Committee of the IAJ.

On the third day, 15 papers were presented, 9 presentations and 6 panel discussions were held.

(B3) Holding of IT Annual Meeting

A 2-day IT Annual Meeting was held on January 16 and 17, 2020 at Taiju Life Insurance Co., Ltd. (Otemachi Nomura Building). The following special lecture was held in this meeting.

” How Information and Communication Technology will Change in Five Years

～What information and communication technology will affect the insurance industry over the next five years?～ “

By Mr. Makoto Shirota (General Manager, Senior Researcher,

Digital Platform Development Department, Nomura Research Institute, Ltd.)

A presentation by Latest IT Technology Research & Study Team, “The role of insurance companies in the changing world of Society 5.0” was made and IT Study Groups (1st to 6th) conducted activity reports.

(B4) Holding of regular meetings

We held a total of 6 regular meetings in FY2019. Details are as follows.

1 <sup>st</sup> Jun.13, 2019 [Others]	Digital Insurance: transforming sales & underwriting	Ms. Sara Goldberg (Gen Re Life / Health)
2 <sup>nd</sup> Jul.17, 2019 [IT]	Success examples of Data Science	Mr. Richard Xu (VP and Actuary, RGA)
3 <sup>rd</sup> ※ Sep. 30, 2019 [Pension and Retirement Benefit System]	Public Pension — Financial Verification in 2019 —	Mr. Koichiro Yamauchi (Director, Pension Bureau, Ministry of Health, Labor and Welfare)
4 <sup>th</sup> Oct. 23, 2019 [Medicine]	Practical use of AI in the medical field — Impact on the life insurance industry	Mr. Andreas Armuss (Munich Re Singapore Branch)
5 <sup>th</sup> Dec. 16, 2019 [Professionalism]	※Joint seminar with Professionalism Training (Continuing Professional Development) (Reference to (B10) ①)	

6 <sup>th</sup> Feb. 7, 2020 [Others]	Theory and practice of foreign bond investment	Dr. Kenta Inoue (Economics) (Senior Bond Strategist/Senior Market Economist, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.)
---	--	---

※The 3<sup>rd</sup> was co-sponsored by the Japanese Society of Certified Pension Actuaries (JSCPA).

※The 7<sup>th</sup> (Mar.4) and the 8<sup>th</sup> (Mar.30) were supposed to be held but cancelled considering the situation on the spread of infectious diseases (COVID-19).

(B5) Holding of Kansai Committee regular meetings

We held a total of 3 Kansai Committee regular meetings in FY2019. Details are as follows.

1 <sup>st</sup> Sep.13, 2019 [Others]	AI and law	Mr. George Shishido (Professor, The university of Tokyo Graduate Schools for Law and Politics)
2 <sup>nd</sup> Dec. 23, 2019 [Others]	Introduction to data science for actuaries	Mr. Kaoru Fueda (Professor, Shiga University Faculty of Data Science)
3 <sup>rd</sup> Jan. 31, 2020 [Pension and Tax System]	The basic of pension tax system for actuaries	Mr. Yoichi Taniuchi (Dai-Ichi Life Insurance)

※The 4<sup>th</sup> (Mar.13) was supposed to be held but cancelled considering the situation on the spread of infectious diseases (COVID-19).

(B6) Holding of moonlight seminars

Moonlight seminars under the following 4 themes were held from November 2019 to March 2020.

IFRS 17 - Trends and Issues	Mr. Kazuyuki Doi Mr. Tomonori Asada (Willis Towers Watson)
Introduction to Data Visualization for Actuaries	Mr. Kosuke Iwasaki (Milliman)
Introduction to Generalized Linear Models	Mr. Kazuaki Naito
Practice of Data Science - Focusing on machine learning -	Examination and Education Planning Committee, Seminar Division

※Other seminars on/after Feb.27 were cancelled considering the situation on the spread of infectious diseases (COVID-19).

(B7) Holding of Kansai Committee seminars

Kansai Committee seminars were held on February 12, 2020 with following themes.

