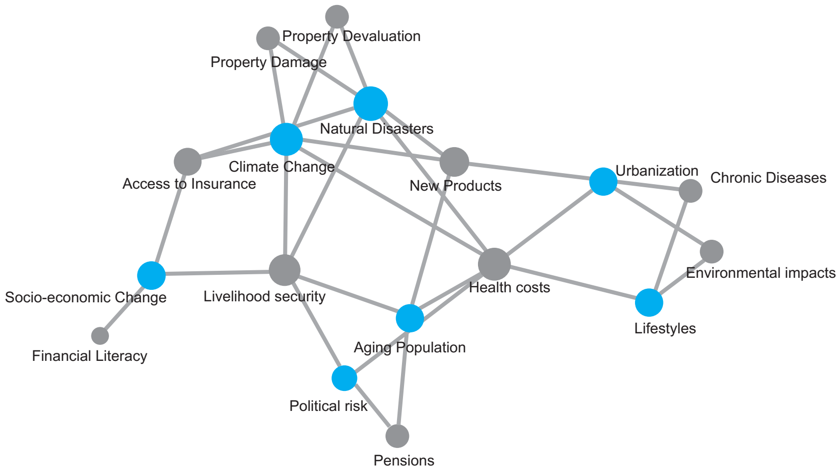
Invited Article

# The Future of Insurance

***N. M. Govardhan****

1. Insurance is a vital integral part of the Financial System. The Financial system envelops Securities - Banking - Insurance - Mutual Funds - Pension Funds - Provident Funds. It is interconnected and responsible for the growth of the economy. Excerpts from several UN studies illustrate the present Risk Drivers Further with rapid change everywhere in all sectors-Agricultural, Rural-Industrial-Healthcare-Housing-Security the risk drivers change continuously. The Key Risk Drivers for Insurance are in Blue dots and comprises Climate change - Natural disasters - Urbanisation - Lifestyles - Socio economic Change - Aging Populations - Political Risks. The Risks covered and Insurance issues by insurance are in grey dots in the figure below:

**Figure 1**
**Risk Drivers and Insurance Issues**




*Source:PSI & UNEP Inquiry, Consultation Responses, 2015*

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2. It is apparent that there is a paradigm shift in last two decades-more so in developing countries as well as in developed countries.

**Need for a paradigm shift in business, economics and financial literacy**

> *"An indispensable and transversal requirement for facilitating the alignment of the financial system with sustainable development is a paradigm shift in business, economics and finance education."*
>
> *Swiss Input into the UNEP Inquiry, 2015*

3. Climate change and natural disasters have increased in recent years and property damage grown enormously in developed countries. In developing countries the Insurance penetration is low and hence may have impacted Insurance claims to a lesser degree. Urbanisation is a worldwide phenomenon and possibly impacts more the less developed countries as income level rises and living expenses escalate. Aging populations would see a dramatic increase in pension and provident funds as persons would like to save to meet the rise in longevity and longer period of retired life. Health care and health costs are now increasingly necessary for an active healthy long life. Rapid economic growth in developing countries would impact Health, environmental quality and access to Insurance.

**Need for Regulators and Insurance industry to be in close consultation to have sustainable development of the financial Sector.**

> *"The meeting of minds of insurance regulators and insurers is critical to the path towards the integration of sustainable development into a policy and regulation."*
>
> *"The regulator and the insurance industry must "walk together", with the same goals in order to avoid unintended consequence."*

**UN studies excerpts**

**Insurance Issues and long term investment funds generated by the Insurance industry**

*In developed countries and major emerging economies, ageing populations may present a critical social and economic sustainability challenge. Ageing populations will require access to new products and services, and will greatly increase the burden on health systems and health-related claims. In rapidly developing countries, changes in demographic balances (the sex ratio at normal level) may have significant long term- impacts on economic and social systems that affect demand for products.*

*Issues at the nexus of urbanization, lifestyles and human health were identified as emerging challenges across many contexts. The impacts of air pollution on respiratory health, an increasing prevalence of chronic dietary diseases (such as obesity), and negative environmental quality outcomes are key insurance challenges in major economies with rapidly developing middle classes, such as China, India, Mexico and Brazil. As these trends are set to increase, insurers are presented with both increasing risks and opportunities in developing new innovative products.*

