

PROJECT TA 4024-INO: FINANCIAL GOVERNANCE AND SOCIAL SECURITY REFORM
Contract No. COCS/04-1161

ON ACTUARIAL PROFESSION IN INDONESIA

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Executive Summary



This report has been prepared in conjunction with the technical assistance on financial governance and social security reform related to the actuarial profession in Indonesia.

The report aims to prepare a study that will provide an overview of the current state of the actuarial profession in Indonesia and its capacity to effectively support the insurance and pension sectors in the implementation of international best practices and standards, identify key issues contributing to the development of the actuarial profession and factors constraining its growth, identify areas for development in the actuarial education system in Indonesia to bring it in line with international standards and recommend practical options and incentives for increasing both the quantity and quality of actuaries in Indonesia with a time-bound plan.

The study shows there are a number of areas that required improvements for the profession to enable it to be in line with international standards as well as developing more awareness internally, such as:

- improve databases and internal communication means for members through website and production of magazine or gazette, form a library and revitalize PAI building to function as a full secretariat office as well as building this facility as training center;
- become full member association of the International Actuarial Association by complying with all its requirements;
- promote a culture of lifelong learning and for the maintenance of qualification through a mandatory continuing professional development program, develop more standards with clear due process and procedure of adoption, create peer review system of compliance, impose and monitor disciplinary process and procedure;
- create more awareness of actuarial profession in the public and in the interest of mathematics students in all universities in Indonesia;
- improve relationship and cooperation with universities in order to improve the quality of examinations and education and revitalize the master degree programs, including future opening of such courses, with better coordination, as well as upgrading the diploma program to bachelor degree program;
- improve communication and relationship with other professional organizations;

Executive Summary



- take advantage the expertise and knowledge of the foreign qualified actuaries working in Indonesia as part of the requirement to be accepted in the statutory capacity;
- promote facility such as seminars and other means to ensure that more expertise of members in the wider fields other than traditional fields by conducting and encouraging members to participate.

The report concludes with a number of recommendations and an ambitious time bound plan to increase the quality and quantity of actuarial services available in Indonesia, much of it in the year 2006 with 2007-2008 being the follow up process:

Quarter 4, 2005

- form a small working committee of local actuaries, who are enthusiastic about change, to develop and monitor the detailed plans to re-organize the actuary profession in Indonesia.

Year 2006

- empower this group to form task forces to do the detailed work in each area of the self-governance model described earlier;
- establish an outside independent consulting mechanism to make sure the committee stays on course and is covering all the areas required to be covered and has not gone off on a tangent;
- define what the profession will be when it is capable of self-governance and obtaining equal status in the international market with the leading professions in the world;
- upgrade and refurbish the secretariat office, revitalize the website and publications as well as set up databases and library as a knowledge center;
- define the education and syllabus requirements which will allow future professionals to meet the needs of Indonesia and decide on the modalities of the examination system to be followed and the certification process to be put in place as well as transitional arrangements while PAI examinations are being phased out;
- revitalize the master degree programs, including future future opening of such courses, with better coordination, and recruit international teachers to jump start mentoring of new graduates;

Executive Summary



- documentation, codification and adaptation of the standards of practice, code of ethics, and disciplinary procedures could be accomplished simultaneously;
- define the requirements for continuous learning by all members of the profession and establish training programs and other means of communications to bring current actuaries up-to-date and to inform the business community of the substantial changes taking place – put wheels in motion for training, by deciding who should be responsible for preparation and delivery of actual courses;
- promote the Society of Actuaries examinations and PAI examinations under new syllabus across various universities in Indonesia building on international recognition as full member of International Actuarial Association;
- expand the concept of appointed actuary and prescribe mandatory courses during the transition period;
- develop a case study for the creation of an Office of the Actuary especially in the context of Financial Services Authority (OJK).

Year 2007

- continue building up databases and library as well as making study material available for Society of Actuaries examinations and PAI fellowship examinations, under new syllabus;
- launch a scholarship program to the actuaries involving in the public policy development;
- implement the creation of the Office of the Actuary if deemed useful;
- extend the requirement for actuarial certification to the non life business;
- eliminate barriers to entry for foreign actuaries participating to educational program, sabbatical, mentoring, and attachment exchange.

Year 2008

- continue to establish more standards of practice;
- continue promoting the Society of Actuaries examinations and PAI examinations under new syllabus across various universities in Indonesia building on international recognition as full member of IAA.

Executive Summary



The report also considers that the following areas could make an immediate jump start for the profession and for PAI which require external means of funding:

- in the documentation, codification and adaptation of the standards of practice, code of ethics, compliance monitoring and disciplinary procedures;
- in establishing training programs and other means of communications to bring current actuaries up-to-date and to inform the business community of the substantial changes taking place – including training potential students to be more qualified actuaries meeting international standards;
- in the making of study material available for Society of Actuaries examinations and PAI Fellowship examinations, and in the continuation of cooperation and coordination with universities, under new syllabus;
- in the launching of a scholarship program to the actuaries involving in the public policy development;
- in the upgrading and refurbishing of secretariat office, revitalization of website and publications;
- in the setting up of databases and library as a knowledge center – may acquire the existing resources built during the FISEK project.

1. Introduction

Background

Asian Development Bank (ADB) has assigned Dayamandiri Dharmakonsilindo (Consultant), a local Indonesian firm, to carry out the Technical Assistance TA 4024-INO Financial Governance and Social Security Reform (Project). In carrying out the Project, the Consultant has assigned **Steven Tanner** who will perform the services and duties as specified in the Terms of Reference.

Purpose

The main purpose of the Project is to prepare a study that will:

- a. provide an overview of the current state of the actuarial profession in Indonesia and its capacity to effectively support the insurance and pension sectors in the implementation of international best practices and standards;
- b. identify key issues contributing to the development of the actuarial profession and factors constraining its growth;
- c. identify areas for development in the actuarial education system in Indonesia to bring it in line with international standards; and
- d. recommend practical options and incentives for increasing both the quantity and quality of actuaries in Indonesia with a time-bound plan.

Methodology

The above study will be carried out through a series of survey and interview of actuaries, insurance firms, pension funds, relevant government officials and agencies, as well as in consultation with relevant domestic and international industry associations.

Acknowledgments

We extend our most sincere appreciation to the people who contributed their time, effort, and expertise to the completion of the Project. Their names appear in **Appendix A** of this report.

1. Introduction



What is an actuary?

As defined in the website of the International Actuarial Association (IAA), actuaries are multi-skilled strategic thinkers, trained in the theory and application of mathematics, statistics, economics, probability and finance. They have been called financial architects and social mathematicians, because of their unique combination of analytical and business skills are used to address a growing variety of financial and social challenges worldwide.

Using sophisticated analytical techniques, actuaries confidently make financial sense of the short term as well as the distant future by identifying, projecting and managing a spectrum of contingent and financial risks. In doing so, actuaries provide decision-makers with valuable information with which to make long-term strategic decisions, as well as providing practical solutions to problems involving the possible consequences of future uncertain events.

The work for which actuaries have traditionally been most noted is the measurement and management of liabilities in life assurance, pensions and general insurance. These are the three traditional areas where most actuaries work – either as employees, managers or consultants – and the sector in which there are roles reserved to actuaries by statute or regulation.

Actuaries perform many non-statutory roles, not just within the insurance and pensions industries but also in public policy and related areas of business, for example, in investment management, healthcare, social policy, risk management, banking and demography. These are the roles that can be and frequently also performed by non-actuaries, often possessing alternative professional qualifications.

The actuarial profession serves the public interest by providing professional advice and independent analyses of public policy options while a number of actuaries are serving in regulatory and supervisory functions or as appointed actuaries for an insurance company, a social security system or a pension plan.

Actuaries take seriously their responsibility to the public and recognize that their unique blend of skills can be enormously beneficial when applied to serve the public interest. Through their national, regional and international associations, actuaries provide voluntary assistance to national and regional governments, analyzing legislative and regulatory proposals, advising on social trends and suggesting solutions to a wide range of social problems.

1. Introduction



Actuaries use mathematical and statistical techniques to solve problems relating to the evaluation and management of risk, especially in relation to financial instruments and the management of financial institutions such as insurance companies, pension and benefit plans, health and accident, provident funds or social insurance programs.