<ul style="list-style-type: none"> <li>• A study on CAT Bond premium calculation</li> <li>• Construction of Smart beta using Portfolio Theory and performance analysis in Japanese stock market</li> <li>• Comparison and reproduction of the impact of genetic testing information on life insurance in Canada and the United States</li> <li>• Estimating risk factors affecting certification of needs for support, and long-term care and the impact of risk factors on incidence of long-term care</li> <li>• Dynamic macro analysis on the introduction of medical insurance using the generational duplication model (Master's thesis for graduate school)</li> </ul>	Graduate School of Science, Kyoto University, Insurance Mathematics Seminar students
--	---

(B8) Enhancement of e-learning

E-learning contents under the following were released.

- IFRS17 Reinsurance Contracts held
- How to clear intellectual property rights that should be noted when writing documents  
\*Video streaming
- 2017 ERM Webinar
- Report of 2018 Annual Meeting:
  - Actuaries and their selection of the models on machine learning (Accurate GLM)
  - Involvement of pension actuaries on personnel system design
- Report of 2017 Open Discussion Forum
- Report of 2018 Open Discussion Forum:
  - Risk Management
  - Product and Asian Insurance Market
  - Financial reporting
- IAA Risk Book
  - Chapter 12 - Capital – A Regulatory Management Tool
  - Chapter 17 - Risk and Uncertainty

(B9) Utilization of “actuvievw”

The service of "actuvievw", which is an international platform for online distribution of videos of international conferences related to actuaries, has begun to be used as a new educational tool for IAJ members.

(B10) Implementation of professionalism training

- ① On December 16, 2019, professionalism training (Continuing Professional Development) covering the following training was offered.

- |  |   |
|--|---|
| • Actuaries and their Professionalism  | Mr. Ikuo Katayose (Resona Bank)   |
| • Professionalism education in Medical | Mr. Yasushi Miyata (Professor,<br>Faculty of medicine, Aichi Medical<br>University) |

- ② On February 26, 2020, professionalism training covering the following training was offered. The completion of this training is required to be approved as a Fellow.

- |   |  |
|---|--|
| • About Professionalism                 | Mr. Ikuo Katayose (Resona Bank)                        |
| • IAA Syllabus and Professionalism      | Mr. Tomio Murata (Taiju Life Insurance)                |
| • Actuaries and Code of Conduct         | Mr. Shinichi Nara (Meiji Yasuda Life<br>Insurance)     |
| • Professionalism in Life Insurance     | Mr. Hitoshi Watanabe (Nippon Life<br>Insurance)        |
| • Professionalism in Non-life Insurance | Mr. Hiromi Kaneko (Sompo Japan<br>Nipponkoa Insurance) |
| • Professionalism in Pension            | Mr. Akihiro Hotta (Tohmatu LLC)                        |

※Considering the situation on the spread of infectious diseases (COVID-19), the participants were limited to "associate members who passed all the subjects in the 2018 qualification examination or 2019 qualification examination" and held on a reduced scale.

- ③ On February 6, 2020, training for appointed actuaries of small amount & short-term insurance was offered by FSA and IAJ at the Small Amount & Short-Term Insurance Association of Japan (SSI). IAJ dispatched Mr. Hiromi Kaneko (Director / Professionalism Education Division in IAJ) as a lecturer of the training as a part of professionalism education.

(B11) Implementation of CERA training

On November 1 and 2, 2019, a 2-day group workshop was held for examinees for CERA examination. The workshop contained lectures on ERM, such as the specific situation in Japan and the case studies. The completion of this training is required to be approved as CERA qualification and 21 participants completed the training.

(B12) Implementation of Research meeting

On October 26, 2019, the 1st research meeting in FY 2019 was held in cooperation with Waseda University (Graduate School of Accounting / Research Institute of Business Administration) and JARIP. The purpose of the research meeting was IAJ members, researchers, and graduate students to discuss and dig deeper into the papers of unpublished research in line with the theme, also as being a place where all the participants were expected to discover new research themes by discussing presenter's advanced research.

※The 2<sup>nd</sup> meeting (Mar.21) was supposed to be held but cancelled considering the situation on the spread of infectious diseases (COVID-19).

[C. Related to investigation and research activities]

(C1) Holding of Standard Mortality Advisory Committee meeting

At the 25<sup>th</sup> Standard Mortality Advisory Committee meeting held on October 30, 2019, it was approved to continue to use in the year 2020 the “Life Insurance Standard Life Table 2018 (for death)”, “Third Sector Standard Life Table 2018” and “Life Insurance Standard Life Table 2007 (for annuity)”.