***Long-term investment and sustainable development***

*With over US$ trillion in assets under management globally, the insurance industry plays a significant role in investment across asset classes. Insurers are increasingly interested in reallocating capital towards long-term investments - and linking this with sustainibility.. However, many respondents remained concerned that international regulatory frameworks were constraining their capacity to make investment choices that could support sustainable development.*

***"Investment in infrastructure and other social investments should not be penalized requiring higher capital requirements."***

***Consultation Respondent***

4. Demography deals with the study of both the Quantitative and Qualitative aspects of the human population. Quantitative aspects include composition, density, distribution, growth, size and structure of the population. Qualitative aspects are the sociological factors such as education, quality of life, development, diet and nutrition, social class, wealth, well-being, and health. The impact of Insurance on the Changing Demographic profile would assist us in envisioning the future of Insurance.

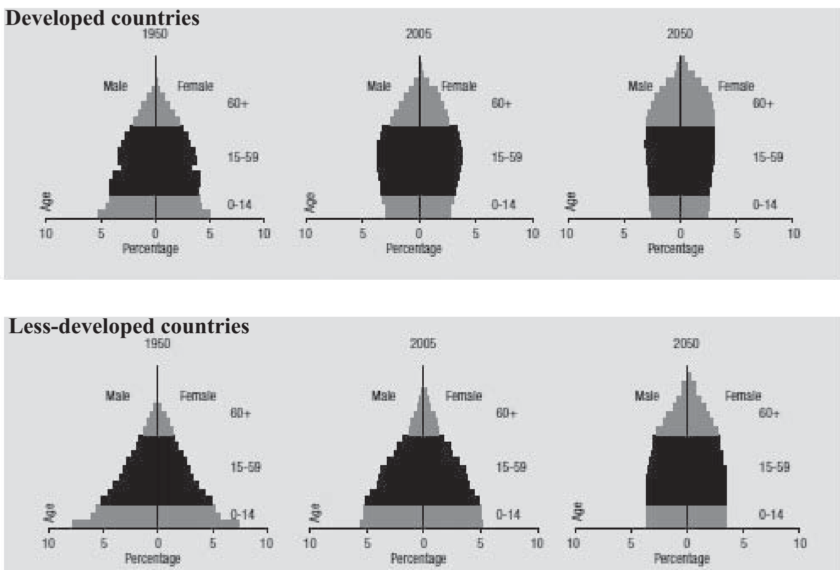
5. India and most Developing countries has moved in the last sixty years from a largely agrarian economy to an Industrial economy with also rapid developments in the services sector. There has been a shift from villages to urbanisation. Cities have grown bigger and possibly unwieldy requiring greater civic planning .A digital revolution has taken place and mobile phones have penetrated to almost every household. Financial Inclusion has made Banking available to large sections of citizens. Joint families have given way to nuclear families. Dual Incomes of Husband and wife have contributed to increasing prosperity of the middle classes .Human Life Values have greatly increased .Pollution levels have increased and we are disturbing the ecological balance resulting in greater natural disasters like, floods, drought, earthquakes, Soil erosion, landslides, etc. In addition there could be man-made disasters in faulty constructions, serious accidents, plane and train crashes, explosions, power failures, nuclear disasters, and now with terrorist strikes, and invasive wars.

There is a dramatic improvement in expectation of Life at Birth and at age 60 .It is noted that with the greater emphasis on the quality of Life, better Medical care, healthy diet, clean drinking water, the emphasis on fitness, yoga, exercise people now have a longer expectation of life at retirement at age 60. The chart shows the increase over the years in a few countries including India. Generally speaking, perhaps the improvement in expectation of Life is about six months every year. The demographic dividend for India is an increasing able workforce at adult ages 18 to 55 or 60 years. Also there is a substantial growth in Senior citizens above age 60. The impact of these factors is to reduce mortality rates and consequently premiums for Life Insurance. Living benefits are more desirable in the form of Endowment plans, Money back plans and of course Pension plans.

