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From the Desk of Editor

It gives me an immense pleasure to release the Volume 4 First Issue (Jan – June 2021) of Amity Journal of Insurance Banking and Actuarial Science. (AJIBAS). This issue of AJIBAS consists of six articles on the recent developments in Banking and Insurance Industry. Themes of these research papers are Cyber Insurance, Pradhan Mantri Fasal Bima Yojana, and Role of Life Insurance Agent in Facilitating Settlement Claims, Personal Financial Planning, Impact of Low Interest Rates and Covid 19 on Insurance Industry. I hope the readers will enjoy reading these articles while learning the new concepts and procedures being followed by the corporate houses in achieving customer satisfaction and Business enhancement.

We would like to express our gratitude to Honorable Founder President Dr. Ashok K Chauhan for his constant motivation and inspiration. We are grateful to our respectable Chancellor Dr. Atul Chauhan for his continuous guidance. Our sincere thanks to Vice Chancellor Dr. Balvinder Shukla for continuous guidance and motivating in publication of compendium of papers. .

Editor

A. P. Singh

Contents

Cyber Insurance in India and Impact of COVID'19 Thereon

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With the rise in digitization in the last decade and of late, work from home due to Covid'19 pandemic, there's a huge rise in cyber risks. Owing to the fact that a lot of data has been uploaded over the internet for smooth functioning of businesses during the lockdown to reduce physical interactions. In addition to that a lot of digital money transactions/payments took place. Thus, creating a need to know about cyber risk, security and financial protection available.

This study aims to check consumer awareness on cyber insurance and impact of the global pandemic on this insurance segment. This study deals with primary data collected from various individuals and secondary data from various insurance companies, brokers, government agencies and published articles and research papers.

Keywords: Cyber insurance, Insurance, Cyber attack, Privacy, Data security

Introduction

Cyber attack is an attempt to alter, disable, expose, destroy, steal or gain unauthorized access to or make unauthorized use of an asset. Cyber crime is any type of offensive maneuver that targets computer information systems, infrastructures, computer networks, or personal computer devices.

Cyber-insurance is a risk management technique via which network user risks are transferred to an insurance company through insurance contract. Cyber-insurance is a specialty lines insurance product designed to protect specially business organizations providing services to their clients from Internet-based risks, and more generally from risks relating to information technology, information privacy, information governance liability, and all other related activities. Risks of this nature are generally excluded from traditional commercial liability policies.

Coverage provided by cyber-insurance policies may include cyber insurance products covering first party expenses incurred and third party liability claims with regards to the same cybercrime. First-party coverage may be against losses such as data destruction, extortion, theft, hacking, notification/ communication cost, denial of service attacks, cost incurred to maintain the goodwill of organization or the public relation/ crisis management costs, any loss of funds/ money/ assets, investigation costs, cyber extortion , fines and penalties payable to any regulatory body and business interruption costs (loss of income due to downtime of the of organization's website after the breach).

Third party expenses include liability coverage indemnifying companies for losses to others caused, for example, by errors and omissions, failure to safeguard data, or defamation; any legal claims that the insured might have to pay due to the breach or any reputational liabilities.

Objectives of the Study

- To check awareness of people about cyber insurance.
- To understand the impact of Covid'19 pandemic on cyber insurance.
- To understand the basics of cyber crimes and the need of cyber insurance.
- To understand how people perceive cyber insurance.

- To know if facing such a cyber attack has led people to buy cyber insurance.
- To check the major reasons why people don't buy cyber insurance.

Research Methodology

The research done in this project is primary research where the sample size of 100 was taken. Majority of these respondents reside in Delhi NCR. The respondents responded to a questionnaire consisting of 17 questions of various types such as type in, rate, chose one and chose more than one. These 17 questions aimed at gathering information related to profession/ area of expertise or current area of study/work, their awareness related to cyber insurance, if they own a cyber insurance policy and reasons if they don't own cyber insurance policy and how cyber insurance is affected by Covid'19 pandemic.

Literature Review

In October 2020, the IRDAI (Insurance Regulatory and Development Authority of India) set up a committee for cyber- liability insurance under P Umesh.

According to the committee report, the number of internet users in India is currently estimated at 700 million. India was ranked as the second-largest online market worldwide in 2019, second only to China. In 2020, according to data proprietary to the team of Harvard Business review, the global insurance community saw the first cyber insurance program/ policy to exceed $1 billion and the second. In 2018 alone, we (Munich re) estimated the economic damage from cyber attacks at US$ 600 bn According to the estimates from market research done by institute Cyber security Ventures, companies around the world fall victim to such attacks every 14 seconds on average in 2019.

With the increased use of new and upcoming technologies which are self-learning machines, cloud computing and digital ecosystems, new, better and faster communication standards like 5G has increased our dependence on such intelligent devices which are all parts of the global digital transformation of businesses and new age society. According to the data In 2017, 27 billion devices around the world were online, but this number is set to increase five-fold to 125 billion by the year 2030.With this increase in active devices the risk of getting hit by such cyber threats is also increasing.

Insurance regulatory and development authority of India's panel report stated that "The Working Group believes that early standardization of cyber insurance in India might impede innovation and hinder adaptation to evolving industry needs. It may lead to price-based competition instead of developing competencies for agility to design new products suitable to new environments,""Cyber insurance, at present, is much dependent upon support of reinsurers who instead of a standardized wording may prefer to use coverage and exclusions as per the latest developments in the market" [11]

"Phishing and malicious breach incidents involve the highest costs while cyber extortion incidents typically involve costs that are two orders of magnitude lower. Malicious breaches, most often target personal financial information. Personal identity information is mostly compromised in unauthorized contact/disclosure cases. An analysis of the perpetrators of cyber incidents shows that hackers, foreign nation states and terrorists have similar targets and employ similar methods. In the same vein, employees, vendors, consultants and trusted third parties also exhibit similar adversarial tendencies.

According to India Insurtech landscape and trends report, There's huge increase in global insurtech funding from about $2 billion in the year 2016to $6 billion in the year 2020.This data shows that America accounted for largest share that is 68 percent in this global funding in the year 2020.Fastest growing continent –Asia till the year 2019 contributed around 60 percent in five year CAGR. As per the data our country, India had a very small base of such investment $11million in the year 2016 which had a visible increase in the year 2020and reached $287 million. There's an increasing trend which can be seen where turtlemint raised around $30million in the year November 2020 and Digit raised around $84 million in the beginning of 2021. General insurance industry is found to be the fastest and largest growing sector which accounts for 60 percent of global funding in the year 2020 and also has the highest CAGR of 65 percent. General insurance in India also shows rapid growth in the past few years accounting for 75 percent funding pool in the year 2020. It shows that B2Cor business to customer had lead the path wherein the funding had accounted for 65 percent of the global funding in 2020 compared to how it accounted for 95 percent in 2015.

