

COUNTRY REPORT - JAPAN

This report is prepared for the IAAMWG Chicago meeting in October 2017. Underlined parts in this report are mainly updated.

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NEW RESEARCH

“STANDARD MORTALITY TABLE 2007”¹

All insurance companies must accumulate Standard Liability Reserves, which is a supervision scheme like the Standard Valuation Law in US.

The Institute of Actuaries of Japan (IAJ) developed "Standard Mortality Table 2007" in 2006. "Standard Mortality Table 2007" has been adopted by the Financial Services Agency (FSA), as the mortality rate constitutes the basis for calculating the standard valuation reserve since April 2007.

Period Covered	1999-2001
Number of Contracts	100 m (Tables for death product)
Number of Deaths	0.43 m (Tables for death product)
Tables Produced	Tables for death product, annuity product and medical product
Factors	Gender(male and female)
Duration	Only ultimate rates

Every year, The Mortality Subcommittee of IAJ reviews an adequacy of "Standard Mortality Table 2007" as mortality assumptions of Standard Liability Reserves, and reports to the FSA.

“STANDARD MORTALITY TABLE 2018” (NEW)

It was concluded that "Standard Mortality Table 2007(for life insurance and for medical insurance)" would be revised from fiscal year 2018 onwards, based on evidence such as improvement in mortality rates.

On March 31, 2017, the IAJ announced the revision proposal of the standard mortality table and conducted a public comment procedure. On May 10, 2017, the "Standard Mortality Table 2018" was approved by the Board of Directors. Following the revision of the relevant Public Notice by the FSA, "Standard Mortality Table 2018" is to be applied accordingly from April 2018 onwards.

RESEARCH IN PROGRESS

There are no major research projects in progress in IAJ.

¹ http://www.actuaries.jp/lib/standard-life-table/seimeihyo2007_B2.pdf

This file is written in Japanese.

Page 2 and 3 are for death product (male and female).

Page 4 and 5 are for annuity product (male and female).

Page 6 and 7 are for medical product (male and female), which is used as a survival rate.

COUNTRY BACKGROUND

POPULATION

DEMOGRAPHICS (UPDATE)

The population of Japan is estimated by Statistics Bureau, Ministry of Internal Affairs and Communications.

Basic Information

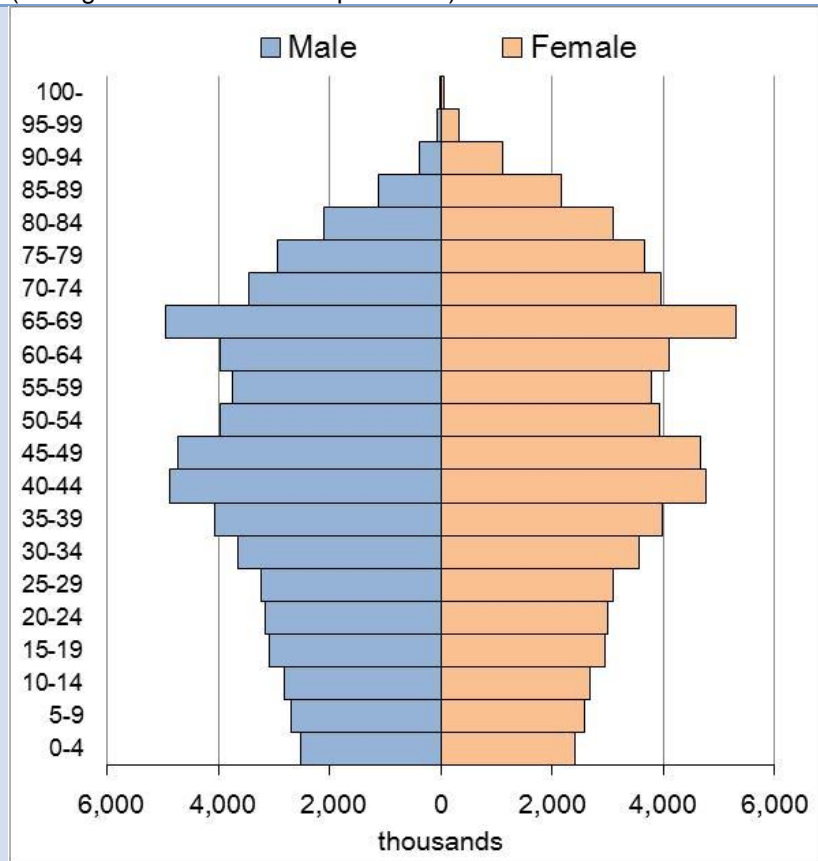
Current population 127 M estimated 1/1/2017²

