

## Comparisons of the systems of pension actuaries in Japan, US, and UK

Yoshihiro Oyama

Japanese Society of Certified Pension Actuaries

8F, Daiya Shinbashi Bldg. 1-10-7,

Shinbashi, Minato-ku, Tokyo 105-0004, Japan

Telephone : 81-3-3571-0887

Fax : 81-3-3571-0892

E-mail : yoshihiro\_oyama@mitsuitrust-fg.co.jp

### Abstract

Through the comparisons of the system of pension actuaries in Japan to those of US and UK, I found that Japanese system is not strict at Continuing Professional Development (CPD). Although CPD is not required compulsorily, many Japanese Certified Pension Actuaries (CPAs) work hard and keep abreast of developments in actuarial techniques. But to keep all CPAs' work in high standards, I think that CPD by Japanese actuarial associations should be more promoted to every CPA.

I think one of effective ways to promote more active CPD is to make public the result of CPD that each CPA has achieved if he/she has shown consent.

### Keywords

Certified Pension Actuary (CPA), Enrolled Actuary (EA), Scheme Actuary, Continuing Professional Development (CPD)

## **Introduction**

In this paper, I would like to review the system of Certified Pension Actuaries in Japan, and compare it with those of enrolled actuaries in US and scheme actuaries in UK. Based on these comparisons, I would like to pose an idea to improve Japanese system.

## **1. The Certified Pension Actuary (CPA) in Japan**

### **(1) Certified Pension Actuary System**

The Certified Pension Actuary system was introduced in September 1988 by an amendment to the Employees' Pension Insurance Act (EPIA). The purpose of the system is to clarify the responsibilities regarding pension actuarial matters and to maintain the financial soundness of Employees' Pension Funds (EPFs). This system has also been applied to National Pension Funds (NPFs) since 1991 and pension plans under the Defined Benefit Corporation Pension Act since 2002.

Certified Pension Actuaries (CPAs) are duly authorized by the Ministry of Health, Labor, and Welfare (MHLW) as professionals in pension actuarial science. They are required to evaluate the contents of actuarial reports that EPFs, NPFs, and other corporate pension plans submit to the MHLW.

### **(2) Establishment of the Certified Pension Actuary System**

In the mid-1980s, corporate pension plans were expected to play a more important role in supplementing public pensions and there was an urgent need to make the operation of corporate pension plans more flexible. The Pension Fund Association (PFA) conducted a study on this problem and concluded that the roles and responsibilities for operating and financing pension funds must be clarified to secure the vested rights of participants in the deregulated corporate pension field. It also concluded that the importance of actuarial services for Employees' Pension Funds (EPFs) and the responsibilities of pension actuaries who provide such services would continue to grow.

#### **A. Proposal by the PFA**

In April 1986, PFA made a proposal to introduce a qualification system for pension actuaries.

#### **B. Proposal by the Ministry of Health and Welfare (MHW)**

In May 1987, in a study concerning the development and dissemination of EPFs, the MHW also proposed the introduction of a qualification system for pension actuaries.

#### **C. Legislation of the System**

An amendment to the EPIA was passed in the Diet in May 1988. The amendment

included the establishment of the Certified Pension Actuary system.

#### D. Inauguration

In September 1988, the Certified Pension Actuary system took effect and 102 actuaries were recognized as the first CPAs by the MHW. (The number of CPAs has grown to 398 in 2005.)

### **(3) Introduction of the Appointed Certified Pension Actuary System**

The Appointed Certified Pension Actuary system was introduced for the EPF system in October 1997. Each Fund is required to appoint a CPA. The appointed CPA is required to check the financial conditions of the Fund continuously, to advise on the financial operations of the Fund, and to confirm the above-mentioned reports.

### **(4) Role of CPAs under the Defined Benefit Corporate Pension Act**

The Defined Benefit Corporate Pension Act (DBPA) was passed in the Diet on June 8, 2001 and came into effect on April 1, 2002. The DBPA requires that the actuarial materials submitted to the MHLW by an employer or Pension Fund are confirmed by a CPA.