6. The impact on Insurance due to the Changing Demographic profile would assist us in planning and envisioning the future changes required to be a proactive vibrant Insurance Industry responsive to the shifting paradigm of business and the economic environment

7. Following figure shows the Population pyramids in the past, recent present and future in Developing and developed countries. It may be noted that there is a progressive flattening of the pyramid with increased longevity showing the rapid increase in seniors with its consequent impact on Social Security, Pension and provident Funds.

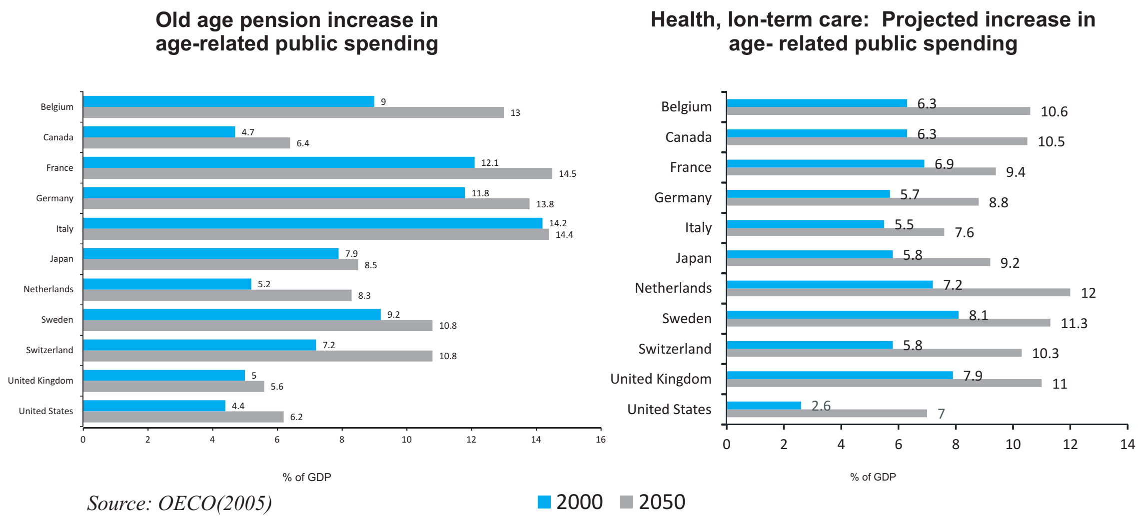
**Figure 2**
**Population pyramids**




*Source: UN (2007)*

8. Figure below shows the impact of aging related public spending as a percentage of GDP and Healthcare spending as a percentage of GDP for various countries. It is noted that healthcare costs are a dominant part of public spending.

**Figure 3**
**Projected increase in ageing-related public spending 2000-2050**
**(assuming unchanged policies as from the early or mid-2000s, in % of GDP)**




*Source: OECO(2005)*

9. Figure below shows the vital demographic relating to population projections, fertility rates, Life expectancy, Percentage of Senior (+60), median age for Developing and developed countries. It may be noted that population is heavily weighted to developing countries creating a strain as well as an opportunity with more active workers as at present.

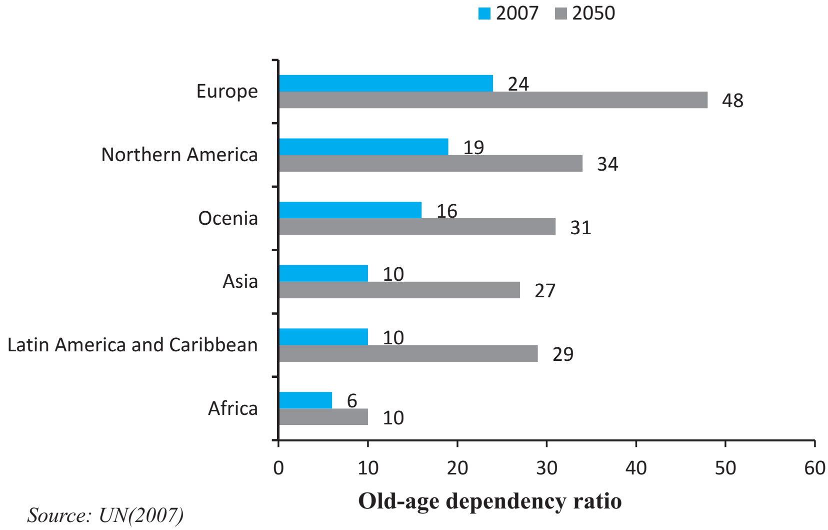
**Figure 4**
**Demographic statistics and predictions in detail**

