

Strategic and Entrepreneurial Actuary:
*A Solution for Development of Actuarial Profession
and Actuaries' Roles in Indonesia?*

By:

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Biography

IENE MULIATI, FSAI

Ms. Muliati is a Senior Marketing Manager of AIA Co. Ltd Singapore. Her major responsibilities include ensuring value of new business creation for life business of company, developing strategic marketing to support life business growth, and managing product launching. Before joined AIA, she was a Director of PT Temerity Inovasi International, an Indonesian management consulting specializing in Management Improvement and Corporate Finance Solution, based in Jakarta (Indonesia) from 2004 to 2006. She provided advices on corporate planning, strategic management, industry analysis, and general management issues to start-ups and established small-medium local companies and government accounts in Indonesia.

Prior to her appointment with Temerity, she worked for Watson Wyatt Worldwide from 1994 until 2003 as a Senior Actuarial Consultant and Consulting Actuary in Jakarta (Indonesia), Washington, D.C. (U.S.A.) and Toronto (Canada). She assisted a variety of large multinational and national clients in the full range of services offered by Watson Wyatt Worldwide, included, but not limited to, provided professional actuarial consulting advisory in the plan design, funding strategy, critical aspects of Initial Public Offering, Plan Merger and Acquisition, financing and cost accounting of all sorts of employee benefits arrangements under Indonesia Financial Accounting Standard, U.S. G.A.A.P and International Financial Accounting Standards.

Ms. Muliati is a Fellow of the Society of Actuaries of Indonesia (FSAI). Currently, she is a Vice President II of the Society of Actuaries of Indonesia. Prior to that, she was

Chairperson of Employee Benefits Committee from August 2005 until April 2007. She is also an Associate member of Singapore Actuarial Society.

Ms. Muliati obtained her Master degree in Management from Asian Institute of Management in the Philippines in 2004 and her bachelor degree in Mathematics from Bandung Institute of Technology in Indonesia in 1994.

Executive Summary

In spite of the actuarial profession has existed since 1960s in Indonesia, the growth of the actuarial profession, people's interest and public recognition toward the actuarial profession in Indonesia are still low. As of July 2007, the actuarial profession only accounted for about 0.00014% of total number of Indonesian population. Most Indonesian actuaries work for life insurance companies, actuarial consulting firms, and related regulatory bodies. Rarely do they work in other industries such as investment, general insurance, health industry, etc. Until now the actuarial profession is still unwell-known in Indonesia. People hardly recognize the profession and its roles.

In Indonesia, the growth, recognition and acceptance of actuarial profession in various industries and by the government will depend on the involvement and contribution of actuarial professionals (supported by knowledge and skills), toward the industries and also to the country. The government support for the growth of actuarial profession in Indonesia through regulation issuances related to actuarial profession involvement in a specific industry is needed, but each individual actuary's involvement is the critical point in developing and expanding the actuarial profession in Indonesia.

With the continuous changes in environment and also constant development around the world, the image of traditional actuary and the roles of actuaries should change. Today environment create more demands for strategic and entrepreneurial actuaries who acquire not only technical competence but also business sense. Evolution and paradigm shift of individual actuary should take in place. Today actuaries are required to be creative, innovative, have market business sense and high versatility toward changes.

Table of Content

	<u>Page</u>
Biography	i
Executive Summary	iii
Table of Content	iv
I. Background	1
II. Actuaries in Indonesia	2
III. Quick Peek to the Industry	6
IV. Opportunity	8
V. Challenges and Strategic Actions	10

I. Background

1. About Indonesia

Indonesia is situated in Southeast Asia and consists of more than 17,000 islands. Indonesia got its independence in 1945. The capital city of Indonesia is Jakarta, situated in the island of Java. Other cities and islands are for examples: Banda Aceh and Medan (in Sumatra), Surabaya and Bandung (in Java), Denpasar (in Bali), Pontianak and Banjarmasin (in Borneo), Makassar and Menado (in Celebes), and Jayapura (in Papua).