Current period life expectancy

- **At birth** 80.98 male/ 87.14 female
(Abridged Life Tables for Japan 2016)³

- **At 65** 19.55 male/ 24.38 female
(Abridged Life Tables for Japan 2016)⁴

Population Pyramid as of 1/1/2017



Source: Statistics Bureau ⁵

² <http://www.e-stat.go.jp/SG1/estat/ListE.do?lid=000001184183>

³ <http://www.mhlw.go.jp/english/database/db-hw/lifetb16/index.html>

⁴ <http://www.mhlw.go.jp/english/database/db-hw/lifetb16/index.html>

⁵ <http://www.e-stat.go.jp/SG1/estat/ListE.do?lid=000001184183>

POPULATION MORTALITY TABLES (UPDATE)

Ministry of Health, Labour and Welfare (MHLW) have prepared two series of life tables - the Complete and the Abridged Life Tables. The former have been constructed every five years based on the Annual Vital Statistics and the Population Census. The latter have been on the Provisional Annual Vital Statistics and the Population Estimates. (Data refer to Japanese nationals in Japan.)⁶

On July 27, MHLW released "Abridged Life Tables for Japan 2016".⁷ Life expectancy at birth was 80.98 years for males, increasing by 0.23 from 80.75 in 2015, and 87.14 for females, increasing by 0.15 from 86.99. Life expectancy both male and female updated a record high.

Table 5. Life expectancies at birth in some countries

(Life expectancy : years, Population : 10 thousands)

Country	Period	Male	Female	Population	
Japan	2016*	80.98	87.14	12 502	
AFRICA	Algeria	2015	76.4	77.8	3 996
	Egypt	2016*	70.5	73.3	8 896
	South Africa	2009	53.5	57.2	5 400
	Tunisia	2015*	74.5	77.8	1 115
	Canada	2010 - 2012*	79.4	83.6	3 585
NORTH AMERICA	Costa Rica	2015	77.37	82.42	483
	Cuba	2011 - 2013	76.50	80.45	1 124
	Mexico	2014	72.05	77.55	12 101
	United States	2014*	76.4	81.2	32 142
SOUTH AMERICA	Argentina	2008 - 2010	72.08	78.81	4 314
	Brazil	2015*	71.9	79.1	20 445
	Chile	2013	76.25	81.44	1 801
	Colombia	2010 - 2015	72.07	78.54	4 820
	Peru	2010 - 2015	71.54	76.84	3 115
ASIA	Bangladesh	2013	68.8	71.4	15 688
	China	2015*	73.64	79.43	137 122
	Cyprus	2014	80.9	84.7	85
	India	2011-2015*	66.9	70.0	121 337
	Iran	2011	71.5	74.0	7 877
	Israel	2014*	80.3	84.1	822
	Malaysia	2016*	72.6	77.2	3 100
	Pakistan	2007	63.55	67.62	19 171
	Qatar	2011	76.47	80.95	222
	Republic of Korea	2015*	79.0	85.2	5 062
	Singapore	2016*	80.6	85.1	554
	Thailand	2015*	71.6	78.4	6 861
	Turkey	2014	75.29	80.73	7 774
	Austria	2016*	79.14	83.95	858
	EUROPE	Belgium	2014*	78.6	83.5
Czech Republic		2016*	76.22	82.05	1 054
Denmark		2015 - 2016*	78.8	82.8	568
Finland		2016*	78.4	84.1	547
France		2016*	79.3	85.4	6 440
Germany		2013 - 2015*	78.18	83.06	8 120
Greece		2014	78.45	83.51	1 086
Iceland		2016*	80.7	83.7	33
Italy		2015*	80.115	84.606	6 080
Netherlands		2016*	79.9	83.2	1 694
Norway		2016*	80.61	84.17	517
Poland		2016*	73.9	81.9	3 801
Russian Federation		2014*	65.29	76.47	14 351
Spain		2015*	79.93	85.42	4 645
Sweden		2016*	80.56	84.09	975
Switzerland		2015*	80.7	84.9	824
Ukraine		2013	66.34	76.22	4 276
OCEANIA		United Kingdom	2013 - 2015*	79.09	82.82
	Australia	2013 - 2015*	80.4	84.5	2 378
	New Zealand	2014 - 2016*	79.91	83.40	460