Actuarial roles may include the design and pricing of products; assessing the adequacy or the fairness of benefits; establishing provisions; assessing and managing risks; making recommendations on financing strategy, solvency and investments; providing dynamic financial analyses and financial reporting.

2. Current State and Capacity

This section provides an overview of the current state of the actuarial profession in Indonesia and its capacity to effectively support the insurance and pension sectors in the implementation of international best practices and standards.

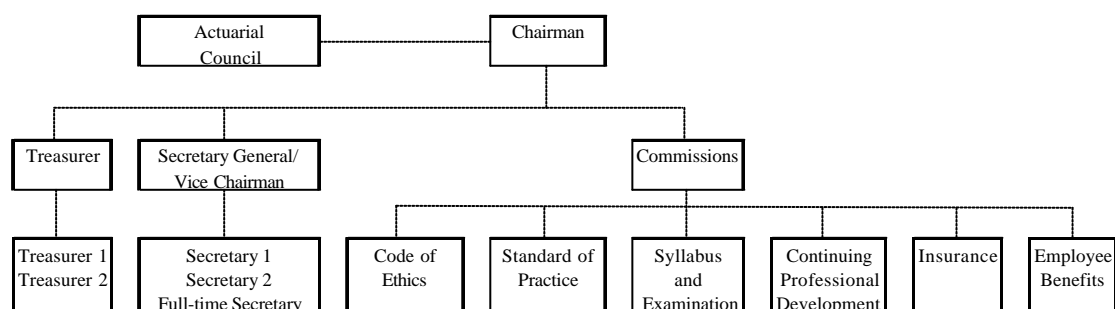
The Indonesian actuarial profession

The Society of Actuaries of Indonesia (PAI) is the professional body for Indonesian actuaries. It was first founded in October 1964 but not active until 1987 where first formal examination was conducted. It is a non-profit and non-political organization and is registered under the Ministry of Finance. PAI is currently an associate member of the IAA and is in the process of becoming a full member.

Initial members were grandfathered but subsequently members were admitted on the basis of examination. However, PAI created its own examination system and given its limited resources has not been able up to this day to reach international standards.

Organizational chart

The Board members are elected through General Meeting of the Members to hold position for a 3-year terms of office. The organization of PAI consists of a chairman, a vice chairman – also serves as secretary general, secretaries and full time secretary (this is a newly created post), treasurer, working commissions (code of ethics, standard of practice, syllabus and examination, continuing professional development (CPD), insurance and employee benefits). The organizational structure of PAI for the period of 2005-2008 can be seen in the following chart:



2. Current State and Capacity

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Membership

To date it has 309 members, of which 124 are qualified actuaries who are designated as Fellows of the Society of Actuaries of Indonesia (FSAI) and 185 designated as Associates of the Society of Actuaries of Indonesia (ASAI).

The growth of the members of PAI during the period of 1987 to 2004 can be seen in the following table:

Year	FSAI	ASAI	Year	FSAI	ASAI	Year	FSAI	ASAI
1987	21	8	1993	33	16	1999	84	112
1988	21	8	1994	36	16	2000	96	133
1989	22	8	1995	41	18	2001	106	149
1990	24	9	1996	53	28	2002	114	180
1991	25	11	1997	59	40	2003	118	183
1992	29	14	1998	71	74	2004	124	185

The role of the profession

Like any other professional bodies, PAI has the role of representing and regulating its members for the benefit of the profession and in the public interest. It regulates its members in terms of standards of practice, codes covering conduct, ethics and technical matters. PAI runs its own examination for new entrants who wish to become actuaries and occasionally conduct seminars for continuing professional development of existing actuaries. PAI also has a cooperative relationship with the government, business, regulators and other professions.

Secretariat office

The secretariat of PAI has always been located in the office of whoever is the President. This makes the condition difficult and many are reluctant to visit. There is no place for actuaries and students to get together where they can share and communicate.

Realizing this, PAI has bought a 3-storey office building located in central Jakarta back in 1999. The third floor is now under lease. However, until now, this facility has not been used and there is no one really knows what to do with it. After being left unoccupied for so long, especially the remaining 2 floors, it now needs renovating and furnishing. A library is being built and will later be located in this secretariat office.

2. Current State and Capacity



Sources of funds

The sources of funds of PAI are mainly derived from the registration fees for examinations and membership fees. Occasionally, PAI also conducts gatherings by organizing golf events. This sort of event is seen as exclusive in the sense that it does not reach out the whole members. From year to year, PAI barely has a surplus. In the event where in any period there is a short of funds, PAI often has to get a loan from individual.

Internal communication

The means of communication amongst actuaries were the website of PAI and magazine. However, the website has been remained idle for many years as no one is maintaining it. PAI also produced its first magazine aiming to become a form of communication for actuaries and students in Indonesia, but it stopped in its first issue since 2000. Internal communication and creation of forum of communication is also important so that members of PAI can have esteem for themselves and their organization – people have been cynical. This is also causing why there is lack of interest and attention given by members. Therefore, support given by PAI to its members must be improved.

Intellectual resources

During the course of the Cooperation in Financial Sector Reform (FISEK) project funded by the Canadian International Development Agency (CIDA) in the period of 1998-2001, a huge amount of actuarial textbooks and journals were donated to PAI. FISEK also created a library and its databases with internet facilities to make it a knowledge center with plenty of resources – papers and electronic documents – with information on the financial sector, on governance and international professional standards and on international organizations.

As regard to the textbooks and journals donated, they have probably being outdated. Therefore, PAI should update references by adding more resources.

2. Current State and Capacity



The actuarial services market

Actuarial activities can encompass:

- financial institutions: life and non-life insurance, pension funds;
- public programs including long-term health services;
- deposit insurance and guarantee fund;
- financial reporting and other statutory requirements;
- prudential requirements;
- market conduct;
- regulation and supervision;
- public policy.

In Indonesia, some 85% of practicing actuaries are concentrated in life insurance, either as employees or directors of a life office or as advisers to life insurance companies. The remaining majority work mostly in pension consulting firms advising occupational pensions schemes (schemes established by employers), around 9 members work within the Ministry of Finance – both insurance and pension directorates, and probably less than 10 members work in the fields of reinsurance, general insurance and other financial sectors combined. There is no full time actuary on the staff of any university in Indonesia.

The major roles of the pension scheme actuaries are to perform periodic statutory valuations of the defined benefit schemes liabilities and contribution rates – it is required by the Pension Law 11/1992 to be performed once every 3 years. The recent development in the statement of financial accounting standard in Indonesia on employee benefits (PSAK 24) requires companies to recognize and disclose employee benefits costs, including post-retirement benefits, in the financial statements, the latest by June 2005, have created new role for actuaries working in consulting firms.

Consulting actuaries are now finding themselves performing actuarial valuations in accordance with the local accounting standard, and for some, international accounting standards, such as US GAAP 87/88/106 and IAS 19. The employee benefits that require actuarial expertise are those of long-term employee benefits (pension, severance pay under Labor Law 13/2003, post-retirement health care, etc.) and other long-term employee benefits (long service award, grand leave, executive compensation, etc.). The demand for the role of actuaries in this area of work is high.

2. Current State and Capacity



Every life insurance company is required by law to have an actuary whose responsibility is to monitor the financial condition and the solvency of the company and to advise the company's board accordingly. A particular responsibility of the actuary has been to identify and monitor any risks run by the insurer which may impact on the firm's ability to meet its liabilities to policyholders. Life insurance actuaries are also responsible for the design of the insurance products, calculate, sign and certify the statutory liabilities.

The government is now requiring actuaries to be registered with the Department of Finance, insurance and pension directorates, providing some sort of statement from PAI confirming that the actuaries are actually members of PAI, for the purpose of administrative control and identification of who can carry out actuarial work in insurance and pensions. Insurers also need to register their actuaries as appointed actuaries who will be responsible to sign the statutory liabilities. Almost all actuaries working for life insurance companies are registered with the Department of Finance.

There is no information as to whether actuaries directly work in the area of investment employed by fund management houses or investment banks. Actuaries who are involved in the area of investments are those who principally work within the fund management functions of life offices. Those who work in actuarial consulting firms hardly offer investment advice to pension schemes. Some are known to only provide advice on manager selection and performance measurement. This area of work requires specific background and skills which most local actuaries have little knowledge of. Although the examination syllabus includes investment course, actuarial qualification is not a must and alternative qualifications such as Certified Financial Analyst are often seen as preferred alternatives.