COVID-19 has helped Accelerate Digital Adoption. COVID'19 has hit the markets of various sectors which includes insurance industry as well. However, the insurance industry has shown better and visible signs of quick and stable recovery, with the pandemic reducing the people's buying capacities and spending sentiment. "In our COVID-19 Consumer Sentiment survey, 49 percent of potential customers said that they might increase spending on life insurance and 45 percent on health insurance in the next six months1—a clear reflection of customers' increased interest in insurance in the backdrop of the pandemic. The pandemic has also accelerated the adoption of digital channels. Nearly 60 percent of all customers prefer digital channels for completing their insurance purchase. This increase in digital adoption is expected to continue post-COVID-19, with a 10 percent increase in digital influence for urban consumers in comparison to pre-COVID-19. Insurers swiftly rolled out measures to safeguard customer's well-being during the pandemic. • Cholamandalam MS, HDFC Ergo etc., launched specific COVID-19 health policies. • Insurers invested in growing new sales channels. For example, Cholamandalam MS and Bajaj Allianz trained agents to make sales pitches via video and WhatsApp. They also rolled out video chat features for advisory and customer service. • Agents also quickly adapted to the new ways of doing business, with 63 percent engaging in some form of virtual customer outreach and 58 percent managing renewals virtually. As many as 67 percent of agents felt that customers' willingness to use digital had increased post the outbreak resulting in a higher push for the channel. Regulators and governments also actively implemented measures to support the industry across key themes such as financial management and compliance, relief to customers, and helping companies extend coverage and support in these challenging times. The rapid adoption of digital in insurance and the changing customer behavior along with the influx of new technologies have led to key shifts in the industry in terms of product innovations, emergence of ecosystems and data, and technology driven innovations across the value chain. Insurers are recognizing these shifts and have affected rapid interventions to adapt.

Why Cyber Insurance is Important in India?

Over the last few years, the Indian Corporate world has been adopting the advanced technologies in all the operations. This trend is helping the organizations to streamline their processes, reduce transaction time and improve product quality. According to a survey on Cyber Risk (Allianz Risk Barometer 2019) the biggest risk for India Inc is cyber-crime. As reported by Symantec, an eminent global cyber security leader, India has witnessed 457% growth in the last half a decade. As per Nasscom's Data Security Council of India (DSCI) report of 2019 India witnessed the second-highest, after United States of America (Specops software report) / China (Global Thematic report) number of cyber-attacks in the world between 2016 and 2018.In view of the forgoing Cyber Insurance has become increasing important for individuals and business organizations in India

Overview of Cyber Insurance Industry in India

Here are some facts about Cyber Insurance in this country:

- India is relatively a new adopter of cyber insurance. Probably the implications of GDPR (General Data Protection Regulation) and Personal Data Protection Bill have been instrumental in its adoption and growth.
- As per the report of Data Security Council of India (DSCI) number of cyber insurance policies taken by corporate in India increase by 40% between 2017 and 2018.
- There were five hundred twenty cyber insurance policies sold till the end of 2020 year and the expected growth is 40 percent.
- Yearly cyber insurance premium was found out to be in the range of INR 2.5 to 3 billion for past years.
- IT, ITES, R&D, Banking and Finance sectors are the main seekers of cyber insurance. Hospitality, Pharma, Retafil and Manufacturing are the potential buyers of this insurance.
- Most early adopters of cyber insurance policy are Information technology companies, banking institutions and other financial institutions.

- New demand patterns can be seen from various industries like manufacturing, pharmaceuticals, retail and hospitality.
- Major insurers of cyber insurance policy include Tata AIG general insurance, HDFC ERGO general insurance, Bajaj Allianz general insurance, ICICI Lombard general insurance, New Indian Assurance.

Potential and Target Customers

- Individuals
- Information Technology companies
- Educational institutes for example schools and colleges
- E-commerce /m-commerce
- Manufacturing units
- Travel agencies
- Hospitality industry
- Retail units
- FMCG
- Any firm/ company doing online business
- Any firm/ company dealing with customer information.

Various Types of Cyber Attacks

1) Phishing or Spoofing attacks:

2) This type of attack relates to identity theft and taking personal details for illegal purposes. In this type of attack Individual / businesses are contacted from call, emails or messages while the attacker poses/shows himself/herself as a known in danger or bank or other business and ask for details which leads to money being extorted from the person's account.

For Example: Mr. A receives a call stating that he has won a lottery worth one million Rupees and he will receive a code on his device which he needs to tell the caller (attacker) to get the money in his e wallet. Once Mr. A tells this code to the attacker this money gets deducted from his account instead of getting added. Reason: to get money you don't need the OTP – one time password but to transfer money you do. The attacker took the benefit of this lack of awareness of the consumer to extort his money.

2) Malware or Spyware:

These are types of malicious softwares which are designed/ made to get personal information or damage information or device. These are secretly put into the device via email, website, message or any other downloads. The information extorted might be sold to various entities or uploaded on the dark web.

3) SIM card or Credit/ Debit Card Swap:

Original SIM/ debit/ credit card gets cloned and becomes invalid to use (useless) , and the duplicate SIM/ credit/ debit card is generally misused to extort money from the owner's bank account/ e-wallets/ other online payment mode to transfer funds .In addition to that the SIM could be used for voice phishing.

4) Credential Stuffing (compromising devices and stealing data):

Credential stuffing is a type of cyber attack where mass stealing of account details generally consisting of lists of usernames and/or email addresses and the corresponding passwords are extorted to gain unauthorized access to user accounts through large-scale automated login requests directed against a web application.

Covers and Extensions available in various Insurers' policies

1. **Data breach and privacy management**: Cyber insurance policy covers investigation fee, data subject notification and call management expenses, remediation cost, regulatory fines etc

2. **Extortion Liability cover:** It covers losses from the threat of extortion and professional fees incurred.

3. **Multimedia Liability**: This extension deals with liabilities arising from claims from third parties against allegations such as defamation, plagiarism and libel (written defamation) or any other similar act relating to publication of any media. Defense costs and charges for prosecution of any criminal case filed are reimbursed. Cases for the same are filed under Indian penal code or Information Technology Act, 2000 or Media wrongful act.