Reference: *In Hong Kong of 2016, life expectancy at birth for males was 81.32 years and that for females was 87.34 years. (Population: 731 ten thousands)

Note: Population in this table means mid-year estimated population in 2015 (in cases of South Africa, Bangladesh, Israel, Qatar and Thailand 2014, Russian Federation 2013, India 2012).

On the other hand, population of Japan was estimated population at Oct. 1, 2016.

Source: Demographic Yearbook 2015 U.N.

*Data offered from the government concerned.

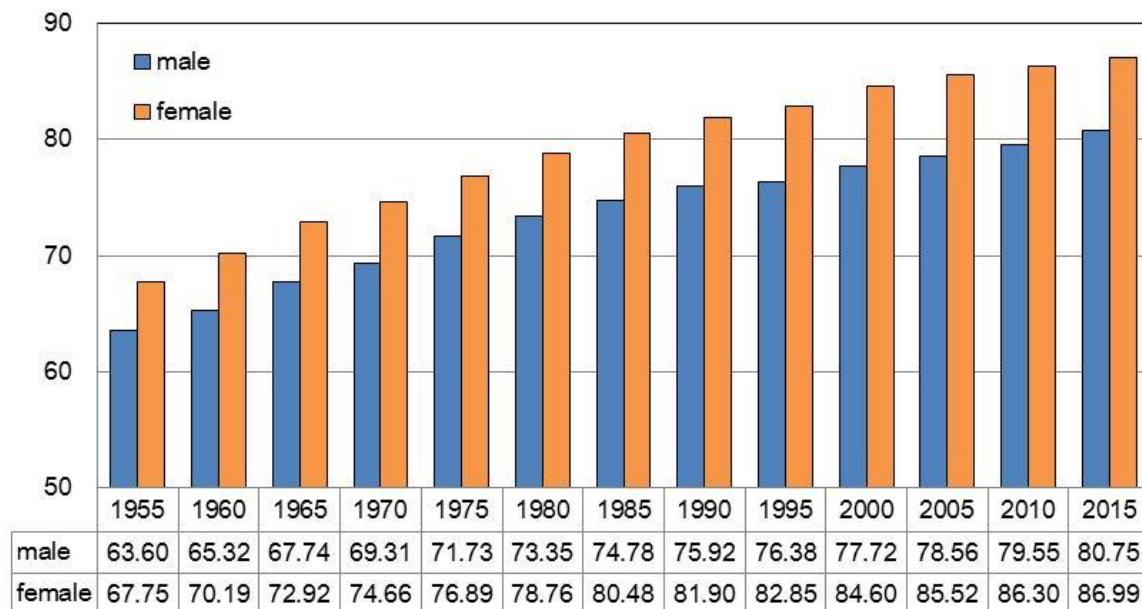
⁶ <http://www.mhlw.go.jp/english/database/db-hw/vs02.html>