Challenges ahead

In developing and improving their professionalism, Actuaries have multiple challenges, amongst others, are:

- meeting the market demand;
- more involvement in the traditional fields;
- competing with other professionals in non traditional fields;
- acquiring tools and methodologies to meet the improvement in technology and social economic condition;
- maintaining the highest quality of work and professional ethics;
- gaining recognition, internally and externally.

2. Current State and Capacity



The following table compiled by the IAA compares the situation of practice areas in Indonesia with other countries in the Asia Pacific region as reported in the 4th International IAA Fund meeting in Bali, Indonesia, in September 2005:

Country	Life	Health	Casualty	Social Security	Pension Schemes	Investment	Other
Australia	Y	Y	Y	Y	Y	Y	Y
Japan	Y	N	Y	Y	Y	Y	Y
South Korea	Y	Y	Y	Y	Y	Y	Y
Hong Kong	Y	N	Y	Y	Y	Y	Y
India	Y	Y	Y	Y	N	Y	Y
Taiwan	Y	N	Y	Y	N	Y	N
New Zealand	Y	Y	Y	N	Y	Y	N
Indonesia	Y	N ¹⁾	N ²⁾	Y ³⁾	Y	N ⁴⁾	Y
Singapore	Y	N	Y	N	N	Y	Y
Philippines	Y	Y	Y	Y	Y	Y	Y
Thailand	Y	N	Y	N	N	N	N
China	Y	Y	Y	Y	Y	Y	Y
Malaysia	Y	Y	Y	N	Y	N	N
Vietnam	Y	N	N	N	N	N	N
Sri Lanka	Y	N	N	N	Y	N	Y

1) Involvement is mainly in the pricing of health insurance products within the life insurance company.

2) One is known to work for general insurance.

3) There was little involvement in the beginning with no actuarial input.

4) Some are known to work in the investment department of life insurance companies.

Public perspectives

Likewise elsewhere, majority of the public have little knowledge of what is the actuarial profession. Actuaries are only known in the business environment, little also known from other professions of fields not related to financial services.

The recent development of the Indonesian statement of financial accounting standards on employee benefits has created awareness from many companies. However, little knowledge of this segment of the public in the actuarial field makes it difficult for them to challenge the work of actuaries. Most challenges are coming from the accountants and auditors, a profession closely related, as they are relying on the work of actuaries.

2. Current State and Capacity



Summary of responses from the survey

In the course of preparing this report, a number of relevant parties have been interviewed to get their feedback on what is their perception of the profession. The following summarizes the results with some noted weaknesses:

- there is a lack of communication means between members, lack of support to members given by PAI and lack of financial resources;
- although actuarial education system has been in place in a number of universities, but still little interest in participating in the courses; lack of internal commitment to develop the course within the faculty, public relations and promotions, expensive, little resources;
- cooperation with insurance and consulting companies encouraging actuarial students to enroll in the courses have been made, but still with little concern;
- the contents of the syllabus of the diploma program have not been reviewed for many years. Students graduated from this course only have technical skill with no business sense. Suggest improving and upgrading this diploma program to bachelor degree program in conformity to the IAA 2005 education guidelines and syllabus;
- some actuarial courses are offered in the bachelor degree program at a number of universities. These subjects should be compulsory instead of election subjects, as few mathematics students in the bachelor degree level interested in taking the subject;
- there is a lack of strong individual desire to improve and upgrade actuarial knowledge and skill. This is mainly due to the resources and weak support from the organization as well as lack of coordination;
- there have been a number of cynical comments received from the users of actuarial services saying that some of the actuaries even do not know how to calculate liability based on the standard prescribed actuarial method and the application of the accounting standard;
- premium calculations often based on arbitrary loadings due to lack of cost allocation for the products;

2. Current State and Capacity



- some suggested to take advantage the expertise and knowledge of the foreign qualified actuaries working in Indonesia as part of the requirement to be accepted in the statutory capacity;
- many actuaries fail to base their assumptions on review of experience, rarely do gains and losses analysis and very few care to justify their choice of methods and assumptions;
- two large institutions, namely PT Taspen, a state-owned enterprise administering the civil service pension and endowment programs, and PT Jamsostek, a state-owned enterprise administering the mandatory programs covering registered private sector employees, make minimal use of actuaries as they should have.

3. Drivers and Constraints on Growth



This section identifies key issues contributing to the development of the actuarial profession and factors constraining its growth.

The potential

As deregulation and increased competition occurs, there is innovation in products, distribution, investments portfolio and business strategy which result in a range of new risks being undertaken by the insurance companies. Recognition and costing of the possible adverse effects of these risks will, in many cases, require actuarial training and knowledge. Innovation and competition is of great benefit to consumers and the economy only if it is soundly managed. Countries with open insurance markets have benefited from having a qualified actuarial profession. The correlation between a free and fair market and the need for qualified actuaries as an almost inevitable outcome and this has been true in Indonesia.

The regulatory framework in Indonesia allocates important responsibilities to actuaries. They are recognized in the area of life insurance, health, reinsurance. Statutory reporting for insurance requires professional actuarial input as is the case in the area of pension. The risk based capital requirements for insurance companies have been introduced in 2000 – Indonesia was the first in Asia to adopt it – and more recently projections of financial conditions have become mandatory. Asset/liability management is a traditional actuarial field. In addition, the Pension Law 11/1992 requires regular funding and solvency actuarial valuation to be performed – once every 3 years and the new statement of financial accounting standard in Indonesia on employee benefits (PSAK 24) requires companies to recognize and disclose employee benefits costs.

The elimination in September 2005 of the blanket guarantee in place since 1998 has made the financial market more risky. Both the pension and the insurance industry will benefit from better actuarial input to identify, measure and control risks associated with investments, set and monitor appropriate investment policies that are responsive to market conditions and balance properly risks and returns.

Contribution of the profession

However the profession has not yet risen to the challenge in full strength, as a results of slow response from the profession, lack of resources – manpower and expertise, or low awareness of the public of the roles of actuaries.

3. Drivers and Constraints on Growth

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Although little influence it can make, there have been a number of active involvements from the profession to a number of laws, in particular the Insurance Law 2/1992, the Pension Law 11/1992 and the Labor Law 13/2003. Although some individual actuaries have written articles regarding the new National Social Security System Law 40/2004 after its release, there was no strong involvement of the profession as it should have been – hardly any actuarial inputs in the creation of the Law 40/2004.

The Government, in particular, the Ministry of Finance, have in many occasions inviting and providing opportunities to the profession to be involved and receiving inputs from the profession in the areas of insurance and pensions.

Intensive training course – examination preparation

After the creation of a master level degree program in actuarial sciences at the University of Indonesia in mid 1997, FISEK created an intensive training course for students who are interested in sitting the examinations of the Society of Actuaries.

This availability of such training facility attracted many students to join and created awareness and interests in sitting foreign examination qualification in addition to local qualification. It proved to be successful in that there were a number of students successfully passed one or more of the Society of Actuaries examinations. This demonstrates that the Indonesian could well meet the international standards if given the opportunity. The FISEK program also provided some financial assistance to certain students to pay the registration, the examination fees for the subjects sit.

However, this program was only run for less than 4 years and there was no continuity after the FISEK project ended. This is primarily lack of resources and interest as well as commitment of the association in taking over this program.

CPD, standard of practice, code of ethics, disciplinary procedure

In a number of occasions, PAI conducted seminars inviting actuaries and students to attend with foreign speakers. The participation sometimes is low due to the lack of good communication channels since PAI databases information of the actuaries and students generally not up to date.

3. Drivers and Constraints on Growth



It is noted that only one or two such events were conducted in a year without a clear program as to whether it is considered part of the CPD – there is no information how many points must be earned or credited for what type of seminars or workshop. There is no procedure and requirement as to how many points must be earned by actuaries in order to maintain their accreditation and to prove that they are keeping up with the keep advancing knowledge. Similarly, there is no procedure and guidelines for actuaries who switch area of practice – what is the requirement needed before one can switch area of practice. Since by Law 2/1992, Indonesian employers have to set aside 5% of their total employee expenses for the purpose of education and training, a proper procedure would enable actuaries to tap into that pool of resources.