| | Population | | | Total fertility ratio | | | Life Expectancy | | | % of total population | | | Median age (years) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1950 | 2007 | 2050 | 1950 | 2007 | 2050 | 1950 | 2007 | 2050 | 1950 | 2007 | 2050 | 1950 | 2007 | 2050 |
| World | 2519 | 6616 | 9076 | 5.0 | 2.5 | 2 | 46.6 | 66.5 | 75.1 | 8.2 | 10.7 | 21.7 | 23.89 | 28.1 | 37.8 |
| Developed Countries | 813 | 1217 | 1236 | 2.8 | 1.6 | 1.8 | 66.1 | 76.2 | 82.1 | 11.7 | 20.7 | 32.4 | 29.0 | 38.6 | 45.5 |
| Low Developed Countries | 1707 | 5398 | 7840 | 6.2 | 2.7 | 2.1 | 41.1 | 64.6 | 74.0 | 6.4 | 8.4 | 20.0 | 21.4 | 25.6 | 36.6 |

*Source: UN (2007)*

10. The senior dependency rate of seniors to active workers. This shows the increasing need for Social Security, Pension and provident Funds are shown in figure below:

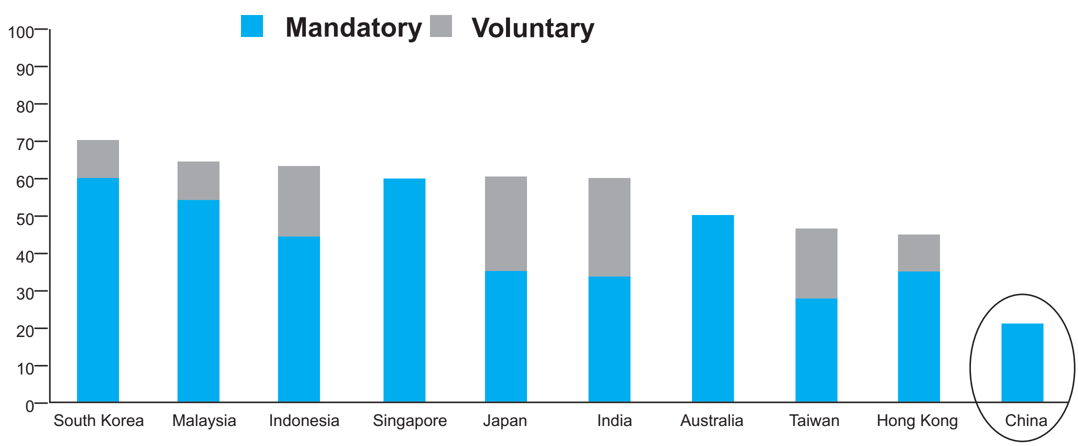
**Figure 5**
**Old-age dependency ratio (%) in major areas, 2007 and 2050**




*Source: UN(2007)*

11. The retirement benefit as a percentage of salary at retirement for various countries for both mandatory and voluntary levels are captured in figure below:

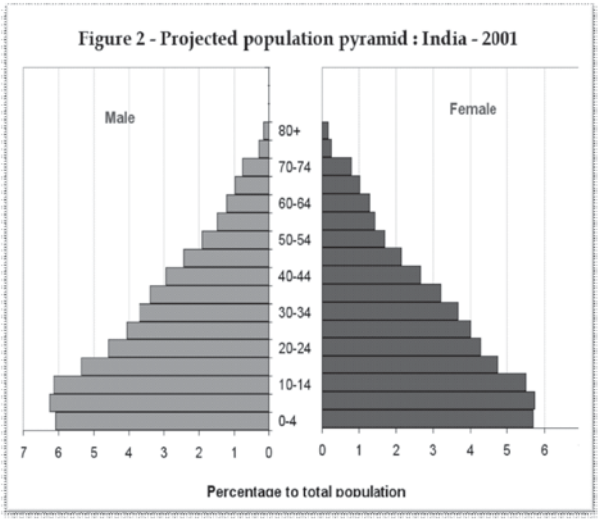
**Figure 6**
**Retirement benefit expressed as % of salary at retirement**