4. **Phishing cost cover:** direct financial losses and pure financial losses resulting from phishing where insured is a victim are reimbursed as claimed by insured. Criminal cases for the same are filed under Indian penal code and Information Technology act, 2000. Amount for filing and prosecution of such cases can also be reimbursed under this cover.

5. **Email spoofing cover**: direct financial losses and pure financial losses resulting from Email spoofing where insured is a victim are reimbursed as claimed by insured . Criminal cases for the same are filed under Indian penal code and Information Technology act, 2000. Amount for filing and prosecution of such cases can also be reimbursed under this cover.

6. **Privacy and data breaches**: under this cover liabilities caused by data breaches or privacy breaches by third parties are covered. The breach should have written or public proof. Any cost or legal fees to file a case under Indian penal code and Information Technology Act, 2000.

7. **Social media cover**: under this cover claims by third parties for any losses incurred to them resulting from identity theft through social media of the insured's legitimate account. This covers only social media.

8. **Cyber stalking cover**: under this cover cost incurred by the insured to file a criminal case against a cyber stalker under Indian Penal code and Information Technology act, 2000.

9. **IT Theft losses cover:** under these cover direct losses as a part of Information Technology losses are covered. This cover generally includes any legal fees incurred by the insured where he or she files for a claim against anyone. This loss must be addressed by the financial institution in written format. This loss will be awarded under payment and settlement act, 2007 and Information Technology act, 2000.

10. **Malware cover:** under this cover both first party and third party losses are covered. First party losses include any restoration cost incurred by insured to restore the data lost, damaged, affected, disrupted or misused. This malware could have been accidently downloaded by the insured from SMS, email or any download from the internet. The third party losses include claims filed by any person who suffered losses caused by insured being affected by this malware wherein the information was misused or in any other manner. This claim might also cover any legal fees, defence cost and transportation cost to court (s) incurred by insured in case any third party files a lawsuit against the insured. Criminal cases are filed under Indian penal code and Information Technology act, 2000.

11. **Cyber extortion**: This extension deals with any amount related to ransom payment or fees or charges related to extortion threats. The charges for hiring any professional to further resolve matters or analyzing the situation or increase security is also covered under this extension. Under this there are certain conditions that are implied such as the existence of such cover needs to be private until and unless asked by any government authority. Second, take appropriate steps and inform and cooperate with government authorities. Third, take all steps to mitigate any further damage in case of occurrence or risk so the incident doesn't happen. This involves hiring cyber security personnel with expertise in the area. Any criminal cases filed under Indian penal code and Information Technology act, 2000 the charges for such prosecution will be reimbursed.

12. **Data restoration costs:** this extension pays for any loss including repairing, restoring or recreating data which was either destroyed or corrupted.

13. **Security and privacy liability**: this extension deals with payment of claims and damages to the third parties resulting from data breaches or due to failure of securities.

14. **Civil Fines & Investigation:** this extension pays for any civil fines and investigation costs by any regulatory authorities provided that they are insurable by law.

15. **Crisis Management Costs**: This extension provides for claim amounts related to added cost to manage the negative effect of the event or crisis i.e. crisis management cost.

16. **Forensic costs**: this extension pays for the amount arising for conducting forensic investigation related to the occurrence of cyber crime.

17. **Privacy notification costs**: this extension covers any cost incurred to notify any board members or internal and external stakeholders about the incident and for any further procedures.

18. **Business interruption costs**: this extension covers consequential costs related to material damage.

19. **Identity theft cover**: under this cover all third parties who claim compensation for damages caused to them because someone stole the insured's identity. This cover sometimes has certain other benefits such as transportation expenses to go to court hearings etc are paid. This cover might or might not include social media.

20. **Counseling Services extension**: under this extension The Insurer will pay the Insured any reasonable fees, Costs and expenses incurred to consult either of psychologist, counselor or psychiatrist that insured chose with the prior written consent of the company for treatment of stress, anxiety or such similar conditions which resulted from insured suffering from any loss from cyber crime covers .

Issues Associated with Cyber Insurance

- The nature of cyber risks is very vast and dynamic. That means they keep on changing and new risks keep on emerging with innovations in technology. This sometimes makes the policy old in terms it covers old threats and requires frequent changes in its coverage, exclusions and terms and conditions. This also limits down the coverage available. This also poses a challenge for insurance companies as they have to frequently change and adapt which requires a lot of paperwork and administration cost in use and file system in India.

- There is no standard cyber policy making it difficult for customers to choose from various companies, especially this problem is more prominent in individual policies where people are not much aware about these terminologies, comparison becomes a difficult task for them. Similarly small businesses face similar problems. Huge corporations or companies where there are specialized IT divisions the employees are well versed with such terms and threats to the business but comparison is difficult even for them as there is no base policy to compare.

- Physical property damage caused by cyber crimes is still not covered in India .e.g. blast in factory caused by some imbalance caused by external device with ill intent to cause blast or harm to owner. This is generally done by taking control over the controlling device via breaking in through hacking. The loss caused by such a blast is still not covered in our country.

- Morale costs, people who believe that now they have insurance cover they are protected and become negligent in safeguarding themselves. Cyber insurance does not protect one from cyber threat; it is financial protection after the incident has occurred.

- Pricing of products is difficult for newer risks and since COVID catastrophe has hit the claims have increased. The pattern is very difficult to find.

- Such Cyber risks pose some unique challenges for the insurance industry over the globe, as in their connection with accumulation risk (one event resulting in numerous claims and aggregate is huge): one single cyber event/ threat might impact a lot of different companies in one go or at a particular time, as well as leading to consequential losses such as business interruption at the same time to another set of companies.