Missing standards procedure

PAI has five sets of standard of practice for pension developed in 1998. Updated version was completed in 2003 but was never passed for approval. There were three standards of practice in insurance – there are still draft and never passed for approval. Although there is no procedure and process of hearing of standards, but drafts were distributed – often responses and feedback received. There is no procedure in monitoring compliance in place as yet – need to develop internal and external peer review. Many complaints received by the regulator in that actuaries often do not conduct in accordance with standards.

More standards need to be developed, not to develop from scratch but to adopt existing standards of well known actuarial associations or of the IAA with modification to suit local needs. Recently, the general meeting of the PAI members approved a set of code of ethics and disciplinary process. More socialization is needed though.

The IAA mandatory criteria for an acceptable process for adoption of standards of practice are:

- a. the proposal to consider a possible standard follows an established process;
- b. the proposed standard is exposed to members, and where relevant, to third parties for comments;
- c. comments on exposure draft are considered;
- d. the standards are promulgated by an authority vested with such powers;
- e. the standards are published and dispatched to member practitioners.

3. Drivers and Constraints on Growth



The following table shows the IAA membership status, year founded, existence of professional code of conduct and statutory recognition, of some of the major associations from countries in the Asia Pacific region as reported in the 4th International IAA Fund meeting in Bali, Indonesia, in September 2005:

Country	National Association Founded	IAA Membership Status	Professional Code of Conduct	Statutory Recognition			
				L	P	H	C
Australia	1897	Full Member, 1996	Yes	Y	Y	Y	Y
Japan	1899	Full Member, 1996	Yes	Y	Y	N	Y
South Korea	1963	Associate Member	Yes	Y	?	N	?
Hong Kong	1968	Full Member, 1999	Yes	Y	Y	N	?
India	1944	Full Member, 1996	Yes	Y	N	N	Y
Taiwan	1969	Full Member, 1996	Yes	Y	N	N	?
New Zealand	1957	Full Member, 1996	Yes	Y	Y	N	N
Indonesia	1964	Application, 2005	Yes	Y	Y	N	N
Singapore	1976	Full Member, 2003	Yes	Y	N	N	Y
Philippines	1953	Full Member, 1998	Yes	Y	N	N	N
Thailand	1975	In discussion	No	Y	N	N	N
China	2000	In discussion	Yes	Y	N	N	?
Malaysia	1978	Full Member, 2003	Yes	Y	N	N	N
Vietnam	–	None	No	Y	N	N	N
Sri Lanka	–	None	No	Y	N	N	?

L = Life; P = Pension; H = Health; C = Casualty.

As mentioned in earlier section, PAI has not yet become full member of the IAA, but has recently made a formal application to become full member. This is also believe to be one of the factors contributing to the lack of confidence of the market in the value of PAI standards and decrease recognition – thus makes mutual recognition also impossible.

3. Drivers and Constraints on Growth



Lack of sufficient financial resources

The following table shows the comparison of the level of effort required from the top member category for selected associations, in terms of financial resources derived from membership fees alone:

Country	Fully Qualified Actuaries (FQA) – Estimate Annual Fees (US\$)	Number of FQA - 2003	Aggregate Fees (US\$)	GDP Per Capita - 2003 (US\$)	Ratio of Annual Fee to GDP per Capita
United States	759	15,957	12,111,363	37,864	2.0%
United Kingdom	900	5,527	4,974,300	30,355	3.0%
Canada	760	2,197	1,669,720	27,437	2.8%
Australia	500	1,237	618,500	25,556	2.0%
Japan	135	1,106	149,310	34,874	0.4%
Indonesia	30	118	3,540	974.4	3.1%

As can be seen from the above table, Indonesia rank highest in the ratio of annual membership fee for fully qualified actuaries in terms of GDP per capita. However, if actual earnings of fully qualified actuaries have been used for comparison which have known to be above average in other countries – at least in the order of US\$ 75,000 – 100,000 per annum as compared to Indonesia, then the membership fee for Indonesia is relatively low.

Cooperation with others

Recently, PAI has involved in providing input in the drafting of the Labor Law 13/2003 which is now being revised, headed by the employee benefit commission. PAI has also been working with the Indonesian Association of Accountants in providing assistance on actuarial technical matter related to the accounting standard on employee benefit, involving in the training of the public and of auditors through certified courses for professional development program run by the Indonesian Association of Accountants and assisting them in the drafting of the implementation guidelines of the said standard.

3. Drivers and Constraints on Growth



Market opportunity – density and penetration

As reported in the comprehensive Sigma reports No 3/2004 and No. 5/2004 published by Swiss Re., at the end of 2003, the total life premiums amounted to US\$ 1,373 million with an assets of US\$ 3.8 billion. Using density (premiums per capita) and penetration (percentage of premiums of GDP which takes into account the capacity to pay) as benchmark in making comparisons, Indonesia's life insurance market stands near the bottom with 0.66% of GDP (rank 71 out of 88 countries) ahead of Middle East/Central Asia at 0.50% but below ASEAN at 2.20% and South-East Asia at 3.50%. The Indonesian Insurance Council 2003 Report indicated that the profitability of the insurance industry in 2003 was low, just over US\$ 50 million or less than 3% of life premium and interest income for the year.

The penetration statistics indicate that there is a strong correlation between the level of per capita income and the portion spent on insurance. Thus, where per capita incomes are low, only a smaller percentage is left after essential basic needs are covered.

The density, that is premium per capita at the same period for Indonesia was US\$ 6.4 the lowest in comparison with Philippines at US\$ 8.6, Malaysia at US\$ 140.3, Thailand at US\$ 52.0, Australia at US\$ 1,128.3 and Canada at US\$ 722.8.

On the other hand, pension assets in Indonesia as reported in the OECD Global Pension Statistics Project, was 2.5% of GDP well below other regional examples (Thailand at 8.8 %, Singapore at 63.9% and Hong Kong at 17.1%) and the OECD at 39.8% of GDP. The private sector pension schemes only covers 2.6% of the total work force.

Other potential market opportunity is the development of Islamic insurance called Takaful – a Shariah-compliant insurance, that has been well developed in Malaysia since 1980 inspired by the prevailing needs of the Muslim public for a Shariah-compliant alternative to conventional insurance. A recent publication of Bank Central Malaysia summarized the 20-year experience of the Takaful industry in Malaysia. There are now 4 Takaful operators that over the period have managed to occupy a market share of 5.1% of the insurance industry in Malaysia. The assets reached over RM 5 billion in 2004 of which RM 4.3 billion in life insurance.

3. Drivers and Constraints on Growth



The following extract reproduces basic definitions of the concepts underlying Islamic insurance as opposed to the conventional insurance:

	Conventional	Takaful
Contract	An exchange contract (sale and purchase) between insurer and insured.	A combination of tabarru' contract (donation) and agency or profit sharing contract.
Responsibility of policyholders/participants	Policyholders pay premium to insurer.	Participants make contribution to the scheme and mutually guarantee each other under the scheme.
Liability of the insurer/operator	Insurer is liable to pay the insurance benefits as promised from its assets (insurance funds and shareholders' fund).	Takaful operator acts as the administrator of the scheme and pays the takaful benefits from the takaful funds, and in the event of deficiency, takaful operator will provide interest-free loan to rectify the deficiency.
Investment of fund	There is no restriction apart from those imposed for prudential reasons.	Assets of the takaful funds are invested in Shariah-compliant instruments.

As Indonesia is one of the largest Muslim country in the world, the development of Islamic insurance, where actuarial principles also apply, will also grow as proven in Malaysia. From the statistics, there is plenty of room for Indonesia to grow. As the income per capita, insurance and pension assets grow then the needs for actuarial expertise is also high.

4. Actuarial Education and International Standards



This section identifies areas for development in the actuarial education system in Indonesia to bring it in line with international standards.

Entry to the profession

PAI is the qualifying body for actuaries in Indonesia. Qualification is achieved primarily by passing a set of examinations, addressing the theory of actuarial techniques and their practical application in the areas where actuarial skills are brought to bear.

The examinations are conducted twice a year, in June and November, in Jakarta, by an examination committee formed by PAI. The examination committee of PAI consists of 7-8 fellows who write and conduct the examination. Since 2002, PAI has been working with a number of universities who are responsible to prepare examination papers of certain subjects and continues doing so as well as exploring opportunity with more universities.

Although PAI is setting its own examination so that Indonesian candidates do not need to sit for examinations from other associations, nevertheless some Indonesian actuaries have studied abroad and have successfully written examinations from the Society of Actuaries, the Institute and Faculty of Actuaries or the Institute of Actuaries of Australia.