⁷ <http://www.mhlw.go.jp/english/database/db-hw/lifetb16/index.html>

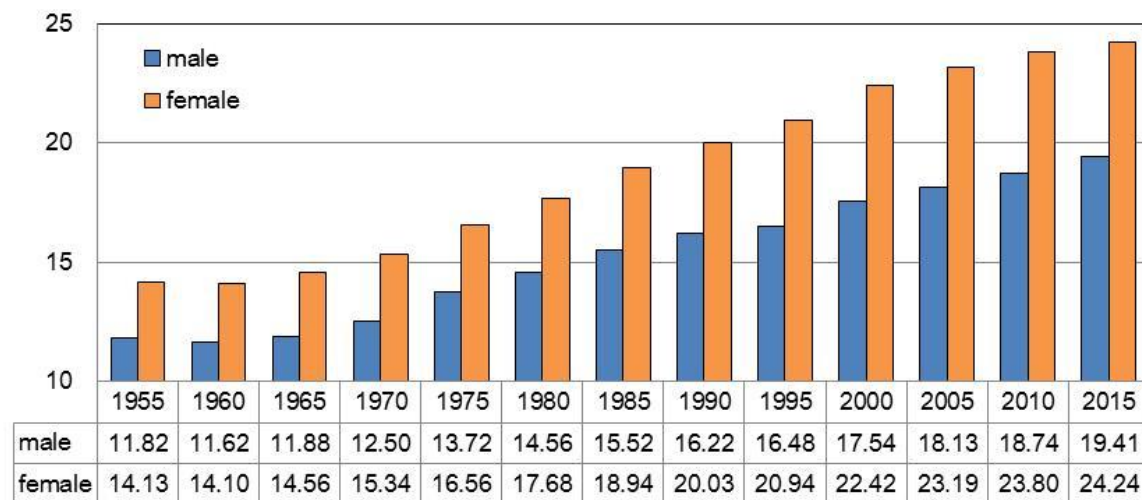
POPULATION MORTALITY IMPROVEMENTS (UPDATE)

Population mortality improvements are as follows. (Source: the Complete Life Tables)

- Changes in life expectancy at birth



- Changes in life expectancy at age 65



PROTECTION INSURANCE

MARKET BACKGROUND (UPDATE)

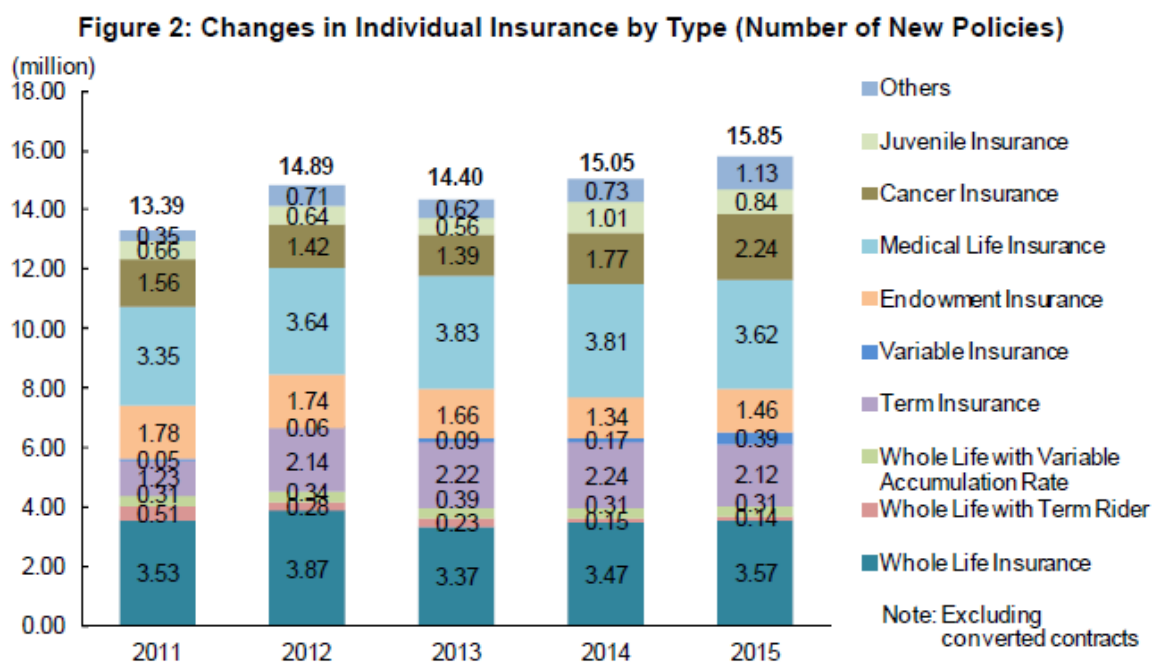
“Life Insurance Fact Book 2016”⁸ that is published by The Life Insurance Association of Japan (LIAJ) shows current life insurance market in Japan.