As of July 2007, Indonesia population size is about 234.6 million with a population size divided proportionally between male (117.4 million) and female (117.3 million). Indonesia population growth rate in 2007 is estimated about 1.213%. Mortality rate overall is estimated about 6.25 deaths / 1,000 population in 2007 while crude birth rate is estimated about 19.65 births / 1,000 population in the same year. The estimated life expectancy in 2007 is 70.16 years in which male, in average, is expected to live until 67.69 years old, while female life expectation is 72.76 years.

2. About Society of Actuaries of Indonesia (PAI)

Society of Actuaries of Indonesia or Persatuan Aktuaris Indonesia (PAI) was established in 1964 with its initial member of 30 people. PAI as a professional organization represents and regulates its members for the benefit of the profession and in the public interest. Since its establishment, PAI has run its own professional curriculum and examinations for new entrants. As a professional organization, PAI also has to ensure its member has an updated knowledge related to actuarial issues and industry they work in by conducting seminars and workshops for member continuing education and professional

development. PAI also has critical role to create and maintain cooperative relationship with Government, business community, other professions and related stakeholders.

PAI board of governors consists of President, Vice President and Secretary General, Vice President II, Treasurer and six working committees focusing on areas of Code of Ethics, Standard Practices for Insurance and Pension, Curriculum and Examination, Continuing Professional Development, Insurance, and Employee Benefits.

In December 2005, PAI has reached its milestone by being accepted as a full member of the International Actuarial Association (IAA). Another milestone was that PAI received technical assistance from Asian Development Bank for development of Actuarial Profession in Indonesia in November 2006.

3. Local Economic Environment

Banking industry and real sector are open to international players. Capital Market, Insurance and Pension Fund industries are open to international players and supervised by the Ministry of Finance (of the Government).

II. Actuaries in Indonesia

4. How to be an Actuary?

To be an actuary, a candidate should pass the professional exams organized by PAI. There are 2 levels of professional examination: the Associate (ASAI) and Fellow (FSAI) levels. There are 5 subjects for associate level and another 5 subjects for Fellow level. In total, the candidate should pass all 10 professional exams for being an actuary. Note that only those who have passed all associate level exams can sit the fellowship level examinations.

Candidates are also required to attend a Professionalism Course for both Associate and Fellow levels.

5. Profile of Actuaries in Indonesia

In spite the fact that the actuarial profession has existed since 1964 in Indonesia, the growth of the actuarial profession is still low. As of July 2007, the actuarial profession only accounted for about 0.00014% of total Indonesian population. The historical data of actuaries in Indonesia is shown in Table 1.

Table 1. Number of Actuaries in Indonesia

Year	Fellow	Associate	Total
1987	21	8	29
1988	21	8	29
1989	22	8	30
1990	24	9	33
1991	25	11	36
1992	29	14	43
1993	33	16	49
1994	36	16	52
1995	41	18	59
1996	53	28	81
1997	59	40	99
1998	71	74	145
1999	84	112	196
2000	96	133	229
2001	106	149	255
2002	114	180	294
2003	118	183	301
2004	124	186	310
2005	134	190	324
2007	130	197	327

Source: PAI Database

6. Where do Actuaries Work?

Most Indonesian actuaries work for life insurance companies and pension and benefit consulting companies. A few work for general insurance/reinsurance companies, regulatory bodies and universities (on part-time basis). Rarely do they work in other industries such as investment, risk management, health industry, etc. Until now the actuarial profession is still unwell-known in Indonesia. People hardly recognize the profession and its roles.

7. Common Tasks

Pension actuaries

Major roles of pension actuaries are to perform statutory valuations, plan design, plan documentation, conversion and liquidation, training, expense calculations for accounting purpose

Most of pension actuaries in Indonesia work as actuarial consultant and provides advisory services on areas such as statutory valuations, plan design and funding, plan administration, training related to pension matters, expense calculations for accounting purpose, and only a limited people is providing services on fund manager selection.