### **(5) Qualifications of CPAs**

Under the EPIA, CPAs are required to have the knowledge and experience necessary to properly certify that actuarial documents related to pension plans have been prepared in accordance with reasonable actuarial methods and assumptions. An applicant to the position of CPA must meet the following four requirements and also be authorized by the MHLW.

- A. Basic knowledge: Fellow of the Institute of Actuaries of Japan (IAJ)
- B. Experience and practice in work using pension mathematics: at least 5 years
- C. Experience in managerial or supervisory positions: at least 2 years experience in actuarial valuation and reporting for pension plans
- D. High public credibility

### **(6) Fellowship of IAJ**

To be a fellow of IAJ, one must pass the qualification examination that is composed of the primary examination (basic subjects) and the secondary examination (advanced subjects), and must attend a professionalism course.

#### A. The Primary Examination

The purpose of the primary examination is to judge whether or not an applicant has sufficient knowledge to take the secondary examination. There are following 5 basic subjects:

- a. Mathematics
- b. Life Insurance Mathematics

- c. Non-Life Insurance Mathematics
- d. Pension Mathematics, and
- e. Accounting, Economics and Investment Theory

#### B. The Secondary Examination

The purpose of the secondary examination is to judge whether or not an applicant has the professional knowledge and problem-solving ability necessary to do actuarial practices. There are 3 courses for the secondary Examination from which the applicant should choose one; Life Insurance Course, the Non-Life Insurance Course and the Pension Course. For each course, 2 advanced subjects are provided for the examination.

**Life Insurance Course** consists of two subjects; Life Insurance 1 (Life insurance products and development) and Life Insurance 2 (Life insurance accounting, settlements of accounts).

**Non-Life Insurance Course** consists of two subjects; Non-Life Insurance 1 (Non-life insurance products and development) and Non-Life Insurance 2 (Non-life insurance accounting, settlements of accounts and asset management).

**Pension Course** consists of two subjects; Pension 1 (Defined benefit corporate pension plans, defined contribution pension plans, tax qualified pension plans, and pension-related tax and accounting) and Pension 2 (Public pension system and employees' pension funds).

#### C. Professionalism course

Attendance at a one-day professionalism course is mandatory from 2005.

#### (7) Continuing Professional Development (CPD)

The Japanese Society of Certified Pension Actuaries (JSCPA) holds lectures and seminars regularly for CPAs. (See Appendix)

IAJ recommends its fellows to undertake more than 50 hours of CPD every year.

Attendance at lectures and seminars by JSCPA is credited as CPD by IAJ.

#### 2. The Enrolled Actuary (EA) in US

An Enrolled Actuary is any individual who has satisfied the standards and qualifications as set forth in the regulations of the Joint Board for the Enrollment of Actuaries and who has been approved by the Joint Board to perform actuarial services required under the Employee Retirement Income Security Act of 1974 (ERISA).

The Joint Board, which was established pursuant to ERISA, is responsible for the enrollment of individuals who wish to perform actuarial services under ERISA. The

Joint Board is composed of five members, three appointed by the Secretary of the Treasury and two appointed by the Secretary of Labor. In addition, the Pension Benefit Guaranty Corporation has one representative with no voting power.

**(1) Enrollment**

**A. The Examination**

An individual applying to be an enrolled actuary, shall demonstrate knowledge of basic actuarial mathematics and methodology by the following examinations or other equivalent ones.

The basic (EA-1) examination tests knowledge of (1) the mathematics of compound interest and practical financial analysis and (2) the mathematics of life contingencies and practical demographic analysis.

The pension (EA-2) examination, which consists of two segments, tests

a. in Segment A, the selection of actuarial assumptions, actuarial cost methods, and the calculation of minimum required and maximum deductible contributions,

and

b. in Segment B, knowledge of relevant federal pension laws (in particular, the provisions of the Employee Retirement Income Security Act and related laws, regulations, and rulings) as they affect pension actuarial practice.

**B. The Experience**

An individual applying to be an enrolled actuary, must fulfill the following experience requirement.