The summaries of Individual Insurance are as follows.

- New Policies

The number of new policies has been increasing since fiscal 2008 due to increasing sales of medical insurance and whole life insurance. While in fiscal 2013, the number of new policies decreased from the previous year in reaction to strong sales in fiscal 2012 prior to the reduction in the standard assumed interest rate, it increased for the second successive year in fiscal 2015.

By type of new policies for individual insurance (excluding converted contracts), medical insurance ranked top in number (3.62 million, 22.9% of the total), followed by whole life insurance (3.57 million, 22.5%), cancer insurance (2.24 million, 14.2%), term insurance (2.12 million, 13.4%) and endowment insurance (1.46 million, 9.2%), with the ranks switched between cancer insurance and term insurance from the previous year.

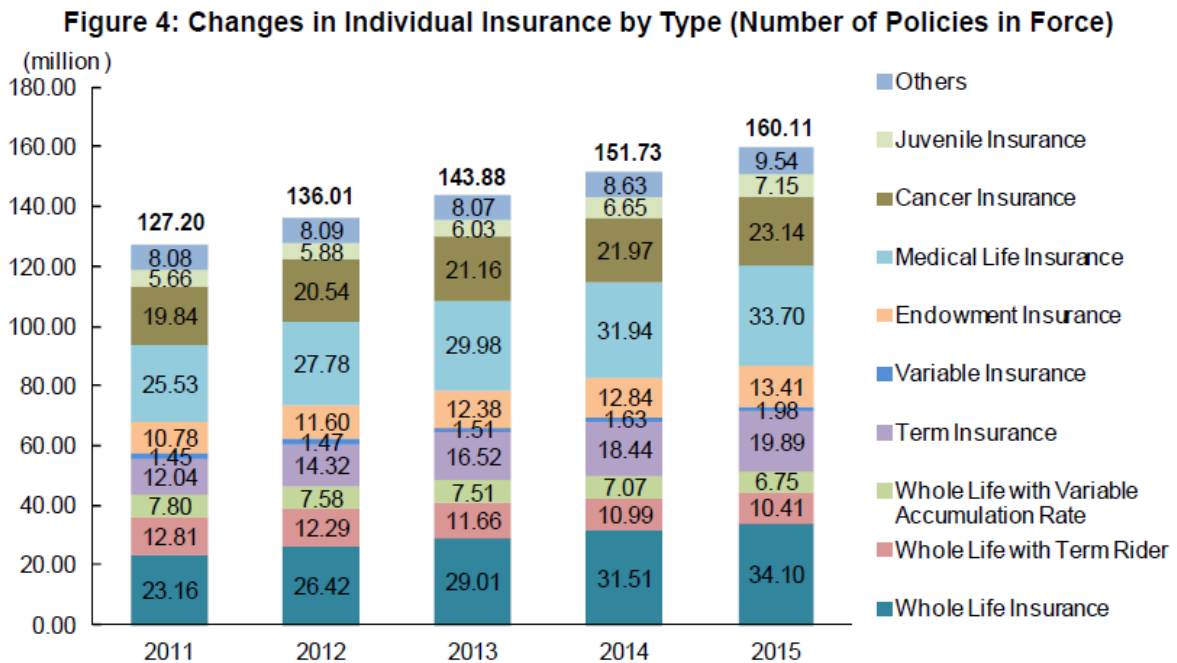


⁸ <http://www.seiho.or.jp/english/statistics/trend/pdf/2016.pdf>

- Policies in Force

The number of policies in force increased for the eighth successive year due to the strong sales of new policies. Although the amount of policies in force had been decreasing due to the current trend of increasing medical protection while reducing death protection, it increased from the previous year for the first time in 19 years in fiscal 2015.