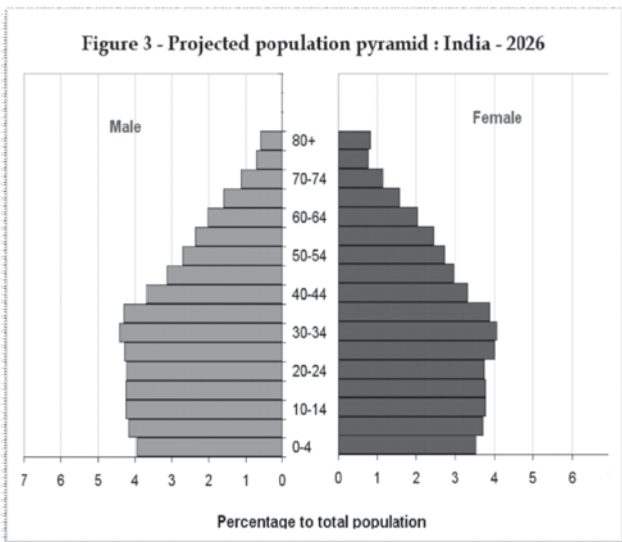

*Source: Mercer 2006 Analysis*

12. Figure below shows the population pyramid for India. It is noted that presently the median age is low giving a large active working force.

**Population Pyramid: 2001**




**Projected Population Pyramid: 2026**



13. International comparisons of Insurance penetration to GDP are in given in Annexure 1. International comparisons of Insurance density is in Annexure 2. Both show the low penetration and density, showing the potential for insurance in India and developing countries. India's current insurance penetration rate stands at 3.42%, far below the global average of 6.2%, says an industry report. "A 1% rise in insurance penetration translates into 13% reduction in uninsured losses-an increased investment equivalent of 2% of national GDP. With 17% of the world's population, the Indian insurance market accounts for less than 1.5% of the world's total insurance premium as India is both under-penetrated and inadequately penetrated.

14. General insurance which was largely confined to traditional areas of Motor, Fire, Engineering and Miscellaneous has erupted with a number of Innovative covers especially with the opening up of the Insurance Sector. The economic reforms and the customers' demands in a vibrant economy both in the retail sector and corporate sector. The demand for staff, recruitment and training is more required and demanded by general insurance sector. It is said that in a developed economy General Insurance covers and Premiums would increase rapidly and even be equal or greater to Life Insurance premia. However the figures for Insurance premium density and Penetration levels in the Life and non-life sectors show a large potential for growth. Insurance penetration in Total in India is 3.49% of GDP as per IRDA annual report 2017, being 2.72 % of GDP for Life and 0.77% for non-life. Insurance density in Total in India is 59.7-US$ as per IRDA annual report 2017, being 46.5-US$ for Life and 13.2-US $ for non-life.

15. The demand for Actuaries and Risk Managers in General insurance is growing and will be a lucrative growth area. Innovative covers for the digital age, Information technology and the space age will require big data analysis and new modelling techniques. General insurance will rapidly expand from the traditional areas of Motor, Fire, Marine and Miscellaneous to more of Liability covers, Engineering risk, Aviation risk, satellite covers, Natural Disasters, Nuclear risk and more exotic risk covers. This would require experts in various disciplines to analyse prevent and predict rates which would have to be continuously monitored for a balanced performing General Insurance Industry.

16. Every year Actuaries analyse current issues in Life Insurance in CILA seminars. The recent seminar focussed on With Profits Business, Pension business in addition to Expenses and persistency.