Within a 10 year period immediately preceding the date of application, the applicant shall have completed either:

(1) A minimum of 36 months of responsible pension actuarial experience,

or

(2) A minimum of 60 months of responsible actuarial experience, including at least 18 months of responsible pension actuarial experience.

**(2) Continuing professional education**

To qualify for renewal of enrollment, an enrolled actuary must certify that he/she has satisfied the following continuing professional education requirements.

A minimum of 36 hours of continuing education credit must be completed between January 1 and December 31 for each three year period. Each such three year period is known as an enrollment cycle.

The recent enrollment cycle ended March 31, 2005. The next enrollment cycle has begun April 1, 2005. To renew enrollment an enrolled actuary must complete a

minimum of 36 hours of continuing professional education (CPE) credits during the period January 1, 2002 to December 31, 2004.

Of the 36 hours at least 18 must be comprised of core subject matter; the remainder may be of a non-core nature. CPE courses must be taken from a qualifying sponsor as described in the Joint Board Regulations.

Core subject matter is program content designed to enhance the knowledge of an enrolled actuary with respect to matters directly related to the performance of pension actuarial services under ERISA or the Internal Revenue Code. Such core subject matter includes the characteristics of actuarial cost methods under ERISA, actuarial assumptions, minimum funding standards, title IV of ERISA, requirements with respect to the valuation of plan assets, requirements for qualification of pension plans, maximum deductible contributions, tax treatments of distributions from qualified pension plans, excise taxes related to the funding of qualified pension plans and standards of performance for actuarial services.

Non-core subject matter is program content designed to enhance the knowledge of an enrolled actuary in matters related to the performance of pension actuarial services.

Examples include economics, computer programs, pension accounting, investment and finance, risk theory, communication skills and business and general tax law.

For renewal of enrollment, an enrolled Actuary must submit a completed Form 5434-A (Joint Board for the Enrollment of Actuaries Application for Renewal of Enrollment) and a filing fee of \$25.00.

### **3. The Scheme actuary in UK**

Councils of the Faculty and the Institute of actuaries require all Fellows of the Faculty and the Institute who hold the position of Scheme Actuary to possess a Certificate issued by the Faculty or the Institute pursuant to the Pensions Act 1995.

#### **(1) Certificate for Scheme Actuaries**

##### **A. The Examination**

To be a fellow of the Faculty of Actuaries or Institute of actuaries, a student has to pass the examinations of four stages.

##### **a. Core Technical Stage**

In the Core Technical stage there are nine subjects:

CT1 Financial Mathematics

CT2 Finance and Financial Reporting

CT3 Probability and Mathematical Statistics

CT4 Models

CT5 Contingencies

CT6 Statistical Methods

CT7 Economics

CT8 Financial Economics

CT9 Business Awareness Module

The ninth subject, CT9 Business Awareness Module will not be assessed by a formal examination. The module consists of internet-based study, attendance at a two-day course and internet-based assessment.

b. Core Applications Stage

In the Core Applications stage there are three subjects that cover actuarial concepts.

CA1 Core Applications Concepts

CA2 Modelling

CA3 Communications

c. Specialist Technical Stage

Students will in future be required to pass two subjects at the Specialist Technical stage. There will be seven Specialist Technical subjects:

ST0 Alternative Specialist Technical

ST1 Health and Care Specialist Technical

ST2 Life Insurance Specialist Technical

ST3 General Insurance Specialist Technical

ST4 Pensions and other Benefits Specialist Technical

ST5 Finance and Investment Specialist Technical A

ST6 Finance and Investment Specialist Technical B

d. Specialist Applications Stage

In the Specialist Applications stage there will be seven subjects. Students will take one subject chosen from:

SA0 Research Dissertation Specialist Applications

SA1 Health and Care Specialist Applications

SA2 Life Insurance Specialist Applications

SA3 General Insurance Specialist Applications

SA4 Pensions and other Benefits Specialist Applications

SA5 Finance Specialist Applications

SA6 Investment Specialist Applications

There is no requirement to have passed the corresponding Specialist Technical subject. The Specialist Applications subjects will typically assume

knowledge of the corresponding Specialist Technical subject.