- The problem faced by most companies and individuals buying cyber insurance relates to determining the quantum of cover - how much cyber insurance they need in terms of sum insured. But, it's even more difficult for insurers to understand demand for such product (cyber insurance) where the buyers (individuals or legal entities like companies etc) themselves are continuously trying to figure out both their exposure to various risk and their severity and their buying appetites in terms will they be able to buy cover same at what premium.
- There is legal uncertainty as it is a comparatively new market insurers find it difficult to frame policy wordings. There are a low number of legal proceedings related to cybercrimes and cyber insurance making it difficult for insurers to think of some legal possibilities. Also the law is not as fast as technology while dealing with newer technologies and crimes related to that technology deciding on its cover, legal framework becomes a difficult task.
- Pricing is difficult as a new product could be underpriced and leaving the insurer at loss in case of claim. This happens because of the lack of historical data available for the same. Another reason includes the fact that hackers come up with new techniques very frequently and the profile of proposer is constant. This makes it difficult to check the actual risk associated with that proposer thus leading to poorly priced policy.
- High priced policies as a result of a low market pool. In insurance the calculations are done on law of large numbers. For example in motor insurance there are 1000 cars and the probability of accident is 5 percent. That is 50 cars the cost of claims would be divided in 1000 insured cars. Leading to calculation of pure premium to which managerial costs, catastrophic margins and profit margins are added in the end the final premium is derived. In case of cyber insurance the risk cost is high but the number of people to divide is less .Thus more burdens on each this leads to high premiums.

Claim Procedure and Terminologies

In case of loss or in case of occurrence of any cybercrime or cyber threat the insured has to give insurer/ the insurance company a written notice in 7 days after occurrence or discovery of loss. In no case the insured should give this notice after 14 days after occurrence or discovery period of the loss.

Documents Required for Claim:

a. Fully completed and signed Claim form;

b. Copy of first investigation report lodged with nearest Polices station/ Authorities or any cyber crime cell;

c. Copies of the claims or legal notice(s) received from any Affected People or legal entities like partnership firms, companies, trust or other such entity;

d. Copies of the summons received from any court where a lawsuit is filed by any Affected People or legal entities like partnership firms, companies , trust or other such entities;

e. Copies of any correspondence with financial institutions with regard to Information Technology Theft Loss

f. Any legal notice received from any Financial Institution (s) and/ or case filed by insured against any Financial Institution(s) for Information Technology Theft Loss;

g. Copies of any legal notice sent to any Third Party(ies) for any Data breaches or privacy breaches;

h. Copies of criminal case filed against third party(ies) under the insurance covers such as 1 Identity Theft Cover/ extension 2 Social Media Cover/ extension 3 Cyber Stalking cover/ extension 4 IT Theft Loss Cover/ extension 5 Malware Cover/ extension 6 Phishing Cover/ extension 7 E-mail Spoofing cover/ extension 8 Media Liability Claims Cover / extension 9 Cyber Extortion Cover / extension 10 or any other cover or extension mentioned/ available in the policy;

i. Copies of any invoices for any reasonable expenses incurred for restoration / restoration cost;

j. Copies of any invoices for any expenses that incurred in Information technology Consultant Services Cover/ extension;

k. Details/invoices of Costs incurred for filing of criminal case /Claim for Damages against third party;

l. Proof along with details showing / proving that the Personal Data or the information is a property belonging to the Insured;

m. Any other Proof to show that any Loss is incurred by the Insured.

Data analysis

Question wise analysis

1. Name: Just to identify who has filled what form

2. Age- this was a required question to identify the age group of the respondents

Options for the same included

Below 18

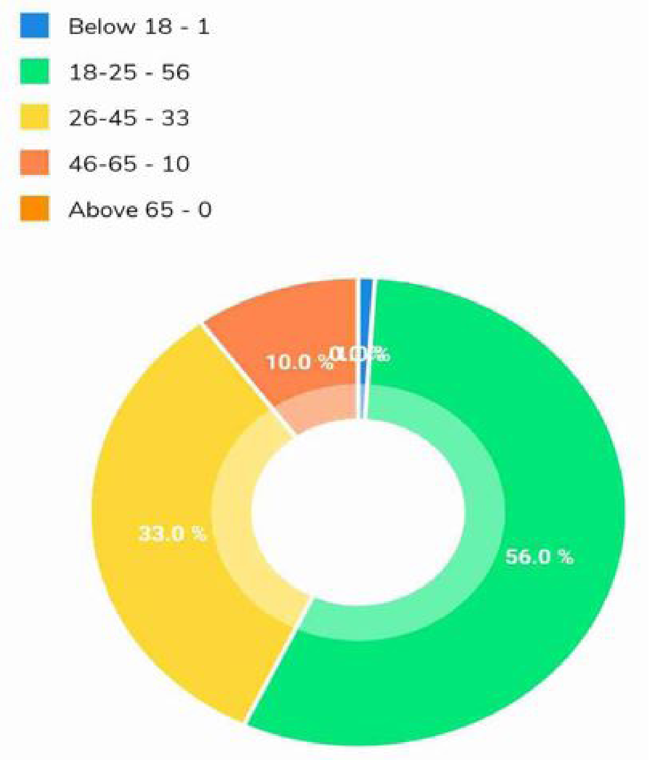
18-25

26-45

46-65

Above 65

The responses for the same were as follows



PIE CHART: 01

Majority of respondents that is 56 falls in the age band of 18-25, followed by age band of 26-45 with 33 respondents then by the age band of 46-65 with 10 respondents and only one respondent below the age of 18.There were no respondents above the age of 65.

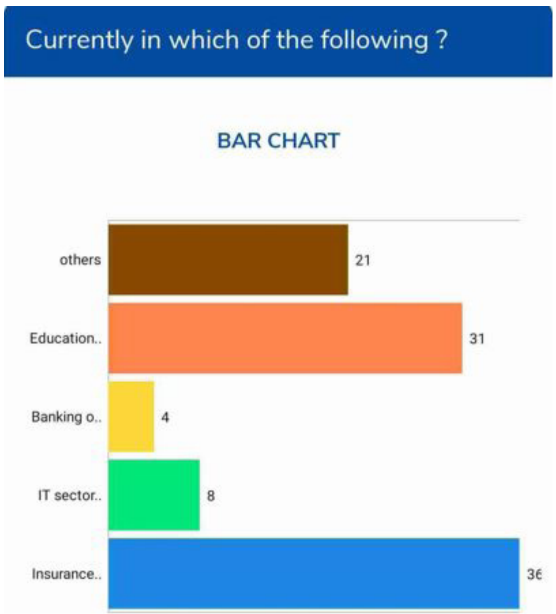
3. Currently in which of the following profession?

Currently in which of the following ?