17. There has been a lot of financial analysts who look only for Term Life cover and advise to invest the rest in securities mutual funds and other savings instruments. With Profits

business is essentially a balanced plan which combines basic protection with savings and also an experience bonus. In the past with high interest rates and balance equity investments has given both protection and a good savings return. ULIPs are at present dominating the Life insurance market with alluring prospects of high returns depending on the risk appetite of customers.

18. With profit policies and ULIPs are very marketable. However ULIP's should be sold as a second or third policy only to discerning customers who understands the inherent risk in these plans. It must be noted that in ULIPs like Mutual Funds do not guarantee returns and the investment risk is borne by the customer. In with profit business the basic sum assured is guaranteed and 90% of the experience surplus is given to the policyholder. This is a Win Win situation. However analyst compare pure investment products with traditional with profit business and advise customers to buy only term policies and invest the rest. It is necessary to redesign to take care of this issue. High expense costs and low persistency should be addressed by the online servicing, Digital technology, bank assurance and simple online plans can make a dramatic reduction. Better Investment performance can make it quite attractive as a good combo product. In addition critical illness riders can give good protection with minimum or no addition to expenses. Disintermediation is now the Buzz word and marketing costs can be reduced by simple online plans as now prevalent for Motor Insurance and some term covers. Increased Non-Medical Insurance can help redesign Insurance covers in Life endowment and Non-Life Industry Healthcare plans.

19. In a competitive financial world it is necessary for Life Insurance to generate a good return on the funds available for investment. The Investment Managers should be well versed in diverse disciplines to ensure good investment returns especially in equities, properties and project financing. Life insurance traditionally has long term funds especially from Endowment and with profit business which is available for development of the corporate sector and Infrastructure. Essentially with profit business contains a considerable participation of with profit policyholders in providing temporary capital in the form of bonus loadings which generates with good persistency a growing volume of funds for investment in the national economy. It is Peoples money for people's welfare especially with a prudent Investment policy which balances risk with return.

20. The future Growth areas apart from Traditional With profit and Endowment Business and ULIPs would be in Health Insurance and Pensions.

21. Health Insurance: Health covers are in great demand due to the rising cost of Medical Care and the ever increasing longevity. Everyone desires a healthy active long life which is now

feasible with the giant strides in Medical science, Surgery, gene therapy and the new non-invasive techniques. Diseases considered uninsurable in the past can now be covered. Preventive and control measures are available to ensure a reasonably active life for those afflicted with critical illnesses. Covers are available for the high hospitalisation costs for critical Illnesses and surgical interventions. All these require a Dynamic management to keep updating covers with expert medico actuarial investigations. It may be noted that the three elements in the Basis is incidence rates, treatment costs and duration of treatment. Healthcare specialists are wary of predicting premium rates for long terms due to the inherent variability of all three elements. However in Group covers there is more stability.

22. Life Insurance Marketing: The image of the Life Insurance industry is largely made up by the Agent as he is sometimes the only person who meets the customer as further servicing is done mostly on line. There appears to be a vast difference in intermediation costs compounded by mis-selling and low persistency. It is said that Life Insurance is sold and not bought. This situation has to be progressively tackled so that financial literacy gradually makes Life insurance to be bought by all as an essential security for the family. At present 20% of agents bring in 80% of Business. It is essential that the large turnover of agents is addressed by marketing specialists by proper selection of the performing 20% to train them as insurance professionals. Professional agents have to sell to the needs and means of the customer and keep effective communication through mobile technology to ensure greater persistency and better build-up of Life funds.

23. With the government stress on Financial Inclusion, at present perhaps more than 90% of our customers and policy holders have bank accounts. This would facilitate expeditious and timely payment of premiums and claims. Further it could be a productive channel for New Business to new and existing customers. This would improve persistency of business and retention of customers. It is necessary that linkages are made with Banks to ensure seamless service through Bancassurance and normal agency channels.

24. Pensions: The biggest challenge is the funding for pensions in post-retirement Life and for Health covers. Pensions are best built up right from the start of a person's working career to allow for the benefit of long term investment in inflation proof assets. Pension plans come in a variety of ways and has a number of options for payment of the annuity each of which is attractive depending on the needs of the Individual.