As for the number of policies in force for individual insurance, whole life insurance ranked top (34.10 million, 21.3% of the total), followed by medical insurance (33.70 million, 21.1%), cancer insurance (23.14 million, 14.5%), term insurance (19.89 million, 12.4%), endowment insurance (13.41 million, 8.4%) and whole life insurance with term rider (10.41 million, 6.5%), with the ranks switched between whole life insurance and medical insurance.



MORTALITY TABLES

The mortality tables that the companies use for pricing are different. Some companies may use the mortality table that which is modified from Standard Mortality Table (for life insurance).

MORTALITY IMPROVEMENTS

LIAJ investigates experienced mortality rate based on data which is submitted by some life insurance companies, but does not disclose the result of the investigation. Experienced mortality rate is improving like population mortality rate.

In addition, submission of data is voluntary, not compulsory.

RETAIL LONGEVITY PROTECTION

MARKET BACKGROUND (UPDATE)

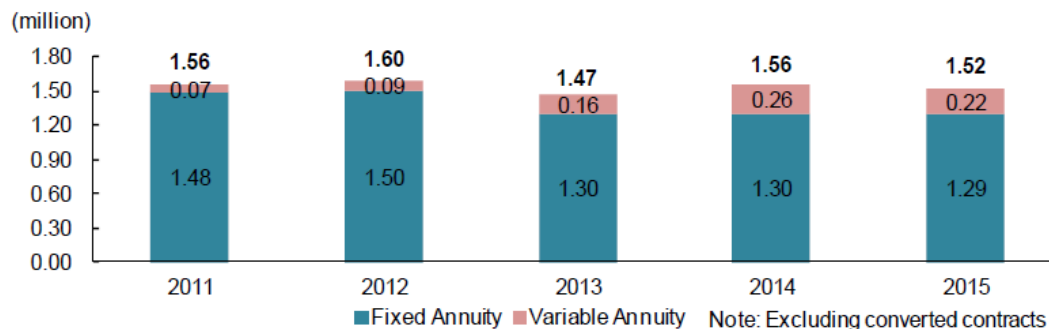
The summaries of Individual Annuity Insurance are as follows.

- New Policies

The number of new policies for individual annuity insurance was 1.53 million (96.3% y/y) (including converted contracts), decreasing from the previous year.

Of all the new policies for individual annuity insurance (excluding converted contracts), the number of fixed individual annuity insurance was 1.29 million (85.0% of the total) and that of variable individual annuity insurance was 0.22 million (15.0%) in fiscal 2015. The ratio of variable individual annuity insurance to the total number of new policies had been rising after fiscal 2012; however, it declined from the previous year in fiscal 2015.

Figure 8: Changes in Individual Annuity Insurance by Type (Number of New Policies)



Generally, banks sell single-premium VA/FA, agents sell installment-premium FA.

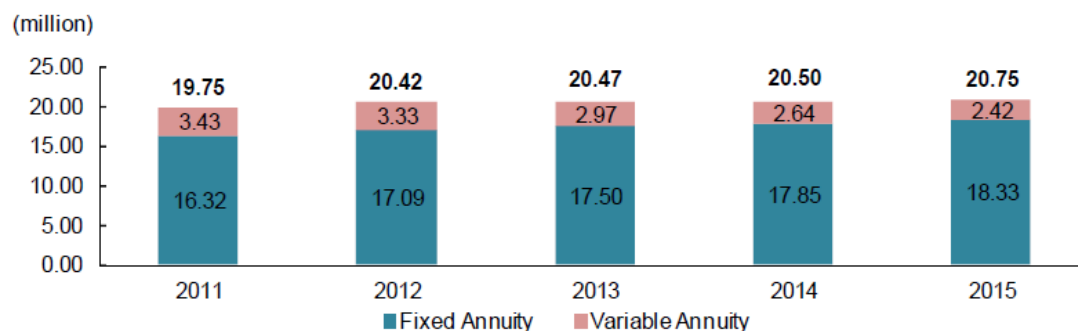
There are few life annuity contracts, using mortality rate. Most of the contracts are fixed annuity certain, not using mortality rate. Therefore, longevity risk is small.

- Policies in Force

The number of policies in force for individual annuity insurance as of fiscal 2015 was 20.75 million (101.3% y/y).