(C2) Improvement of practice standards

- ① With regard to “Standards for Actuarial Practice Concerning Retirement Benefits Accounting” and “Guidance for Actuarial Practice Concerning Retirement Benefits Accounting”, the revisions were made in May 2019 to reflect the IAS19’s revision.
- ② With regard to “Actuarial Standard of Practice in relation to IAS 19”, the revision was made in May 2019 to reflect the IAA's revision of ISAP3.
- ③ With regard to “Guidance for Actuarial Practice Concerning Retirement Benefits Accounting”, a revised draft was published not to refer to the "Practical Standards for Welfare Pension Funds", based on the handling of that by the Japanese Society of Certified Pension Actuaries (JSCPA).

(C3) Review of actuarial science for Life Insurance Product

In March, 2020, Life Insurance Product Special Review WG members cooperated with the Financial Services Agency was supposed to hold an exchange of opinions about actuarial science for life insurance products, but it was cancelled considering the situation on the spread of infectious diseases (COVID-19).

(C4) Response to international accounting standards and international insurance regulation

The International Accounting Standards Board (IASB) and the International Association of Insurance Supervisors (IAIS) have been energetically reviewing international accounting standards and international insurance regulation. The International Actuarial Association (IAA) is carrying out contracted research and other activities as an actuarial professional group. The IAJ is actively participating in the activities of IAA committees.

(C5) Dispatch of an observer to “Members of The Study Group on the Economic Value-based Solvency Framework”

Upon request of the Financial Services Agency, we dispatched Mr. Jun Miyamoto (Dai-Ichi Life Insurance) as an observer to the "Members of The Study Group on the Economic Value-based Solvency Framework". At the meeting, a presentation by the IAJ was given on ensuring the reliability of economic value-based insurance liabilities.

(C6) Work for the revision of IAA educational syllabus

Corresponding to the amendment of IAA educational Syllabus and its application in 2021, IAJ has been considering the future qualification examination and education systems in Japan by Planning Committee, Examination and Education Planning Committee and the relative committees, respectively.

(C7) Research on data science

In September 2019, in order to make data science easier for members to use, the "Data Science Related Basic Research WG" was established with the aim of researching the basic data science-related matters and widely disseminating the results to members.

(C8) Review of the way how professionals should respond to the demands of society

In September 2019, with regard to "Code of Conduct" and "Practical Standard" which composes system of actuarial profession, "Professionalism Research WG" was established to conduct surveys and studies based on today's perspective, with the aim of reporting the review result and suggestions for improvement to IAJ Planning Committee.

(C9) Activities of Committees

Each committee, division, study group, working group and project team carried out investigations, research and other activities based on the purpose and mission set at the beginning of the fiscal year. The status of their activities was posted on IAJ web sites. The activities that were put together into investigation and research results were published on the IAJ's member-only web page and/or in supplementary volumes of bulletins, etc.

[D. Expression of Opinions]

(D1) Voting at IAA Council (including electronic voting)

- ① In April 2019, voted for the approval of revision of Strategic Objectives/ changes of the Terms of Reference (TOR) of the Membership Committee.
- ② In May 2019, voted for the approval of all the topics at the IAA council meeting in Washington.
- ③ In August 2019, voted for the approval of new IAA Associate membership application (Actuarial Association of Mozambique / Association Tunisienne des Actuares).
- ④ In November 2019, voted for the approval of all the topics at the IAA council meeting in Tokyo.
- ⑤ In March 2020, voted for the approval of all the topics, those were the revision of the rules (rules, internal rules, and Nominating Committee's protocol), the venue of 2Q2021 IAA Meeting, and rules for holding the 32<sup>nd</sup> ICA2022.

(D2) In April 2019, the IAJ submitted its opinions to IAA on the exposure draft of IAA/IAN100 after studies by the relative committees.

(D3) In December 2019, the IAJ submitted its opinions in favor of IAA Climate Risk Task Force Statement of Intent (SOI) after studies by Insurance Regulation Division and the relative committees.

- (D4) In December 2019, the IAJ submitted its opinions in favor of the internal rule revision about the selection of Chairman of Nominating Committee (NC).