25. Due to increasing longevity most Life Insurance companies are reluctant to guarantee pension annuities for Life. However there is a growing demand for inflation proof pensions.

26. At this stage it is necessary to examine how different sectors address the variability in interest and asset values. Good performing securities / shares and well located properties give the best returns. Mutual funds are more stable being a bundle of shares. Lower interest rates tend to give better corporate returns and push up prices of shares. However low interest rates affect small savings and bank deposit returns though being relatively safer instruments. Interest rates on fixes deposit in banks are guaranteed only for three years. Securities and Mutual funds do not guarantee any returns. However with profit business guarantees the basic sum assured and the vested bonuses in addition to the prospect of additional bonuses and terminal bonuses according to experience performance in investments, mortality and expenses.

27. With profit annuities and Pension plans with return of premiums is a good option which is akin to a banking deposit but has a variable tenure .More such designs are feasible to address the growing need for pensions especially with a better investment policy which includes inflation proof assets.

28. Future Developments:

- Regulation should assist in development and growth of the Industry. Generic principles should be stated and Management and Actuaries allowed to innovate within these guiding principles. Emphasis on policyholder protection and allow reasonable profits to shareholders who bear the risk. Adequate but not onerous Solvency levels recognising that in With Profit Business the Policyholder also contributes capital.

- It is necessary that taxation should be only on shareholders profit and not on policyholders. There should be exemption from GST as policyholders out of their own taxed savings are buying essential cover and required savings for their social security, thus lessening the burden on the state. Regulators and Industry should impress on Government the peculiar nature of this Industry and eliminate taxation on the policyholders in both Life, Pensions and Health Insurance

- Dematerialisation of all policies should become a reality so that customers and their families have ready comprehensive information. This is now available for Stocks and shares and Mutual Funds. It should be expeditiously done for all Life policies . This would comprise a financial profile of all policyholders.

- Steps to be taken to improve financial literacy and make Insurance products simple for on line sale as a product to be bought for security and risk cover which is ever present.
- Increase use of mobile technology to communicate and service clients through their bank accounts for receipt of premia and payments of claim.
- Use Big Data Analytics for Marketing, Profiling and Credit appraisal.
- Use earlier biometrics and routine testing for simplified underwriting.
- Increased Non-Medical limits for instant covers on simplified non-medical questionnaire.
- The Industry should be proactive with good Corporate Governance. The Insurance Industry is a Vital Component of a bustling growing economy and should play its part in shaping public policy and in its contribution to GDP.
- A study of the risk drivers, the insurance indicators, and the demographic profile indicates tremendous growth potential in developing countries including India and a steady growth in Developed countries.

## ANNEXURE 1

### INTERNATIONAL COMPARISON OF INSURANCE PENETRATION*

*(in percent)*

| Countries | 2015** | | | 2016** | | |
|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life |
| Australia | 5.7 | 3.5 | 2.2 | 6.52 | 2.99 | 3.53 |
| Brazil | 3.9 | 2.1 | 1.8 | 4.04 | 2.28 | 1.76 |
| France | 9.3 | 6.2 | 3.1 | 9.23 | 6.06 | 3.17 |
| Germany | 6.2 | 2.9 | 3.4 | 6.08 | 2.75 | 3.33 |
| Russia | 1.4 | 0.2 | 1.2 | 1.38 | 0.25 | 1.13 |
| South Africa | 14.7 | 12.0 | 2.7 | 14.27 | 11.52 | 2.74 |
| Switzerland | 9.2 | 5.1 | 4.1 | 8.85 | 4.72 | 4.12 |
| United Kingdom | 10.0 | 7.5 | 2.4 | 10.16 | 7.58 | 2.58 |
| United States | 7.3 | 3.1 | 4.2 | 7.31 | 3.02 | 4.29 |
| | | | | | | |
| **Asian Countries** | | | | | | |
| Hong Kong | 14.8 | 13.3 | 1.5 | 17.6 | 16.2 | 1.41 |
| **India#** | **3.4** | **2.7** | **0.7** | **3.49** | **2.72** | **0.77** |
| Japan# | 10.8 | 8.3 | 2.6 | 9.51 | 7.15 | 2.37 |
| Malaysia | 5.1 | 3.4 | 1.7 | 4.77 | 3.15 | 1.62 |
| Pakistan | 0.8 | 0.5 | 0.3 | 0.89 | 0.63 | 0.26 |
| PR China | 3.6 | 2.0 | 1.6 | 4.15 | 2.34 | 1.81 |
| Singapore | 7.3 | 5.6 | 1.7 | 7.15 | 5.48 | 1.67 |
| South Korea# | 11.4 | 7.3 | 4.1 | 12.08 | 7.37 | 4.72 |
| Sri Lanka | 1.2 | 0.5 | 0.7 | 1.12 | 0.52 | 0.6 |
| Taiwan | 19.0 | 15.7 | 3.2 | 19.99 | 16.65 | 3.34 |
| Thailand | 5.5 | 3.7 | 1.8 | 5.42 | 3.72 | 1.7 |
| **World** | **6.2** | **3.5** | **2.8** | **6.28** | **3.47** | **2.81** |