## B. The Experience

The experience requirements for obtaining a Certificate are:

- a. Fellow of the Faculty or of the Institute who at the date of application for a certificate has been qualified for longer than one year.
- b. A member should be able to demonstrate appropriate practical experience in dealing with pension schemes. It would normally be least at three years' full-time experience of pension scheme work as a Fellow in the five years preceding the date of the application.

### **(2) Continuing Professional Development (CPD)**

CPD is mandatory for those actuaries who require Practising Certificates.

The minimum CPD standard determined by both Councils is at least 15 hours of Formal CPD and 52 hours of Informal CPD per year. Formal CPD may also be recorded as 30 hours over 2 years or 45 hours over 3 years.

Formal CPD is participation in professional meetings, courses or other events of equivalent standing, which are of relevance to an individual member's personal, professional or technical development. Distance learning courses, formal research and examination setting can also contribute towards Formal CPD provided they have contributed to an individual's professional development. Studying for the profession's Certificate and Advanced Certificate in Derivatives would also count towards a Formal CPD program.

For those undertaking Mandatory CPD, 10 hours of their Formal CPD must be on technical subjects relevant to their role. Five of these relevant hours must be obtained externally.

Attendance at a two-day professionalism course is mandatory for newly qualified actuaries within twelve months of qualification.

Attendance at this Course is also mandatory for those who require Practising Certificate, and it can be counted towards Formal CPD.

The Certificates are valid for one year.

The fee for the issue of a Certificate is £360.



#### 4. Comparisons of the three systems

Comparisons of major points of systems are as follows.

	Japan	US	UK
Name	Certified Pension Actuary	Enrolled Actuary	Scheme Actuary
Approved by	Ministry of Health, Labor, and Welfare	Joint Board for the Enrollment of Actuaries	Faculty and Institute of Actuaries
Examinations	(1) The Primary Examination (5 subjects) (2) The Secondary Examination (One from 3 courses) From 2005, attendance at a one-day professionalism course is mandatory to become a fellow of IAJ.	(1) The basic examination (2) The pension examination (2 segments)	(1) Core Technical Stage (9 subjects) (2) Core Applications Stage (3 subjects) (3) Specialist Technical Stage (2 from 7 subjects) (4) Specialist Applications Stage (one from 7 subjects)
Required Experience	(1) At least 5 years experience and practice in work using pension mathematics, and (2) At least 2 years experience in managerial or supervisory positions in actuarial valuation and reporting for pension plans.	Within a 10 year period immediately preceding the date of application, the applicant shall have completed either: (1) A minimum of 36 months of responsible pension actuarial experience, or (2) A minimum of 60 months of responsible actuarial experience, including at least 18 months of responsible pension actuarial experience.	(1) Fellow of the Faculty or of the Institute who at the date of application for a certificate has been qualified for longer than one year, and (2) A member should be able to demonstrate appropriate practical experience in dealing with pension schemes. It would normally be least at three years' full-time experience of pension scheme work as a Fellow in the five years preceding the date of the application.

	Japan	US	UK
Renewal	Not required	Every three year	Every year
CPD	IAJ recommends its fellows to undertake more than 50 hours of CPD every year.	A minimum of 36 hours of continuing education credit must be completed between January 1 and December 31 for each three year period. Of the 36 hours, at least 18 must be comprised of core subject matter; the remainder may be of a non-core nature.	CPD is mandatory for those actuaries who require Practising Certificates. The minimum CPD standard determined by both Councils is at least 15 hours of Formal CPD and 52 hours of Informal CPD per year. Formal CPD may also be recorded as 30 hours over 2 years or 45 hours over 3 years. For those undertaking Mandatory CPD, 10 hours of their Formal CPD must be on technical subjects relevant to their role. Five of these relevant hours must be obtained externally.

## 5. Conclusion

Compared to the systems in US and UK, Japanese system is characterized as follows.