[E. Related to International Activities]

(E1) IAA activities

The IAJ send committee members to IAA and actively participates in the activities of IAA committees. Especially, Mr. Tomio Murata is in Executive Committee, Mr. Toshihiro Kawano is in Actuarial Standards Committee, Mr. Yoshio Nakamura is in Insurance Accounting TF as a Vice-chair and Mr. Ryutaro Yamada is in General Insurance Committee as a Vice-chair.

Also, Mr. Masaaki Yoshimura was IAA Immediate-past President in 2019.

(E2) IAA Council and Committee Meetings in Tokyo

IAA Council and Committee Meetings in Tokyo, which was invited to commemorate our 120th anniversary, was held from November 18 to 22, 2019. The following related events were planned and held along with the plenary session.

- ① On November 17, a joint seminar, "Longevity Inside and Outside Japan", whose theme is a Japan unique case of longevity, was co-hosted by the IAA's Population Issues Working Group (PIWG), Mortality Working Group (MWG) and IAJ. 3 presentations were planned and held by the following speakers, and this seminar gathered 97 participants including foreign actuaries who participated in IAA Meetings.

- Social Security in Japan- Current Status and Issues from a Holistic Perspective  
Mr. Kazuhito Ihara (Director-General for Policy Planning and Coordination,  
Ministry of Health, Labour and Welfare)
- Efforts to Maintain the Sustainability and Adequacy of Social Security Pensions  
Mr. Junichi Sakamoto (Representative of JS Actuary)
- Insurance Industry Efforts on Longevity Issues - Arrival of 100-year lifespan  
Mr. Taisuke Nishimura (Dai-Ichi Life Holdings)  
Mr. Takashi Yamaura (Sompo Japan Nipponkoa Insurance Inc.)

- ② On November 21, 2019, the presentations were planned and held at "Member Forum" by the following speakers:

- Japanese Longevity from Population Projection Perspective: Background, Prospects and Impacts  
Mr. Futoshi Ishii (Professor, Keio University)
- What A 100-year Life Means for Japan's youth  
Mr. Nobusuke Tamaki (Professor, Junior College Division, Otsuma Women's University)

- ③ On November 20, 2019, the IAJ hosted (co-sponsored by JSCPA) an official dinner at Meijikinenkan and about 300 IAA Meetings participants and the related people joined the dinner.



- (G2) Upon request of Osaka University to send lecturers for insurance mathematics lectures, Mr. Akihiko Sasada (Sumitomo Life Insurance), Mr. Masaki Takemura (Daido Life Insurance) and Mr. Hiroyuki Tsunekawa (Nippon Life Insurance) were sent to the University.
- (G3) Upon request of Kobe University to send lecturers for insurance mathematics lectures, Mr. Koji Matsumoto (Sumitomo Life Insurance) was sent to the University.
- (G4) Upon request of Waseda University to send lecturers for insurance mathematics and pension mathematics lectures, Mr. Yoshiki Adachi (Meiji Yasuda Life Insurance), Mr. Kouichi Tanaka (Meiji Yasuda Life Insurance), Mr. Junichi Hamada (Meiji Yasuda Life Insurance), Mr. Akira Arai (Meiji Yasuda Life Insurance), Mr. Kentaro Sekiguchi (Aon PLC) and Mr. Yosuke Fujisawa (Swiss Re) were sent to the University.
- (G5) In December 2019, at the financial symposium organized by Risk Analysis Research Center of the Institute of Statistical Mathematics, three members from IAJ presented papers at the session of “Actuarial modeling in the super aging society”.
- (G6) In November 2019, at the department of mathematics of Kyoto University, consecutive lectures were held and the IAJ held them in common by dispatching lecturers.

#### [H. Related to Presentation of Awards]

- (H1) Awards presented to a person with outstanding results in the 2018 qualification examination
- ① Presentation of President Award  
The IAJ presented the President Award to Mr. Kazunori Odani (Nippon Life Insurance), Mr. Masashi Tomita (Meiji Yasuda Life Insurance), Mr. Yusuke Nakahira (Nippon Life Insurance).
  - ② Presentation of award for outstanding results for each subject  
The IAJ presented an award to 1 person for Mathematics, 1 person for Life insurance mathematics, 1 person for Non- life insurance mathematics, 1 person for Pension mathematics, 1 person for Accounting, economics, and investment theory, 1 person for Life insurance 2.
- (H2) Presentation of awards for outstanding research paper
- ① On November 22, 2019, an award was presented for the following paper at the Annual Meeting:  
“Reserve Valuation for the Guaranteed Minimum Benefit in Variable Annuities under the Assumption for the Lapse Intensity to be a Step Function of the Account Value “  
Mr. Masaya Tsukamoto (The Dai-Ichi Life Insurance)
  - ② On January 16, 2020, awards were presented for the following outstanding IT-related papers at the IT Annual Meeting:  
“Consideration for utilizing Big Data in insurance industry”  
(IT Study Group III)  
“Applicability of block chain technology to insurance business and insurance products”  
(IT Study Group VI)