*Source: Swiss Re Sigma Volume 3/2016 and 3/2017*

** Insurance penetration is measured as the ratio of premium (in US$) to GDP (in US$)*

*** Data pertains to the calendar year 2015 and 2016*

*# Data relates to financial year 2015-16 & 2016-17*

## ANNEXURE 2

### INTERNATIONAL COMPARISON OF INSURANCE DENSITY*

*(in US$)*

| Countries | 2015** | | | 2016** | | |
|---|---|---|---|---|---|---|
| | Total | Life | Non-Life | Total | Life | Non-Life |
| Australia | 2958 | 1830 | 1128 | 3397.1 | 1558.5 | 1836.6 |
| Brazil | 332 | 178 | 154 | 346.3 | 195.5 | 150.8 |
| France | 3392 | 2263 | 1129 | 3395.3 | 2227.7 | 1167.5 |
| Germany | 2563 | 1181 | 1381 | 2547.6 | 1150.6 | 1397.1 |
| Russia | 117 | 15 | 102 | 122.8 | 22.4 | 100.3 |
| South Africa | 843 | 688 | 155 | 762.5 | 615.8 | 146.7 |
| Switzerland | 7370 | 4079 | 3292 | 6933.5 | 3700.3 | 3233.0 |
| United Kingdom | 4359 | 3292 | 1067 | 4063.6 | 3033.2 | 1030.5 |
| United States | 4096 | 1719 | 2377 | 4174.1 | 1724.9 | 2449.2 |
| | | | | | | |
| **Asian Countries** | | | | | | |
| Hong Kong | 6271 | 5655 | 616 | 7678.8 | 7065.6 | 613.2 |
| **India#** | **55** | **43** | **12** | **59.7** | **46.5** | **13.2** |
| Japan# | 3554 | 2717 | 837 | 3731.7 | 2803.4 | 928.3 |
| Malaysia | 472 | 316 | 157 | 452.2 | 298.3 | 153.9 |
| Pakistan | 12 | 8 | 4 | 13.1 | 9.2 | 3.9 |
| PR China | 281 | 153 | 128 | 337.1 | 189.9 | 147.2 |
| Singapore | 3825 | 2932 | 894 | 3776.8 | 2894.5 | 882.4 |
| South Korea# | 3034 | 1940 | 1094 | 3361.9 | 2049.6 | 1312.3 |
| Sri Lanka | 43 | 19 | 25 | 45.6 | 21.2 | 24.5 |
| Taiwan | 4094 | 3397 | 698 | 4320.7 | 3598.7 | 722.0 |
| Thailand | 319 | 215 | 104 | 323.4 | 222.0 | 101.4 |
| **World** | **621** | **346** | **276** | **638.3** | **353** | **285.3** |

*Source: Swiss Re, Sigma Volume 3/2016 and 3/2017*

** Insurance density is measured as the ratio of premium (in US$) to total population*

*** Data pertains to the calendar year 2015 and 2016*

*# Data relates to financial year 2015-16 & 2016-17*