Demand for role of actuaries is growing, in particular on financial accounting standard valuation for pension and employee benefit plans. Demand for actuaries can also be expected to increase in the future especially in social security area.

Life Insurance actuaries

The most developed insurance industries in Indonesia is life insurance industry. Many of Indonesian actuaries work for life insurance industries and are in charge of risk

management, financial reporting and other statutory requirements, product development, pricing and market conduct.

Major roles of life (and health) insurance actuaries are to monitor financial condition and solvency of companies, advice to their boards, in particular, and identify and monitor any risks run by the company which may impact company's ability to meet its liabilities to policyholders, and design and price products, and sign and certify statutory liabilities.

Demand for life insurance actuaries can be expected to increase in the future.

8. Public Awareness & Recognition Toward the Actuarial Profession

The limited roles of actuaries' involvement in Indonesia contribute to the unwell-known profession in Indonesia. Many Indonesian are still unfamiliar with the word of actuary, its roles and scope of works.

In Indonesia, the growth, recognition and acceptance of actuarial profession in various industries and by the government will depend on the involvement and contribution of actuarial professionals (supported by knowledge and skills), toward the industries and also to the country. The government support for the growth of actuarial profession in Indonesia through regulation issuances related to actuarial profession involvement in a specific industry is needed, but each individual actuary's involvement is the critical point in developing and expanding the actuarial profession in Indonesia.

III. Quick Peek to the Industry

9. Insurance Industry

There are about 54 life insurance companies and 98 general insurance companies in the local insurance market. Life insurance penetration accounted for 5% of the population or 1.4% of GDP. Only 2% of Indonesia's population has life insurance.¹ The total assets of industry equals to only 4% of GDP, compared to Malaysia's 21% or Singapore's 38%.²

The size of business for life insurance and non-life insurance for period of 2001 to 2005 are shown in Table 2-4 below.

Table 2. Life Business Growth

Year	Gross Premium	
	(in Indonesian Rupiah)	%
2001	9.1 trillion	
2002	11.2 trillion	23%
2003	13.7 trillion	22%
2004	18.3 trillion	34%
2005	21.6 trillion	18%

Table 3. Life New Business Growth

Year	Gross Premium		Number of Insured	
	(in Indonesian Rupiah)	%	(in million)	%
2001	4.3 trillion		9.2	
2002	5.3 trillion	23%	8.7	-5%
2003	6.5 trillion	23%	6.8	-22%
2004	9.6 trillion	48%	10.6	57%
2005	9.8 trillion	2%	13.0	23%

¹ Source: Indonesia: Economic and Financial Highlights, April 2005

² Source: Indonesia: Economic and Financial Highlights, April 2005

Table 4
Non Life and Reinsurance Business Growth

Year	Gross Premium	
	(in Indonesian Rupiah)	%
2001	10.0 trillion	
2002	11.9 trillion	19%
2003	12.7 trillion	7%
2004	14.3 trillion	13%
2005	15.9 trillion	11%

Pension Industry

There are 272 pension companies in the industry consisting of 248 employer pension plans and 24 financial institution pension funds.

Total assets of industry equals to only 2.5% of GDP, compared to OECD's 39.8%, Thailand 8.8%, Singapore's 63.7% and Hong Kong 17.1%. The profile of industry as of 2006 is shown below.

	DB-EPF	DC-EPF	FIPF	Total
Count	245	35	23	303
Asset (in IDR trillion)	54.5	4.3	5.5	64.3

IV. Opportunity

10. Non-Life Actuary

Regulator Statutory Requirement on in-house Actuary in Non-Life Insurance industry may be introduced in the future. Once the requirement applied, there will be an opportunity for Indonesian actuaries to be more involved as non-life actuary.