Results

Options	%	Count
Insurance sector	**36.00**	36
IT sector	8.00	8
Banking or Financial services	4.00	4
Education	31.00	31
others	21.00	21

TABLE: 01

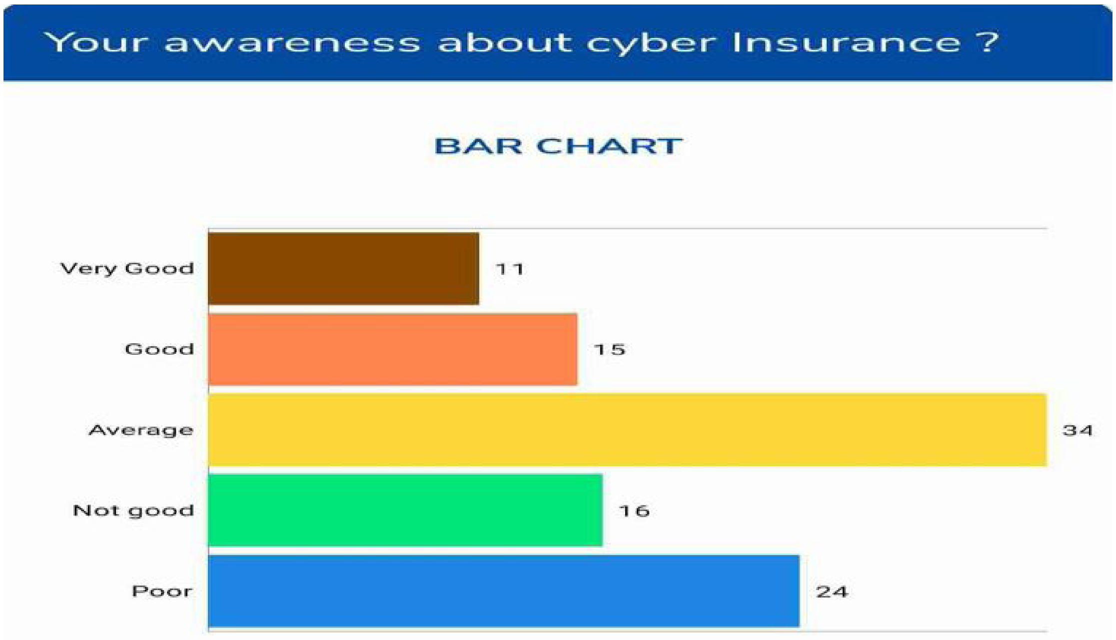


PIE CHART: 02

The results of this question show that the majority of respondents are from the insurance sector that is 36 respondents followed by education sectors including teachers and students with 31 respondents .21 respondents chose others meaning from neither of these. Rest 8 respondents are from IT sectors and 4 from banking or financial services. Seeing the profession of respondents it was expected that they will have high awareness about cybercrimes and cyber insurance.

4. Your awareness about cyber Insurance?

This question was required, this question relates to how people think in terms of their awareness about cyber insurance?



BARCHART: 01

As per the results maximum number of respondents that is 34 out of 100 believe that there awareness about cyber insurance is average, followed by 24 respondents who believe that there knowledge is poor, then by 16 people who believe there knowledge is not good only 26 people believe that there awareness is above average out these 26 people only 11 chose very good and rest 15 chose good.

5. Cyber insurance provides first-party expense and third-party liability coverage?

Cyber insurance provides first-party expense and third-party liability coverage ?

Results

Options	%	Count
True	86.00	86
False	14.00	14

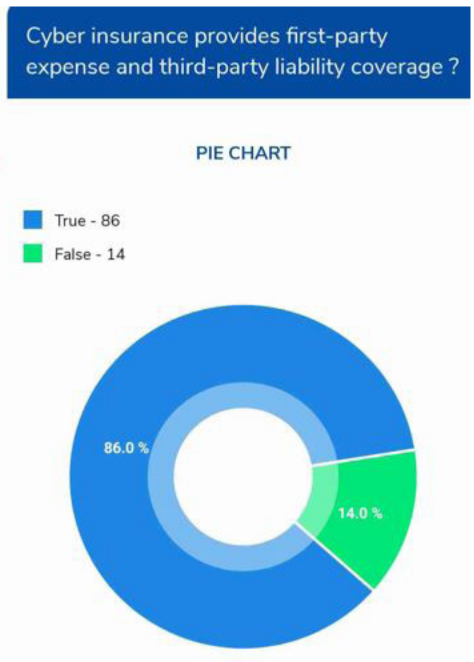
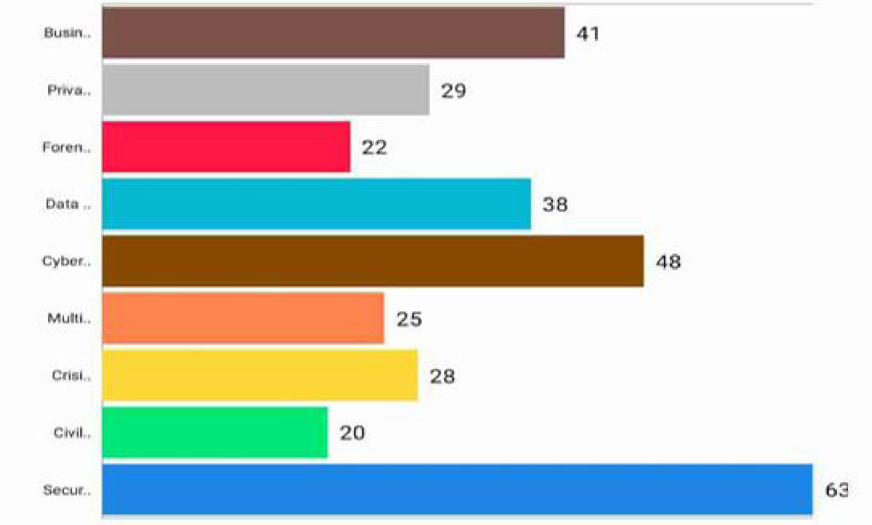


TABLE: 02 **PIE CHART: 03**

As per results 86 people believe the statement cyber insurance provides first party expenses and third party liability coverage is true and rest 14 out of 100 respondents believe that it is false and they don't agree with it.

6. Which of the following Extensions are you aware of?

Bar Chary



BAR CHART: 02

Which of following extentions you are aware about?

Result

Options	%	Count
Security & Privacy Liability	**20.06**	63
Civil Fines & Investigation	6.37	20
Crisis Management Costs	8.92	28
Multimedia Liability	7.96	25
Cyber Extortion	15.29	48
Data Restoration Costs	12.10	38
Forensic costs	7.01	22
Privacy Notification Costs	9.24	29
Business Interruption Loss	13.06	41

TABLE: 03

Out of 100 respondents

- 63 are aware about security and privacy liability, making this extension the most known one.
- Second most known is cyber extortion known by 48 respondents.
- Next in line in Business interruption loss known by 41 respondents.
- Fourth is data restoration cost known by 38 respondents?
- Fifth is privacy notification known by 29 respondents?
- Sixth is crisis management cost known by 28 respondents.
- Seventh is multimedia liability known by 25 respondents?
- Eighth is forensics cost known by 22 respondents.
- Ninth or last is civil fines known by 20 respondents.