Requirements to become a pension actuary are as difficult as other two systems.

Requirements for continuation are not strict.

Although the Japanese system does not require CPD and the renewal of the authorization by the Ministry, many CPAs work hard and keep abreast of developments in actuarial techniques, so that the work done is up-to-date and relevant. But to keep all CPAs' work in high standards, I think that CPD by Japanese actuarial associations should be more promoted to every CPA.

I think one of examples of minimum CPD for each CPA is:

- (1) 50 hours of CPD in total per year.
- (2) 12 hours of CPD on technical subjects relevant to pension actuaries per year.
- (3) 6 of these relevant hours must be obtained externally.

In order to make this requirement effective in the strictest way, it is necessary to change the regulations to require renewal of authorization. But I think it is impractical to make new regulations concerning the authorization in Japan.

Under these circumstances,

**making public the result of CPD that each CPA has achieved, if he/she has shown consent**

is the best way to promote more active CPD for CPAs in Japan.

By the publicizing of result with consent, I hope many Japanese actuaries recognize the importance of CPD more than before, and participate more actively in the CPD programs, especially lectures and seminars offered by JICPA.

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## **Appendix: The Japanese Society of Certified Pension Actuaries (JSCPA)**

The JSCPA is a professional organization of CPAs engaged in pension actuarial business for the EPF, the NPF, and corporate pension plans under the Defined Benefit Corporate Pension Act.

The membership is as follows;

Full Qualified Member: Certified Pension Actuary

Associate Member: Fellow or Associate\* of the Institute of Actuaries of Japan who wishes to qualify as a CPA

\* Before October 2000, only Fellows of the IAJ were permitted to become members of the JSCPA.

There are 398 Full Qualified Members and 129 Associate Members, as of July 21, 2005.

The history, objectives, and businesses of the JSCPA are outlined below.

### **History**

September 1, 1988 Establishment of the Certified Pension Actuary system

April 4, 1989 Establishment of the JSCPA

May 1, 1998 Authorization as a corporate juridical person

### **Objectives**

The objectives of the Society are to take the necessary steps to develop the qualifications of CPAs, maintain their professionalism, improve pension actuarial services, and help support and improve the financial soundness of EPFs, NPFs, and pension plans under the Defined Benefit Corporate Pension Act.

### **Mission**

1. To establish a Code of Ethics that raises the ethics of the Society's members
2. To establish Standards of Practice for members performing Pension Actuarial services
3. To investigate and research domestic and international Pension Actuarial Science
4. To train members in Pension Actuarial Science
5. To conduct seminars to inform people on Pension Actuarial Science
6. To maintain data regarding the list of Certified Pension Actuaries
7. To issue bulletins, public relation magazines, and other publications
8. To engage in any other businesses necessary to accomplish the objectives of the Society.

### **Activities**

The Society has been conducting various activities that contribute to the sound and efficient operation and further development of corporate pension plans. Such

activities include the submission of proposals and opinions to the MHLW, the establishment of actuarial standards, and the holding of seminars. More details of these activities are given below.

**(1) Proposals and Opinions**

Proposals to the Government (MHLW)

Example: The Method for Substitute Rebate Rates (January 1997)

Opinions to the Corporate Accounting Board, MOF

Example: Opinion on the Exposure Draft of "Opinion on the Accounting Standards for Retirement Benefits (May 1998)"

Opinions to the public

Example: Opinion on the treatment of the substitute portion of EPFs in the Accounting Standards for Retirement Benefits (November 1999)

**(2) Establishment of actuarial standards**

Establishment of actuarial standards for conducting pension actuarial business

Example: Actuarial Standards for EPFs (March 1997)

**(3) Training and Public Relations**

Training

Holding lectures and seminars

Holding seminars on practical matters

Public Relations

Publication of the "Journal of Certified Pension Actuaries" and newsletters (Japanese)

Publication of "Corporate Pension Plans in Japan"

**(4) International Affairs**

Submission of opinions to international organizations

Participation in international congresses

Full membership of the International Actuarial Association