Examination system

The associate and fellow levels examinations, heavily related to life insurance and pensions, with no professionalism subject, which cover the following subjects:

Associate Level Subjects	Fellow Level Subjects
AAI-1 Probability and Statistics	A1-1 Actuarial Mathematics–Advanced
AAI-2 Mathematics of Finance	AI-2 Pensions
AAI-3 Actuarial Mathematics–Basic	AI-3 Selection of Risks
AAI-4 Construction of Mortality Table	AI-4 Valuation and Accounting of Life Insurance
AAI-5 Economics – Basic	AI-5 Investment and Government Regulations

4. Actuarial Education and International Standards



Most entrants to the profession have studied for a mathematical degree at universities before joining the profession. It is, however, possible to join with a good knowledge of mathematics with higher school leaving stage. Once qualified, actuaries are expected to continue to study through a program of CPD – this is yet to be developed. There is additional requirement before being admitted to the class of fully qualified actuaries where applicants must sit for a 2-hour session of standard of practice training.

During the period of 2000-2004, a total of 2,110 students have sit at least one PAI examinations (1,595 for associate level and 515 for fellow level), with an average passing rates of just under 30% for both associate and fellow levels.

Successful completion of the first 5-examination satisfy the membership requirements as an Associate (ASAI, stands for Associate of the Society of Actuaries of Indonesia). Satisfactory completion of all 10-examination is required for Fellowship (FSAI, stands for Fellow of the Society of Actuaries of Indonesia). Only those who have passed associate level can sit the fellowship level examinations.

Both associate and fellowship level examinations are and become more difficult. Becoming an actuary requires a fair amount of study and preparation. However, unlike other professions, in the actuarial profession, students can earn while they learn. Many students received on-the-job training while enrolled in the examination process.

Employers are generally supportive and may give students study time during working hours, pay examination fees, and award raises for each examination passed. However, most employers prefer to hire people who have started the series of examinations on their own and have already passed at least two or three examinations. Also, many prospective actuaries are now beginning to take examinations while in college with the aid of self-study.

Formal actuarial education

Realizing that the actuarial profession has a key role in the insurance and pension industries and there are only a small number of professionals capable of doing the needed actuarial work, a graduate level university master degree course in actuarial science was created by FISEK, in September 1997 at the University of Indonesia – Business School (MM-UI). This program offers 20 courses balanced between management and actuarial science. Actuarial topics include life and non-life insurance contingencies, financial mathematics, risk assessment, survival models, credibility and professionalism. The graduates of the program have received competitive offers to work in the insurance and pension industries.

4. Actuarial Education and International Standards



Further, was the opening of a graduate level university master degree course in actuarial science at the Bandung Institute of Technology (ITB), in cooperation with the Gronigen University in the Netherlands. The Bogor Institute of Agriculture (IPB) is still in the process of opening up similar course.

In addition, there are 2 other institutions offering actuarial course, Financial Institution Training Center of the Department of Finance (BPLK) and FISIP-UI of University of Indonesia, both offering diploma degrees.

The lack of coordination between universities has made each program becomes weaker in promoting the growth of the programs. In addition to that, students enrolling into the program are mostly part time – this is in contrary to other professions where most candidates can devote full of their time.

Cooperation with Universities

One of the attempts that PAI made was to form cooperation with universities in assisting PAI to prepare examination questions.

Since 2002, PAI has been working with a number of universities who are responsible to prepare examination papers of certain subjects – associate level examinations. This cooperation with universities is part of PAI effort to become full member of IAA by gradually upgrading its qualification syllabus and examination process towards IAA standards.

The IAA examination syllabus covers the subjects of financial mathematics, probability and mathematical statistics, economics, accounting, modeling, statistical methods, actuarial mathematics, investment and asset management, principles of actuarial management and professionalism.

The fellowship level examinations are still being handled by an examination committee within PAI.

The International Actuarial Association

The International Actuarial Association, founded in 1895 is a worldwide association of professional actuarial associations and individual actuaries. It exists to encourage the development of a global profession, acknowledged as technically competent and professionally reliable, which will ensure that the public interest is served.

4. Actuarial Education and International Standards



The IAA has the following objectives:

- a. develop the role and enhance the reputation and recognition of the actuarial profession and individual actuaries throughout the world;
- b. promote high standards of professionalism among actuarial associations and among actuaries throughout the world to ensure that the public interest is served;
- c. advance the body of knowledge of actuarial science and its applications;
- d. further the personal professional development of actuaries throughout the world;
- e. promote mutual esteem and respect amongst actuaries;
- f. provide a forum for discussion among actuaries and actuarial associations throughout the world; and
- g. represent member associations in discussions with international bodies.

The IAA fosters professionalism among actuaries worldwide by requiring its member associations to establish and maintain standards of conduct and practice and an appropriate disciplinary process. The IAA offers the expertise of the global actuarial community to provide voluntary assistance to international public policy makers and service organizations.

At September 1st, 2005, the IAA had 52 full member and 23 associate member associations in about 70 countries, which cover some 35,000 individuals who are full members of their association and work in around 90 countries.

Actuarial associations which are full members of the IAA are required to have in place a code of conduct meeting certain requirements, a formal disciplinary process, a due process for adopting standards of practice and should ensure that by 2005 their process for accrediting fully qualified actuaries is in compliance with the IAA education guidelines and syllabus for an internationally recognized actuarial qualification.

PAI is currently an associate member of the IAA, but has recently applied to become full member. There are a number of requirements before an association can be accepted as member of the IAA.

4. Actuarial Education and International Standards



Conformity to the syllabus of the IAA

Comparing the examination subjects of PAI and the IAA, it is similar in general in that it covers more than 75% of the same topics addressed and examined for qualification. However, full conformity is a necessity and the detail, depth and content of the syllabus and the text references must also be upgraded not just the subjects alone.

There is a question of whether PAI should still conduct its own examination given the cost of conducting it, the energy and availability of time of the examiners. There is a question of the quality, the rigorous, the creativeness, the level of difficulty of questions of the examination papers.

The conduct during examination sessions has also been weak, in the sense that it requires more strictness and more discipline imposed, such as strict in the timing – when to start and finish, not to touch the examination paper before instructed, things to bring into the examination room, calculators used, etc. Should PAI continue to conduct its own examination process, they need to be trained in how to write variety of examination questions with their tricks and traps.

As an example, the oldest actuarial association in Asia, the Institute of Actuaries of Japan, clearly expressed the need to meet higher standards as sited in its report titled ***‘Pave the Way to the 21st Century’***, which states that individual financial institutions need to

“compete under the highly transparent market rules based on the principle of self responsibility. In concrete the importance will increase in the ‘priority of management efficiency’, ‘advanced risk management’, and ‘development of unique management strategy’ in the management of financial institutions.”

“While the principle of self responsibility is required to enterprises under intensified competition, the involvement of actuaries will become more important to reinforce risk management for business management. For actuaries in the insurance and annuity businesses, the weight lay on their role as the so-called ‘risk controller’, namely how to maintain the balance between the competitiveness and soundness in these businesses, is expected to increase its importance. For this end, it should be necessary to thoroughly promote the improvement of knowledge and skills of investment and finance as well as the acquisition and application of modeling techniques as pointed out in the IAA (International Actuarial Association) Education Guidelines and Syllabus.”

4. Actuarial Education and International Standards



Mutual recognition

There exist a number of mutual recognition agreements – bi-lateral or multi-lateral – between full member associations of the IAA whereby a fully qualified actuary from one country can be recognized in another country. This is the case in particular within the European Community and between a number of European and North American associations as well as Japan and Australia for example. The recognition by the local actuarial association can be the basis for granting the right to practice in a statutory capacity.

Unfortunately, that route is not available since Indonesia is not a full member association of the IAA. It means that the Indonesian actuarial profession is well protected against external competition but also that it is not much exposed to opportunities for exchanges and cross-fertilization within the global actuarial community.

International professional support

For a period of around 4 years, from the beginning of 1998 to September 2001, beside the creation of the master degree course, FISEK have made the following important contributions to the development of actuarial profession in Indonesia:

- a. provide teaching assistance, counseling services, mentoring and support to students;
- b. encourage students to write international professional examinations and organize study sessions for Society of Actuaries examinations;
- c. provide intensive preparatory courses, monitoring and practical exercises as well as study material;
- d. mentoring program within insurance companies;
- e. provide scholarship for talented students.