#### [I. PR and Publication Activities]

- (I1) PR activities

- ① “Actuary Seminar” primarily for students was held on January 25, 2020 in Tokyo and in Osaka. There were 48 participated in Tokyo and 24 participated in Osaka.
- ② On July 2, 2019, upon request of board of education in Haebaru, Okinawa, the IAJ gave a lecture on introduction of actuaries’ profession to about 40 2<sup>nd</sup> grade students of Nansei junior high school in the city at their career learning class.
- ③ The IAJ cooperated with shooting a short video which introduces actuaries’ profession on the job information web site (Occupational Information Network (O-NET)) opened by the Ministry of Health, Labor and Welfare on March 19, 2020.

(12) Enhancement of information provision function

The following revisions were made in our HP:

- ① ” Round-table discussion by actuaries” was held and posted on the website. The page was renewed from the ex “Round-table discussion by qualified actuaries” by extending the participants range from qualified actuaries to examinee.
- ② The 120<sup>th</sup> anniversary Annual Meeting exclusive page was built and posted, earlier than the usual schedule.
- ③ The “Voice of successful applicants” page was renewed by replacing the members introduced.

(13) Cooperative activities of related associations / institutes

- ① The IAJ sponsored the public interest purpose project; “Suugaku Koshien 2019 (The 12<sup>th</sup> National Math Championship)” organized by the mathematics Certification Institute of Japan (SUKEN).
- ② The IAJ has started to sponsor the public interest purpose project such as "64<sup>th</sup> IMO2023 Japan Games" organized by the Mathematics Olympic Foundation of Japan (JMO).

(14) Publication of bulletins, etc.

The following bulletins and other publications were published.

① Bulletin

No.72	<ul style="list-style-type: none"> <li>• On the history of classical actuarial mathematics (2)</li> <li>• Improving Defined Contribution Pension Plans in Japan</li> <li>• A Study on Optional Properties of Defined Benefit Pension</li> <li>• A study on investment component in IFRS 17 insurance contracts - Numerical example in general model and impact on the practical</li> <li>• Product &amp; Price Strategy of life insurance company using “Random Utility Theory”</li> <li>• A study on the mortality model using stochastic differential equation</li> <li>• Mortality models at older ages and their comparison and evaluation</li> <li>• An estimation of the value of options and guarantees on insurance liability</li> <li>• On a estimating method of the loss ratio variance</li> <li>• Reserve Valuation for the Guaranteed Minimum Benefit in Variable Annuities under the Assumption for the Lapse Intensity to be a Step Function of the Account Value</li> <li>• Markov chain models of bonus-malus systems: stationary distributions and rates of convergence</li> </ul>
-------	--

② Supplementary volumes of bulletin

No.285	<p>&lt;The 8<sup>th</sup> Actuary Overseas Training&gt;</p> <ul style="list-style-type: none"> <li>• Life insurance &amp; pension groups report</li> <li>• General insurance group report</li> <li>• SOA presentation documents</li> <li>• Pension group presentation documents</li> </ul>
--------	--