Only one extension falls under category of more than 50 percent

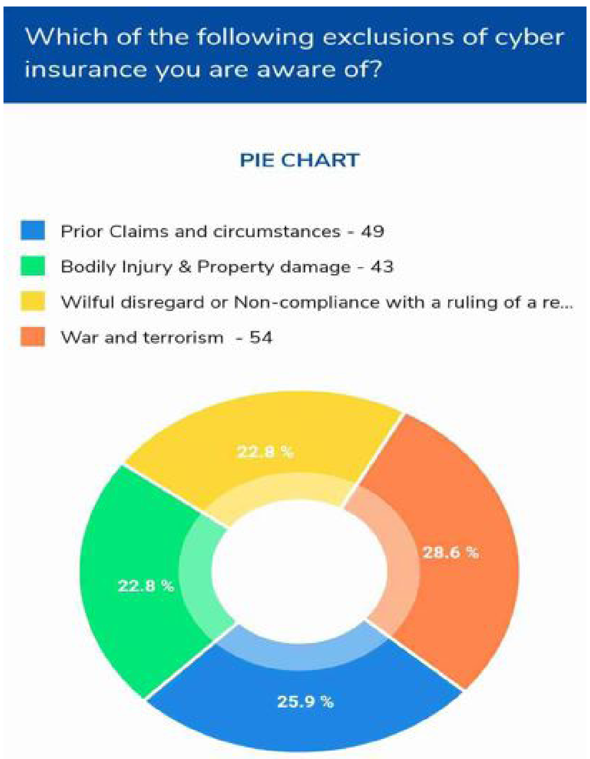
Majority of extensions are under 30percent

Three fall in between 30- 49.9percent

The difference between first and last is 43 respondents.

None of the extensions is known by more than 70 respondents.

7. Which of the following exclusions of cyber insurance are you aware of? - Prior Claims and circumstances



PIE CHART: 04

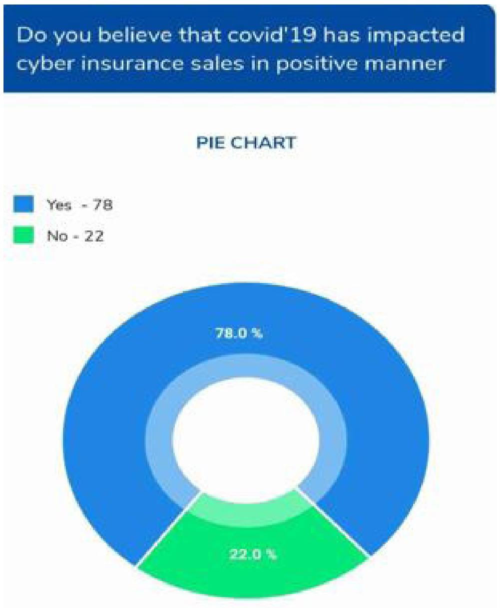
- The most known exclusion is war and terrorism which is known by 54 respondents.
- Followed by prior claims and circumstances by 49 people.

- Both willful disregard and bodily injury were known by 43 respondents.

The difference between first and last is that of 9 respondents.

All exclusions are known by more than 40 people but no exclusion is known by more than 60 respondents.

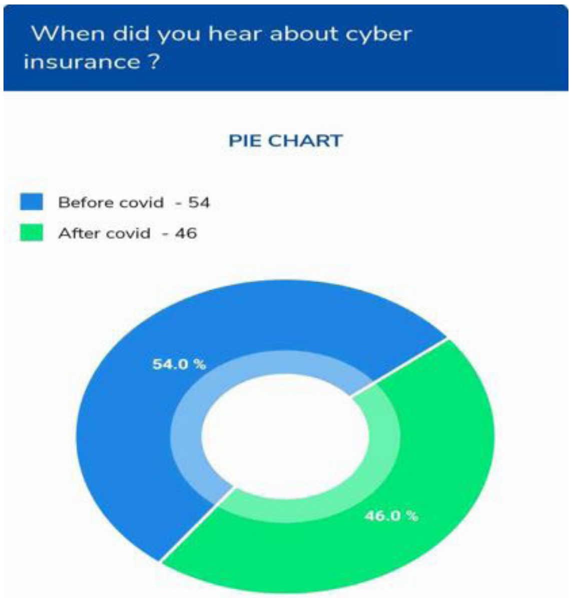
8. Do you believe that covid'19 has impacted cyber insurance sales in a positive manner?



PIE CHART: 05

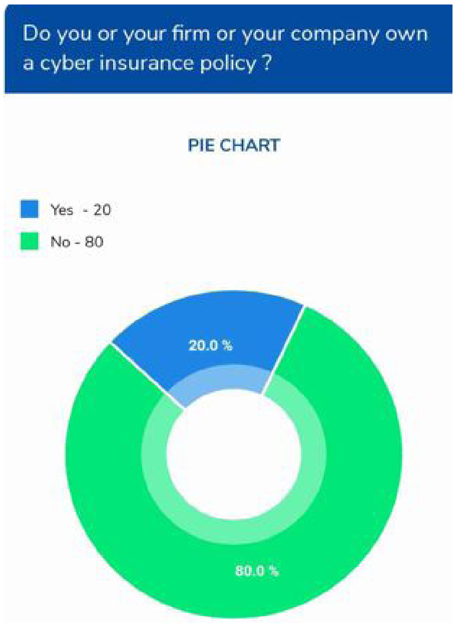
Majority i.e. ¾ or more than 75 percent respondents believe that Covid 19 has impacted cyber insurance sales in a positive manner, only 22 respondents believe that it hasn't.

9. When did you hear about cyber insurance?



PIE CHART: 06

Majority of the respondents knew about cyber insurance before Covid but 46 people got to know about cyber insurance after covid19.