The aim of the assistance was to ensure actuaries have the sense of business with knowledge of finance, accounting and economics, keen analytical and problem solving skills, specialized mathematics knowledge, strong computer skills, and solid written and oral communication skills.

In 1995, PAI has also received some assistance from the Institute of Actuaries of Australia in that a number of short courses in actuarial science were jointly conducted. This course however, lasted only for one term and there was no follow up since.

4. Actuarial Education and International Standards



Other countries have chosen different route. Countries like Singapore, Philippines, Malaysia rely on the Society of Actuaries and other examinations for the associate level and focus resources on country specific examinations for fellowship level. Language problem can be addressed and for later examinations any way essential to know English to access study material and literature.

The following table shows the professional qualification paths taken and the availability of actuarial science taught in the universities in a number of countries in the Asia Pacific region as reported in the 4th International IAA Fund meeting in Bali, Indonesia, in September 2005:

Country	Professional Qualification Paths	Local Fellowship Qualification	Universities Teaching Actuarial Science	
			2003	2005
Australia	IAAust	Yes	4	4
Japan	IAJ	Yes	3	3
South Korea	N/A	No	3	1
Hong Kong	SoA, F&I, IAAust	No	3	3
India	F&I, ASI	Yes	1	None
Taiwan	AIRC, SoA, IAJ	Yes	2	2
New Zealand	F&I, IAAust	No	1	None
Indonesia	SAI	Yes	3	2
Singapore	F&I, SoA, IAAust	No	1	2
Philippines	SoA, ASP	Yes	5	3
Thailand	SoA, F&I	No	N/A	2
China	SoA, F&I, SAC	Yes	9	10
Malaysia	SoA, F&I, IAAust	No	2	2
Vietnam	SoA, F&I	No	1	1
Sri Lanka	F&I, SoA	No	None	None

IAAust = Institute of Actuaries of Australia; IAJ = Institute of Actuaries of Japan; SoA = Society of Actuaries; F&I = Faculty of Actuaries and Institute of Actuaries, ASI = Actuarial Society of India; AIRC = Actuarial Society of the Republic of China; SAI = Society of Actuaries of Indonesia; ASP = Actuarial Society of the Philippines; SAC = Society of Actuaries of China.

Except for Indonesia, Japan and South Korea, most of the countries listed above have one or more recognition of qualification other than of its own.

5. Increasing Actuarial Quantity and Quality



This section identifies practical options and incentives for increasing both the quantity and quality of actuaries in Indonesia with a time-bound plan.

Quantity

The number of actuaries in Indonesia seems to be low compares to the demand of actuarial work existed at present. There are almost 200 life and non-life companies in Indonesia plus 20 or so actuarial consulting firms. If the non-life companies are required to have an in-house actuaries and for a company there at least 2 actuaries is required, then Indonesia probably needs at least 500 qualified actuaries in these traditional areas of work, let alone increasing demands of actuarial expertise in other fields. Thus, there is a shortage of supply of the actuarial expertise.

The following table shows the comparison of the number of actuaries – fellows and associates including students in a number of countries in the Asia Pacific region as reported in the 4th International IAA Fund meeting in Bali, Indonesia, in September 2005:

Country	Number of Fellows			Number of Associates and Students		
	2003	2005	% Incr.	2003	2005	% Incr.
Australia	1,237	1,382	12	1,417	1,581	12
Japan	1,016	1,109	9	2,504	2,430	(3)
South Korea	379	542	43	184	240	30
Hong Kong	205	252	23	89	109	22
India	132	203	54	2,214	4,123	86
Taiwan	131	154	18	600	171	N/A
New Zealand	109	142	30	94	116	23
Indonesia	118	124	5	183	185	1
Singapore	59	84	42	119	128	8
Philippines	61	63	3	126	142	13
Thailand	N/A	60	N/A	N/A	157	N/A
China	43	50	16	35	164	369
Malaysia	45	45	0	168	N/A	N/A
Vietnam	6	> 10	< 67	15	N/A	N/A
Sri Lanka	5	4	(20)	8	2	(75)

5. Increasing Actuarial Quantity and Quality

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Potential candidates

Although there are only 4 formal institutions offering actuarial courses, with one is in the process of establishing one, but there are 38 universities across the nation offering undergraduate degree in mathematics and statistics which can accommodate almost 2,000 or so undergraduate students, not to mention students from other disciplines with strong mathematics background. This is one of the potential source of candidates in increasing the number of actuaries in Indonesia.

Recognition of foreign qualification

Recently, PAI has in response to the market demand and the request of Ministry of Finance, for accepting, recognizing and allowing actuaries qualified elsewhere to be able to sign off statutory reserve. The procedural criteria has been set as he/she must possess fellowship from any reputable actuarial associations, not currently under suspension, have working permit and only to perform duty on behalf of the company he/she is currently working for. The recognition expires along with the expiration of the working permit. Multinational companies operating in Indonesia can use services of actuaries from other countries and some 20 fully qualified actuaries have been doing work in Indonesia but not in a statutory capacity.

The following table compiled from various sources shows the number of actuaries in 2003 in some of the major top countries relative to the life premiums, Gross Domestic Product (GDP) and population:

Country	Fully Qualified Actuaries	Life Premiums Million \$	Actuaries per \$ Million Premiums	GDP \$ Billion	Actuaries per \$ Billion GDP	Population ('000 000)	Actuaries per 1 Million Population
Indonesia	118	1,373	85.9	209	0.6	214.5	0.6
Average			21.7		1.2		39.4
USA	15,957	480,919	33.2	10,988	1.5	290.2	55.0
Japan	1,016	381,335	2.7	4,429	0.2	127.0	8.0
France	1,207	105,436	11.4	1,759	0.7	59.8	20.3
UK	5,527	154,842	35.7	1,797	3.1	59.2	93.4
Germany	1,306	76,738	17.0	2,418	0.5	82.3	15.9
Switzerland	298	24,713	12.1	320	0.9	7.2	41.4
Netherlands	690	25,371	27.2	515	1.3	16.2	42.6
Italy	173	71,694	2.4	1,476	0.1	57.5	3.0
Australia	1,237	22,341	55.4	506	2.4	19.8	62.5
Canada	2,197	22,841	96.2	867	2.5	31.6	69.5

5. Increasing Actuarial Quantity and Quality



Wider fields

A special way to create a wider fields for actuaries in the public sector is to regroup Government of Indonesia actuaries in a single unit as is done in some countries. This may fit well with Financial Services Authority (OJK).

Needs have to be met in the social security areas, and in public sector pensions, where expensive promises may turn out to have adverse consequences. Insurance and private pension schemes supervision require actuarial involvement to address properly the real long-term financial issues. And there are other areas where the Government needs advice on the management of financial risk resulting from future events and costing and solvency information regarding strategic policy options.

Not having an Office of the Actuary would not mean a Government cannot obtain actuarial advice. Each government unit which requires actuarial advice may employ its own actuaries or hire external consultants. However, a more fragmented approach may result in poor accessibility to actuarial advice in areas not familiar with their role, in newly emerging areas or areas where confidentiality is an issue. A larger pool of in-house actuaries will raise the profile of actuaries both internally and externally, improving the accessibility and availability of advice to Ministers and government units.

Advice is also likely to carry more weight when it comes from a more authoritative and independent source where conflicts of interest are perceived as minimized. In addition, an Office of the Actuary should provide an effective bridge of communication between government units and the actuarial profession and thus ensure that the role of actuaries is properly understood within the corridors of power.

In our opinion, an Office of the Actuary is cost-effective and can offer important advantages over a fragmented approach in terms of independence, availability, accessibility, continuity, confidentiality, authority, and quality of actuarial advice. This is an important consideration for Indonesia. The pooling of the tasks can equalize the workload over time. It will also ensure immediate availability of advice on new actuarial problems wherever they arise in any government or public sector unit. Both these factors result in an improved cost/benefit ratio.

A larger critical mass will facilitate sensible remuneration solutions and help the recruitment of well qualified actuaries by offering mentoring and a stimulating professional milieu conducive to higher professional morale and ethics. Maintaining the public sector market open to competition through a combination of internal and external bidding and recruiting actuaries with private sector experience will ensure cross-fertilization, will prevent complacency and maintain good contact with economic realities.