	<ul style="list-style-type: none"> <li>• CAS presentation documents</li> <li>• Questionnaire after training</li> </ul>
No.286	<p>&lt;The 59th IT Annual Meeting Report&gt; (IT Committee)</p> <ul style="list-style-type: none"> <li>• Special lecture ” How Information and Communication Technology will Change in Five Years~What information and communication technology will affect the insurance industry over the next five years?~ “ (By Mr. Makoto Shiota, General Manager, Senior Researcher, Digital Platform Development Department, Nomura Research Institute, Ltd.)</li> <li>• Research on financial and insurance services utilizing smart devices and IoT devices</li> <li>• Applying Agile Development in Insurance Industry</li> <li>• Research on optimal UI/UX in the systems in insurance companies</li> <li>• How SoE &amp; SoR should function in the insurance industry</li> <li>• Measures and the challenges to cybersecurity in the supply chain of insurance industry</li> <li>• Utilization of new payment method in insurance industry</li> </ul>
No.287	<p>&lt; A PUBLIC POLICY PRACTICE NOTE – Model Risk Management&gt; Developed by the Model Risk Management Work Group of the ERM/ORSA Committee of the American Academy of Actuaries (Translated by International Relations Committee)</p>

③ Actuary Journal

No.107	<ul style="list-style-type: none"> <li>• The 8<sup>th</sup> regular meeting report in 2018</li> <li>• The 10<sup>th</sup> regular meeting report in 2018</li> <li>• ASTIN Bulletin Abstracts (Translated by ASTIN related Study Group)</li> <li>• Report of paper research activities (AFIR related study group)</li> <li>• 2018 Report on Activities of Kansai Committee’s Sub-committees</li> <li>• 2018 Report on Moonlight Seminar</li> <li>• Initiatives on data science (Preliminary Report)</li> <li>• 2018 CERA qualified person(s)</li> <li>• 2018 accomplished members for CPD objectives</li> <li>• 2018 applicants who passed the qualified examination</li> <li>• Actuaries’ relay talks (Series Part.8)</li> </ul>
No.108	<ul style="list-style-type: none"> <li>• &lt;Notice of the 120th Anniversary Annual Meeting &gt; (120th Anniversary Project Special Committee/ Annual Meeting Committee /International Relations Committee / IAJ secretariat)</li> <li>• Notice from the secretariat- “actuview”</li> <li>• The 11<sup>th</sup> regular meeting report in 2018</li> <li>• The 1<sup>st</sup> regular meeting report in 2019</li> <li>• Introduction of actuaries’ profession (PR Committee)</li> <li>• 2018 Continuing Professional Development / CPD units achievement report</li> <li>• Introduction of committees’ activities (PR Committee)</li> <li>• Book review – Leases For Lives (by David R.Bellhouse) (Mr. Koichi Tanaka / Meiji Yasuda Life Insurance)</li> <li>• Actuaries’ relay talks (Series Part.9)</li> </ul>
No.109	<ul style="list-style-type: none"> <li>• The 2<sup>nd</sup> regular meeting report in 2019</li> <li>• The 3<sup>rd</sup> regular meeting report in 2019</li> <li>• The 47<sup>th</sup> ASEA Seminar report (ASEA Division, IAJ Secretariat)</li> <li>• Report of “Suugaku Koshien 2019(The National Math Championship)” (PR Committee)</li> </ul>

	<ul style="list-style-type: none"> <li>• Introduction of committees' activities (International Relations Committee/ Investment Theory Committee)</li> <li>• Actuaries' relay talks (Series Part.10)</li> </ul>
No.110	<ul style="list-style-type: none"> <li>• &lt;The 120th Anniversary Annual Meeting Implementation Report&gt; (120th Anniversary Project Special Committee/ Annual Meeting Committee /International Relations Committee / IAJ secretariat)</li> <li>• Data Science Basic Survey WG – newly established - Aiming to spread data science technology for actuaries -</li> <li>• Research report on Error Evaluation in Predictive Modeling (Data Science Basic Survey WG)</li> <li>• The 4<sup>th</sup> regular meeting report in 2019</li> <li>• CERA training lecture report</li> <li>• 2019 Actuary Seminar report</li> <li>• Actuaries' relay talks (Series Part.11)</li> </ul>
Special Edition <Risks and Insurance No.16 >	<p>&lt;Lectures &gt;</p> <ul style="list-style-type: none"> <li>• Issues related to the introduction of economic value-based capital regulation –exchange opinions among industry-government-academia</li> </ul> <p>&lt;Paper&gt;</p> <ul style="list-style-type: none"> <li>• Joint estimation of cause-specific future mortality using tensor analysis</li> </ul>

④ 2019 Qualification Examination Question Collection

(15) Revision of PR brochure

IAJ PR brochure was renewed with new illustration by incorporated the latest information such as on data science, the decision to hold ICA2026 by IAJ.