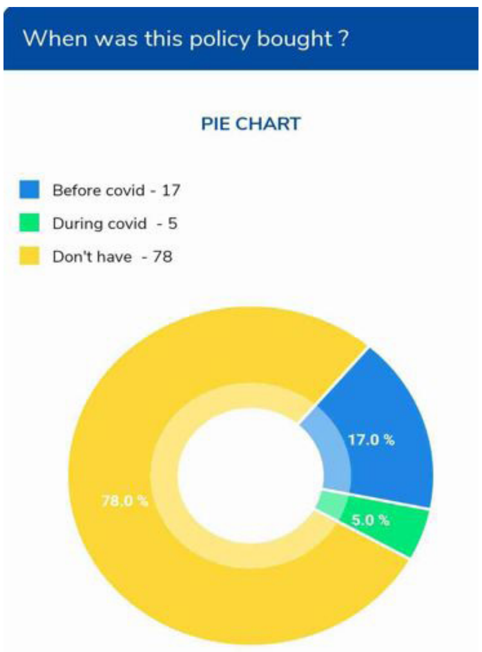


PIE CHART: 07

Only 20 respondents or 20percent people or their company owns a cyber insurance policy.

The number is low compared to the rest of the world but good compared to India.

11. When was this policy bought?



PIE CHART: 08

5 people bought cyber insurance policy during Covid and as per responses 17 bought before. There is discrepancy of 2.

12. What is the main reason for not taking cyber policy?

What is the main reason for not taking cyber policy?

Results

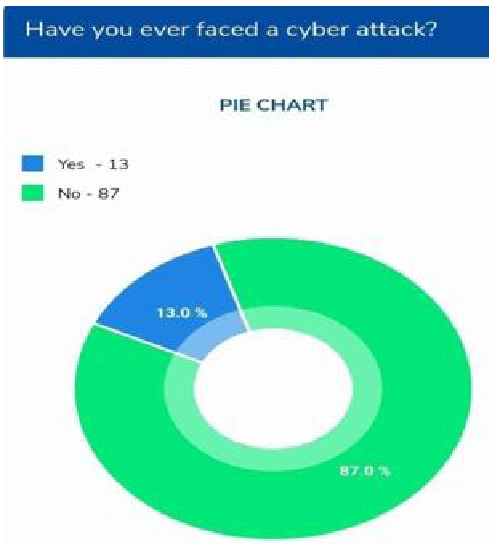
Options	%	Count
Don't need	35.00	35
Don't understand	**42.00**	42
Don't find it useful	7.00	7
Highly priced	6.00	6
I have	10.00	10

TABLE: 04

The most prominent reason why people don't buy cyber insurance is they don't understand these policies. This option was chosen by 42 respondents.

Second reason that came into light was that people believe they don't need the policy. This option was chosen by 35 respondents

13. Have you ever faced a cyber attack?



PIE CHART: 09

According to the data collected 13 out of 100 people have faced cyber attacks.

14. When did you face a cyber attack?

When did you face the cyber attack?

Results

Options	%	Count
Before covid	**63.41**	26
During covid	36.59	15
No Answer	-	58

TABLE: 05

15. Were you insured at the time of cyber attack?

Were you insured at the time of cyber attack?

Results

Options	%	Count
Yes	14.29	7
No	**85.71**	42
No Answer	-	51

TABLE: 06

This is a follow up question that deals with if people actually had cyber insurance policy when they faced cyber attack.

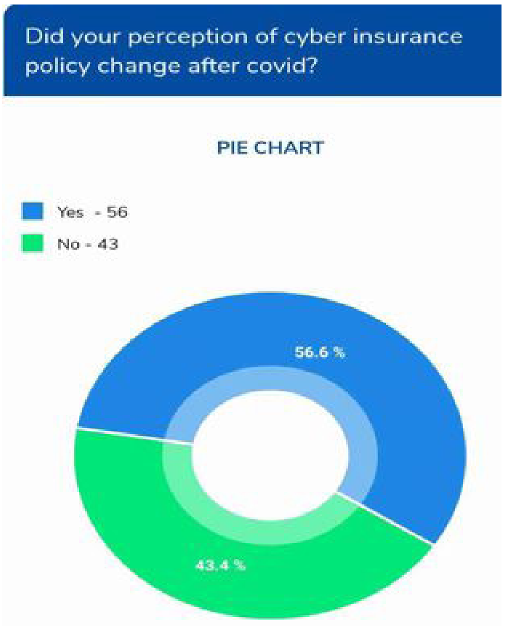
Did you buy a cyber insurance policy after the cyber attack?

Results

Options	%	Count
Yes	18.52	10
No	**81.48**	44
No Answer	-	46

TABLE: 07

This is a follow up question based on the principle "you learn from your mistakes" that deals with if people bought cyber insurance policy after the cyber attack.



PIE CHART: 10

More than 50 people say that their perception about cyber insurance has changed during covid pandemic.

Suggestions

- Since many people are aware about the basic definition of cyber insurance and existence of cyber insurance policy, the main focus to increase awareness is to be put on making people aware about inclusions and exclusions of policy.
- Explanation of cyber risk in common language free from technical jargons to make people understand the need to buy cyber insurance and also know various methods and ways to protect themselves from such cyber threats, also they need to be educated about steps to take after occurrence of a cyber threat event. This can reduce any further damage. Knowledge about after- steps is similar to knowing first aid can protect any further damages, quickness and efficiency might reduce the quantum of loss.
- Provide cover for recent risks available and make policy as customizable as possible.
- There is a need for one standard base policy that covers the basics and has all the extra benefits, covers, extensions that a company wants to provide to give it Unique selling proposition .This unique selling proposition, maximum possibility to get a policy that fulfills the needs of customers (individuals or any legal entities), price comparison will help the customer make the decision for choosing the company.
- Providing expertise and consultation to figure the needs of customers. This must be done in good faith considering need based selling rather than trying to sell the customer the things that just benefits the company.
- Since Covid-19 has provided an opportunity for e-learning, companies must use this to inform the customers more about the policy through webinars, live streaming, YouTube tutorials etc.
- Insurance regulatory authority of India must set a compulsory minimum limit for insurance companies to spend on awareness and advertisement of cyber insurance.
- Companies dealing with collection of personal data must be given certain rules on minimum measures taken to protect the data from cyber threat and also taking cyber insurance for a minimum amount to be made compulsory for such companies.

Conclusion

Overall, it can be said that even after seeing visible increase in demand for cyber insurance policies in India since COVID-19 pandemic began there is not high awareness levels that can be seen via the survey. The awareness is somewhere below average to average. People are not really aware about inclusions, exclusions and policy terms and conditions. Huge rise in cyber threats can be noticed, seeing the number of people who have faced such threats and companies in news headlines suffering huge losses for the same. In addition to that the pandemic even after it has become disastrous and has taken a lot of lives, caused huge losses to economies and swept away people's resources has resulted in growth for cyber insurance. Their sales of cyber insurance policies have really grown in a year.