5. Increasing Actuarial Quantity and Quality



The Office of the Actuary does not need to enjoy a monopoly; in Korea for example the FSS could continue to employ a significant number of actuaries given the need for them to be involved as well in monitoring and examination work. However, it is more difficult for an actuary employed in other departments to develop and maintain its professional expertise and to benefit from the intellectual stimulation of contact with professional colleagues. Another very important factor is the need to offer a reasonable career structure for actuaries, or perhaps to offer responsibilities and salary sufficiently attractive to be able to recruit good quality staff from the private sector. There is also less likely to be a suitable environment or infrastructure for recruiting and training student actuaries in small units.

Quality – where from?

Indonesia, as a member of OECD, APEC and WTO, needs an actuarial profession where international standards and codes of practice prevail and where the reporting is done according to international standards. Transparency, credibility and quality are key issues. To achieve mutual recognition, the governance of the profession must much more closely resemble that of the leading countries that provide the largest pools of capital investments and are key trading partners. In this context, governance means self-governance. Professional organizations must build the structures necessary for them to become self-governing, that is, be responsible for their own entrance requirements, examination and certification process, standards of practice, rules of conduct and discipline procedures, and, finally, for the maintenance of qualification through continuing professional development.

Self-governance

Self-governance is the process whereby responsible leaders diligently manage the elements of a profession, which comprise:

- a. examination process;
- b. entrance requirements;
- c. certification;
- d. standards of practice;
- e. professional ethics;
- f. disciplines;
- g. peer review – internal and external;
- h. management of profession – professionalism.

All of these areas must become the responsibility of the members of the profession, with no direct government control or involvement although within an appropriate regulatory framework.

5. Increasing Actuarial Quantity and Quality



‘**The Blue Book**’ is that comprehensive set of documents which govern the actuarial profession in Canada and constitutes an exhaustive inventory or checklist of responses to actuarial issues.

The actuarial profession enjoys a high degree of recognition in the Canadian legal environment, which comprises both the common law popular in English speaking countries and the civil code used in Indonesia and most of Western Europe. It relies on other associations, namely the Society of Actuaries and the CAS, to which Canadian actuaries participate actively, for the education and examination of actuaries. There is a high level of cooperation with the universities, a few of which offer a strong actuarial program supported by research activities. For historical reasons, it makes provision for the recognition of actuaries having qualified through alternative sets of examinations. It serves the needs of both English speaking and French speaking actuaries, so it has accommodated a language other than English in its systems.

Future development – the way forward

There are a number of things that need to be done for improvements of PAI as a professional organization – this is also realized and part of the mission statements of the new leaders of PAI elected recently.

The mission statements of the new leaders of PAI elected recently are:

- improve the quality of Indonesian actuaries;
- improve existing and to add more standard of practices;
- conduct CPD with accreditation;
- continue processing the application to become full member of IAA;
- improve communication amongst members;
- establish relationship with other professional bodies;
- optimization the use of the office space owned by PAI;
- improve relationship and cooperation with universities in order to improve the quality of examinations and education.

5. Increasing Actuarial Quantity and Quality



A more explicit list of potential initiatives comprises:

- become full member association of the IAA is a must and urgent by complying with all its requirements. Money is no object, annual fees would be about US\$1,300 (124 FQA x C\$12,50). By becoming full member of the IAA, PAI will receive continuous international support, once the standard is up to the international level, thus creating mutual recognition to avoid being washed out when the AFTA is in place;
- create training center, improve databases and internal communication means through website (may imitate websites of better associations) and production of magazine or gazette, make PAI building to function as a full secretariat, a place for gathering of members, form a library, build this facility as training center;
- seriously decide whether need to conduct its own examination system and process in terms of costs, quality and efficiency;
- need to find financial support in subsidizing students who write international examinations instead or on top of PAI examinations;
- improve communication and relationship with other professional organizations, such as the accounting association – this has been done recently with PAI taking part of drafting the implementation guidelines of the new statement of financial accounting standard on employee benefits;
- create awareness of actuarial profession in the public and in the interest of mathematics students in all universities in Indonesia; Ministry of Finance can play an important role for awareness and increase demand for actuarial work and reporting such as the financial condition report for life insurance companies – thus need to qualify the personnel of the Ministry of Finance to better review and examine the quality of such reports;
- promote a culture of lifelong learning through a well planned CPD, create more standards, create peer review system of compliance, impose and monitor disciplinary process and procedure;
- adopt due process of the procedure in setting standards – this could easily be done through the established standards, such as of the IAA;

5. Increasing Actuarial Quantity and Quality



- take maximum advantage of the presence of foreign qualified actuaries working in Indonesia by requesting them to contribute their intellectual expertise, as part of their recognition and acceptance in the statutory capacity; this could be the means for current members becoming exposed to peer pressure on issues of discipline, standards, education and performance but will enhance their potential for future penetration of ASEAN markets by Indonesia-based entrepreneurs who will in due course enjoy the leverage of the biggest regional domestic market;
- promote facility such as seminars and other means to ensure that more expertise of members in the wider fields other than traditional fields by conducting and encouraging members to participate.

Most of the above requires funding – not permanently but temporarily for a number of years subject to improvement in each of the areas needed funding with a given assessment criteria for success.

6. Recommendations



Funding assistance

In the course of the recent Morris Review of the actuarial profession set-up by the UK Government, it was indicated that in the UK the profession spends “approximately £2 million per annum (over 40% of subscription income) on a combination of standard-setting, discipline, compliance monitoring and other activities mainly in relation to statutory actuarial roles.”

Although the proportion may vary with the country and the size of the association, it is typical for local associations to spend considerably in support of professional activities.

It is considered that the following areas could make a jump start for the profession and for PAI which require external means of funding:

- in the documentation, codification and adaptation of the standards of practice, code of ethics, compliance monitoring and disciplinary procedures;
- in establishing training programs and other means of communications to bring current actuaries up-to-date and to inform the business community of the substantial changes taking place – including training potential students to be more qualified actuaries meeting international standards;
- in the making of study material available for Society of Actuaries examinations and PAI Fellowship examinations, and in the continuation of cooperation and coordination with universities, under new syllabus;
- in the launching of a scholarship program to the actuaries involving in the public policy development;
- in the upgrading and refurbishing of secretariat office, revitalization of website and publications;
- in the setting up of databases and library as a knowledge center – may acquire the existing resources built during the FISEK project.

6. Recommendations



Initiatives

It is essential that PAI commits promptly to the following initiatives, also considered as a multi-shock attack to jump start the change, if it is to be a force in the financial sector in Indonesia and recognized internationally:

- **PAI working committee**
It is recommended that a mandate and time table be established and formally reviewed and minuted monthly. The tasks to be undertaken and monitored are summarized as follows:
 - elements of self-governance;
 - governance tools ;
 - entrance requirements;
 - certification;
 - continuing professional development;
 - research and standards process;
 - standards ;
 - ethics and discipline;
 - communication.

- **Continuing education**
 - Members of a revitalized PAI will be required to maintain and upgrade their knowledge and skills through a continuing education program. External sources should be encouraged to assist setting up a program. Other organizations may also be able to assist.

 - PAI and/or Indonesian universities to develop a program to be offered by mid 2006 to provide for the continuing professional development of qualified actuaries. A continuing development program may include participation in courses, professional meetings or other formal events of equivalent standing, any other activity of professional development such as management, communication, reading, training, teaching, etc., not necessarily of a technical nature.

 - In cooperation with the Ministry of Finance, Indonesian Insurance Council (DAI) or other suitable organization, develop a series of mandatory intensive courses for appointed actuaries to be offered regularly starting in 2007; Appointed actuaries perhaps required to write selected Society of Actuaries examinations.