As for the number of policies in force for individual annuity insurance, that of fixed individual annuity insurance was 18.33 million (88.3% of the total) and that of variable individual annuity insurance was 2.42 million (11.7%).

Figure 10: Changes in Individual Annuity Insurance by Type (Number of Policies in Force)



MORTALITY TABLES

The mortality tables that the companies use for pricing are different. For life annuity contract, some companies may use the mortality table that which is modified from “Standard Mortality Table (for annuity product)”.

MORTALITY IMPROVEMENTS

No industrial data is available.

TAX INCENTIVE

INCOME DEDUCTION FOR LIFE INSURANCE PREMIUM

The person who paid for insurance premium can deduct up to 120,000 yen (nearly 1,200 dollars) from income.

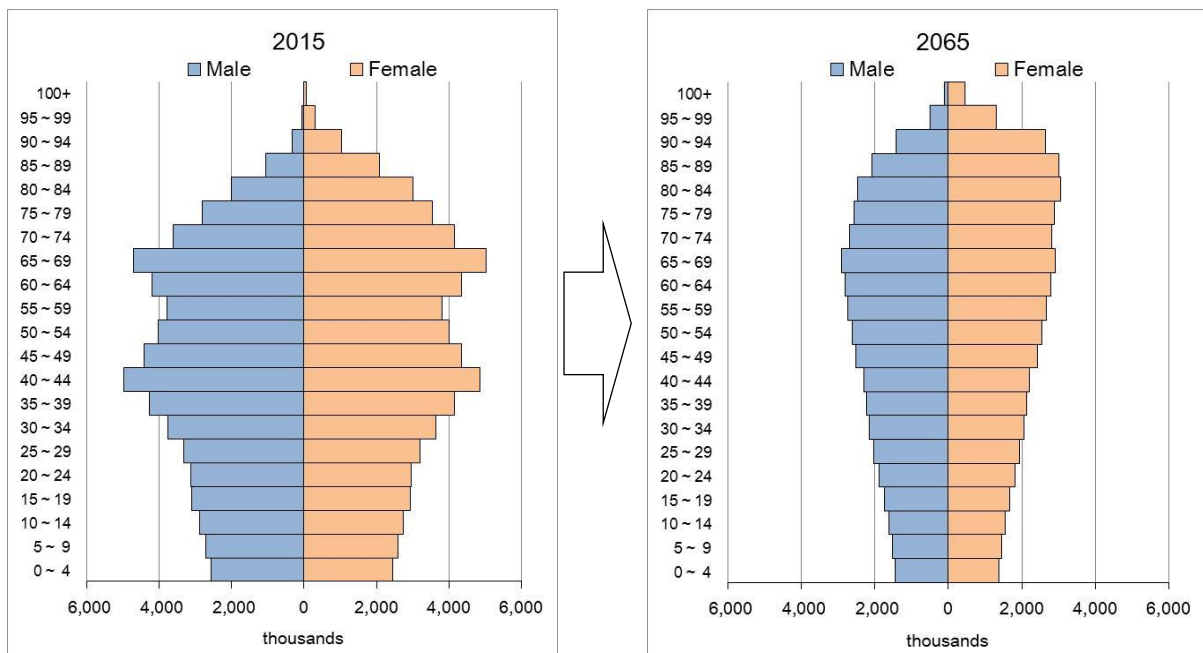
- Ordinary life insurance premium : Up to 40,000 yen (nearly 400 dollars)
- Medical insurance premium : Up to 40,000 yen (nearly 400 dollars)
- Annuity insurance premium : Up to 40,000 yen (nearly 400 dollars)

POPULATION PROJECTIONS (UPDATE)