11. Pension Actuary

Development of the Indonesian statement of financial accounting standards on employee benefits creates bigger opportunity in Indonesia and has created movement in actuarial field job in Indonesia. In 2005, almost 80% of Indonesian actuaries worked for Life Insurance companies. However, since Regulator issued requirement on financial accounting standard valuation for pension and employee benefit plan (including benefits under Labor Law), almost 22% of actuaries in life insurance industry moved to pension industry.

Development of more real social security system can also create demand for actuaries in Indonesia. Actuary with strong public policy and regulations combined with strong technical actuarial and financial management skills will be needed for reviewing and implementing social security system in the future.

12. Investment actuary

Regulator statutory requirement on better actuarial input to identify, measure and control investment risks create opportunity for Investment Actuary in pension and also insurance industry.

In pension industry, currently, existing mandatory savings programs are generally fully funded but have low investment return. Investment Actuary can help the pension funds to do asset liability management and assist in managing their portfolio and asset allocation without ignoring the financial risks for each type of asset chosen.

13. Product Development / Innovation

Majority of Indonesian population is Moslems. There is growing needs for Islamic insurance called Takaful – a Shariah-compliant insurance.

There is also a need for Supplementary Retirement Plan and/or Insurance Product to cater future financial need. As shown in table below, in 2007, 8% of Indonesian population is above age 60 and the percentage of this group will increase to 12% in 2022.

Population Distribution Percentage by Age						
Year	0-24	25-44	45-54	55-59	60+	Total
2007	46%	32%	11%	3%	8%	100%
2008	46%	32%	11%	4%	8%	100%
2009	45%	32%	11%	4%	8%	100%
2010	44%	32%	11%	4%	8%	100%
2011	44%	32%	12%	4%	8%	100%
2012	43%	32%	12%	4%	9%	100%
2013	43%	32%	12%	4%	9%	100%
2014	42%	32%	12%	4%	9%	100%
2015	42%	32%	12%	5%	9%	100%
2016	41%	32%	12%	5%	10%	100%
2017	41%	32%	13%	5%	10%	100%
2018	40%	32%	13%	5%	10%	100%
2019	40%	32%	13%	5%	11%	100%
2020	39%	32%	13%	5%	11%	100%
2021	39%	31%	13%	5%	11%	100%
2022	39%	31%	13%	5%	12%	100%
2023	38%	31%	13%	5%	12%	100%
2024	38%	30%	13%	6%	13%	100%
2025	38%	30%	13%	6%	13%	100%

Source: Data Statistik Indonesia, downloaded on 3 Jul 07

As shown in table, almost 40% of Indonesia population is below 24 years old. This class can be targeted for education plan. Insurance company can develop a product that can cater future education expenses. The social movement in Indonesia and also increasing trend of upper class Indonesian to send their children to study overseas also creates opportunity to provide product for education purposes with more choices of currency and also higher coverage.

V. Challenges and Strategic Actions

14. Challenges

The local actuaries are facing tighten competition. Not only should they compete with other local actuaries, but also with international actuary with broader experience and expertise.

Based on survey done by IMD in 2006, Indonesia was ranked 60 out of 61 in term of competitiveness. Lack of expertise and experience is a key issue that needs to be solved soon as to make the Indonesian professionals more competitive in the market.

World Competitiveness Rankings ³			
Country	2001	2003	2006
People's Rep. Of China	26	29	19
India	42	50	29
Malaysia	28	21	23
Philippines	39	49	49
Indonesia	46	57	60
Number of countries/regions ranked	49	59	61

15. Strategic Actions

To encounter the lack of skills, it is crucial to increase quality of work and professionalism, increase knowledge and skills, and master business planning and strategy.

³ Source: World Competitiveness Yearbook, 2006, published by IMD, Switzerland.

Today actuaries must acquire set of skills, both soft and hard skills, especially business acumen, including market analysis, product innovation, strategic finance and asset liability modeling. On top of that, today actuaries must also have network / relationship capital.

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