6. Recommendations



- **University degree course**
 - Revitalize the University of Indonesia Actuarial Magister Management Degree program, as well as the program at Bandung Institute of Technology, including future opening of such courses, with better coordination.
 - Need to review the syllabus of the Diploma program at the University of Indonesia and then upgrading it to undergraduate degree.
 - Make the election subjects on actuarial matters in undergraduate level degree in mathematics and statistics to be compulsory.
 - Establish on-going promotion and public relation for awareness.
- **Ministry of Finance**

In order that the actuarial profession be upgraded, the continuing support and assistance of the regulator will be essential. In particular, they will need to be proactive and if the proposals in this report are to be implemented a program similar to the one described below should be adopted. Need to stimulate demands and to regroup actuaries working for the Ministry of Finance into a single unit if not within a wider Office of the Actuary.
- **DAI, Pension Fund Association (ADPI) and DPLK Association**

The support of the industry associations for the development of a self-governing and widely respected actuarial profession is needed to ensure that the senior management of the member companies appreciates the advantages for a de-regulated environment.
- **Innovation**

Need to promote the need for research in all its areas of work. One way of doing it quickly is to rebuild the mortality team who constructed the Indonesian Mortality Tables several years ago. The extension of this research can cover pension schemes. Other research areas may include social policy that is connected with or adjacent to fields of actuarial activity, such as state pension and aging, consumers' understanding of risk in investment, the future of participating insurance business, future demand for equities and bonds, relationship between actuaries and auditors, the use of stochastic modeling technique in actuarial work and its practical application, risk management, etc.

6. Recommendations



- **Promotion and external relations**

The profession needs to promote its status of the profession of actuaries and the standing of those who are engaged in it. Such promotional activity must related actuaries as a group, neither firms of actuaries nor individual actuaries in relation to their commercial work. Promotional or public relation activity may include:

- explaining the nature and role of actuaries to those who might use actuarial services and to those who might become or advise others to become actuaries;
- communicating the views of the profession to industry, government, press, etc., so that those who make decisions on issues of public policy and those who influence the policy-makers are aware of any actuarial considerations that are relevant to the topics under discussion;
- attract students from universities to increase the pool of actuarial talent.

A program for support to PAI initiatives is suggested as follows:

- Starting in 2006 organize a series of presentations to member companies on the expansion of the role of actuaries.
- Prior to the November 2006 Society of Actuaries examination session, organize and arrange for insurance companies to register their students in correspondence study groups for selected examinations; expand the program in future years.
- During year 2006, develop a program of temporary attachments in Indonesia for actuaries now working outside and for Indonesian actuaries to benefit from attachment in other countries. Adapt the offer for foreign actuaries interested in taking a sabbatical in Indonesia or via an exchange program. Seek support from international insurers and re-insurers.
- Over the period of 2006-2008, program mentoring sessions by senior foreign actuaries.
- Over the period of 2006-2008, continue pursuing and updating standard of practice, promoting Society of Actuaries examinations as well as of PAI based on the new syllabus across various universities in Indonesia, building on international recognition as full member of IAA and mutual recognition across association worldwide.

6. Recommendations



Action plan

The following immediate action plan are considered essential:

- Create a small working committee to formulate the recommendations necessary to adapt the governance of the current association to the existing and new challenges, including follow up on the submitted application for becoming full member of IAA.
- Decide on the syllabus and the examination system, either an update syllabus or an external syllabus such as the Society of Actuaries syllabus and examinations up to associate level, to replace current PAI examinations as the basis for the certification of actuaries; contract with Universities for the administration of the Society of Actuaries examinations and take steps to overcome the language barriers for the early examinations; need to negotiate with the Society of Actuaries on examinations and registration fees.
- Create a liaison committee with the mandate to coordinate PAI initiatives with those of the Ministry of Finance, the trade associations, foreign actuarial associations, including those working in Indonesia and other relevant entities in the area of education and continuing professional development; this committee promotes the recruitment of actuaries by distributing information about the profession.

6. Recommendations



Timing

The following sets down the timing of the required improvements:

Quarter 4, 2005

- Form a small working committee of local actuaries, who are enthusiastic about change, to develop and monitor the detailed plans to re-organize the actuary profession in Indonesia. The leader of this group should be someone who already has the respect and profile to lead with a minimum of opposition.
- Recommendations should be widely circulated and accepted before they are implemented. Groups to be consulted should include the end users of actuarial services, the government departments currently responsible for and users of the profession, various financial institutions, similar foreign professional bodies, and outside professional consultants.

Year 2006

- Impose tight, but workable, time constraints. There is simply a lot to do and a prolonged process will lose momentum and risk being out of date before it is in place.
- Empower this group to form task forces. There are many developments which must take place, many in the same time frame, and these task forces can do the detailed work in each area of the self-governance model described earlier. And in cloning foreign standards.
- Establish an outside independent consulting mechanism to make sure the committee stays on course and is covering all the areas required to be covered and has not gone off on a tangent. The consultants should have knowledge of foreign well-established professional organizations.
- The working committee should start by defining the finished product, that is, what the profession will be when it is capable of self-governance and obtaining equal status in the international market with the leading professions in the world.
- Establish priorities. It would be prudent to first establish a new governance structure to develop the ways and means to finance all the necessary projects.
- Upgrade and refurbish the secretariat office, revitalize the website and publications as well as set up databases and library as a knowledge center.

6. Recommendations



- Define the education and syllabus requirements which will allow future professionals to meet the needs of Indonesia.
- Decide on the modalities of the examination system to be followed and the certification process to be put in place as well as transitional arrangements while PAI examinations are being phased out.
- Revitalize the University of Indonesia Actuarial Magister Management Degree program, as well as the program at Bandung Institute of Technology, including future opening of such courses, with better coordination, and recruit international teachers to jump start mentoring of new graduates.
- Documentation, codification and adaptation of the standards of practice, code of ethics, and disciplinary procedures could be accomplished simultaneously. There are many well established systems available to obtain information to use as a basis and which will ensure international acceptance.
- Define the requirements for continuous learning by all members of the profession, to ensure that all members remain current in their knowledge. This program should be mandatory.
- Define requirements for bringing current actuaries up to the new requirements. This will include recommendations on ‘grandfathering’.
- Establish training programs and other means of communications to bring current actuaries up-to-date and to inform the business community of the substantial changes taking place. This is a very important phase of the project and must be well done.
- Put wheels in motion for training, by deciding who should be responsible for preparation and delivery of actual courses.
- Promote the Society of Actuaries examinations and PAI examinations under new syllabus across various universities in Indonesia building on international recognition as full member of IAA.
- Expand the concept of appointed actuary and prescribe mandatory courses during the transition period.
- Develop a case study for the creation of an Office of the Actuary especially in the context of OJK.

6. Recommendations



Year 2007

- Continue building up databases and library as well as making study material available for Society of Actuaries examinations and PAI fellowship examinations, under new syllabus.
- Launch a scholarship program to the actuaries involving in the public policy development.
- Implement the creation of the Office of the Actuary if deemed useful.
- Extend the requirement for actuarial certification to the non-life business.
- Eliminate barriers to entry for foreign actuaries participating to educational program, sabbatical, mentoring, and attachment exchange.

Year 2008

- Continue to establish more standards of practice.
- Continue promoting the Society of Actuaries examinations and PAI examinations under new syllabus across various universities in Indonesia building on international recognition as full member of IAA.
- After the house is in order do more public relations.

Appendix A

People consulted during the course of preparing this report are:

Masdar, he is an actuary with the Insurance Directorate, heading the Department of Insurance Supervision.

Rianto A. Djojosingito, he is now the president elect of PAI for the period of 2005-2008.

Hendrisman Rahim, he is a former president of PAI.

Jusuf Wibisana, he is the chairman of the Indonesian Accounting Standard Council.

Peter Clark, he is the former president of the Institute of Actuaries, UK.

Harvey Chamberlain, he is a Fellow of the Institute of Actuaries, currently working for a joint venture insurance company in Indonesia.

John C. Vieren, he is a Fellow of the Society of Actuaries, currently working for his own insurance practice, located in Hong Kong. He has more than 10 years experience working in the Indonesian insurance industry.

Yves Guérard, he is the Secretary General of the International Actuarial Association, a Guru of actuarial profession and is my mentor.

Isa Rachmatarwata, he is a Fellow of the Society of Actuaries of Indonesia and an Associate of the Society of Actuaries, currently working in the Department of Finance and the Director of the actuarial master degree program of MM-UI.

Prof. R. K Sembiring, he is one of the founders of the master degree program at the Institute Technology, Bandung. He is also the resident professor and lecture of the course.

M. Tugendar, he is also one of the founders of the master degree program at the Institute Technology, Bandung. He lectures at the program, as well as teaching at the BPLK actuarial training courses and is a member team of the PAI examination team writing PAI examinations.

Others, in addition, a number of actuarial students, actuaries and practicing accountants are also interviewed.