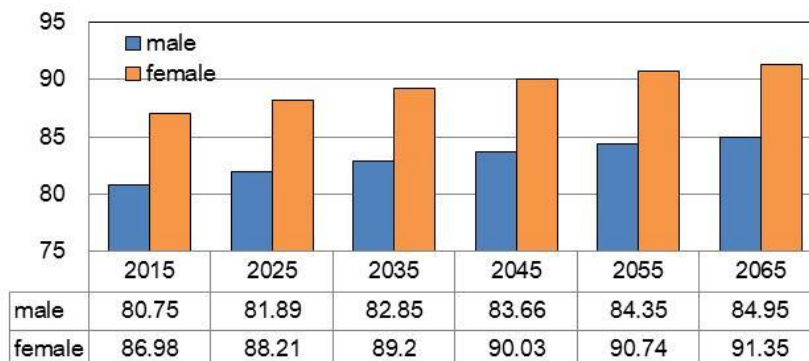
Based on the latest results from the Population Census of Japan and the Vital Statistics of Japan, the National Institute of Population and Social Security Research in Japan (IPSS) has conducted a new national population projection exercise (Population Projections for Japan).⁹ The period of the projections begins with the 2015 Population Census and continues until 2065.

According to the 2015 Population Census, which serves as the base year for these projections, the total population of Japan in that year was 127.09 million. Based on the results of the medium-fertility projection, Japan is expected to enter a long period of population decline. The population is expected to decrease to around 110.92 million by 2040, fall below 100 million to 99.24 million by 2053, and drop to 88.08 million by 2065.

- Projection of population pyramid



- Projection of life expectancy at birth



⁹ http://www.ipss.go.jp/pp-zenkoku/e/zenkoku_e2017/pp_zenkoku2017e.asp

RELEVANT ORGANISATIONS

DETAILS ON GOVERNMENT STATISTICS DEPARTMENT

- Statistics Bureau, Ministry of Internal Affairs and Communications

<http://www.stat.go.jp/english/index.htm>

The Statistics Bureau and the Director-General for Policy Planning (Statistical Standards) of Japan play the central role in the official statistical system in producing and disseminating basic official statistics, and coordinating statistical work under the Statistics Act and other legislation.

- Ministry of Health, Labour and Welfare (MHLW)

<http://www.mhlw.go.jp/english/>

MHLW publishes a lot of statistics data. In the case of product development for medical, the life insurance company may use those data, such as patient survey etc.¹⁰

- National Institute of Population and Social Security Research (IPSS)

<http://www.ipss.go.jp/index-e.asp>

IPSS released “Population Projections for Japan (January 2012): 2011 to 2060” in March 2012. The medium-mortality assumption, the high-mortality assumption and low-mortality assumption are included in this report. The mortality improvement is also considered.¹¹

IPSS creates the Japanese Mortality Database. The Japanese Mortality Database is a comprehensively-reorganized mortality database that is optimized for mortality research and consistent with the Human Mortality Database.¹²

¹⁰ <http://www.mhlw.go.jp/english/database/report.html>

¹¹ http://www.ipss.go.jp/site-ad/index_english/esuikei/gh2401e.asp

¹² <http://www.ipss.go.jp/p-toukei/JMD/index-en.html>

ACTUARIAL SOCIETY OF THE COUNTRY

- The Institute of Actuaries of Japan (IAJ)

<http://www.actuaries.jp/english/index.html>

IAJ, founded in 1899, is proud of over a century of heritage and tradition.

The IAJ structured as an incorporated association engages in a broad range of activities, including study and research of actuarial science, the education of actuaries, administration of the qualifying actuarial examination system, and facilitation of professional and cultural exchanges with overseas actuarial organizations.

- Japanese Society of Certified Pension Actuaries (JSCPA)

<http://www.jscpa.or.jp/english/index.html>

The JSCPA is a professional organization of the Certified Pension Actuaries who are engaged in pension actuarial business for the Employees' Pension Funds ("EPF"), the National Pension Funds ("NPF") and Defined Benefit Corporate Pension Plan ("DBCPP").

Both IAJ and JSCPA are full member of the IAA.

INSURANCE REGULATOR

Financial Services Agency (FSA)

<http://www.fsa.go.jp/en/index.html>

BUSINESS INTEREST ASSOCIATION

The Life Insurance Association of Japan (LIAJ)

<http://www.seiho.or.jp/english/>

All insurance companies join the LIAJ, including Japan Post Insurance Co., Ltd. (so called "KAMPO") which is controlled by the government.

The objective of LIAJ is to strive for sound development of the life insurance industry and maintain its reliability.

It is very useful to know the life insurance market of Japan.