Cyber risks have increased by 500% since the first lockdown was imposed in India in March 2020.The surge in use of IT and the wholesale shift to operate businesses online have substantially increased the risk of cyber attacks. Reports suggest that cyber frauds and ransom ware constitute 36% of the mass risks and are perceived as long-term threats to the smooth operation of the business organizations.

"Impact of Low Interest Rates on Life Insurance Industry"

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Low interest rates in life insurance industry have always been a major concern for the insurers. This paper shows how low interest rates can impact adversely and what are the supervisory measures and tools for the risk assessment and their mitigation plans.Life insurance companies have got a major hit due to low interest rates due to their major investments in interest sensitive assets like corporate bonds, Sovereign bonds, stocks, mortgage-backed securities, commercial mortgage loans, and real estate. etc. The opportunity cost involved in holding a particular bond for long period increases when there is an increase in interest rates. However low interest rates decrease the profitability of the life insurance companies due to reduction in sales, low level of investments in equity, etc.

Life insurance contracts are set at the inception and have maturities of around 20-30 years. These contracts do not change once come into existence till redemption. These long-term contracts result in higher duration on liability side than on the asset side. Amount of current liabilities increase at current level of interest rates and they tend to be higher than present value of assets.

Sustained period of low interest rates will impact the solvency position of the life insurance companies which might increase their probability to default. This paper caters to the problem of low interest rates on balance sheets of life insurance companies. An effort is made to identify and assess measures in the dealing of low interest rates.

Keywords: Interest rates, Asset Liability Management, scenario analysis, life insurance, finance, interest rate risk, insurance companies, Minimum Return Guarantees

Introduction

Interest rates always have a notable impact on many segments of the economy including the most popular life insurance industry. It is very important for the life insurers to understand this crucial impact upon their assets and liabilities. Amount of exposure towards interest rates of net worth of the company is termed as interest rate risk. Many historical trends have shown that life insurance companies make profit during the time of high interest rates.

Interest rates in Life insurance industry are a very sensitive matter and technical interest rates are used to determine the reserves in the policy. Upper bound of such interest rates is required as higher interest rate means lower reserve of the policy. This upper bound can be called as "Maximum Technical Interest Rate". Interest rates have declined significantly even after the financial global crisis happened in 2007-2008. If the interest rate used is low then the reserves in the policy are higher implying, lower profitability/yield from investments. To cover the promised contingencies of the policies, insurers need to focus on their investment policy. Life Insurance companies are struggling to meet the needs of guaranteed returns.

Low interest rates form an important source of systematic risk. Federal Reserve had announced in Year 2012 for expecting high unemployment for the coming couple of years. Due to this Central Bank was expected to keep interest rates approximately zero during that duration. There are three major risks faced by the insurance companies namely interest rate risk, credit spread volatility and disintermediation risk.

Interest Rate Risk: Insurance companies have limited choices of investment thereby leading to safer options and lower yields. They are starving for yield, hence creating investment tension to increase their risk for yield. Some of the low yielding investments are premiums, deposits, reinvestment of interest income, returns on maturing Fixed-interest deposits etc. These low earnings might lead to lowering of credit rating.

Credit Spread Volatility: Credit spread is the extra money that borrowers pay over the risk-free rates. So, for taking more risk, borrower has to extra amount of yield in return.

Disintermediation Risk: It is the risk associated with a person who withdraws the money from a lower yielding fund and reinvests the amount at a higher rate. This situation in insurance market may increase the sale of assets which could be producing financial losses. In case the interest rates rise, then policyholders tend to surrender their policies. In case of decline in interest rates, life insurance companies too face the risk of decline in investment returns to such a low point that they are unable to exceed/service ongoing liabilities. Life Insurance firms usually use fixed income markets to hedge their losses that may occur in guaranteed life insurance policies and annuities. For this they may be using Duration Matching technique, derivatives etc. Exposure of each company towards interest rate risk is dependent upon the features of the product sold by it. There were products that had a minimum guaranteed rate which led to a higher risk than products with zero guarantees.

As per the data from SNL Financial, Year 2014 included 87% of Prudential Financial's investment assets comprising of fixed income securities. At times duration matching is also not a feasible measure for the interest rate risk. Many insurance companies offer various options in their products like the option to contribute further in the premium or to close out a contract in return for some payment. Policyholders tend to opt for such options in case of variation in interest rates. Policyholder behaviour and minimum guaranteed rates make the situation of variation in interest rates more complicated.

Non-life insurance companies have a shorter duration of liabilities and that too don't have any guaranteed returns so they don't react much to the variation in interest rates.

Background of the Study

During the year 2010, low interest rates resulted in depressed crediting rates. This led to decrease in company's obligation towards the liability of the policy issued. Interest rate sensitive products might become less attractive thereby reducing the sales and lowering the asset growth of the company. This demands the requirement of restructuring the investment portfolio to meet the future contingencies associated with the policies issued. Sensitivity towards income invested and obligations involved in the policy issued have a big influence upon equity value. Price to earnings multiple could be used to assess equity valuations and is commonly used. "The P/E multiple represents the value of a firm's equity per dollar of earnings and can be based on historical earnings, such as net income during the latest 12 months, or forward earnings, such as net income expected in the next 12 months." This enables to assess company's growth prospects and risk profile that might be affected by the variations in interest rates.

Objectives

The motive is to understand the life insurance exposure to interest rate risk. So, objective of the study is to apprise readers of

- how low interest rates affect the balance sheet of the life insurance companies leading to asset liability mismatch
- Supervisory tools for identification and assessment of these effects
- Measures/solutions to life insurance companies to deal with the effects of low interest rates

Research Design and Methodology

Study conducted is descriptive and exploratory. Content analysis is done on the secondary data. The details and the analysis mentioned are pertaining only to life insurance industry.

The researcher has used her own industry and teaching experience in the field of Insurance.

Literature Review

Secondary data is taken from research papers published in various national and international journals and even from newspapers articles, blogs, and websites.

Low interest rates affect earnings of the life insurance companies and liquidity. Asset liability matching and duration matching are a few measures adopted by life insurance companies as hedging strategies. But at times, these too fail when large change is there. Life insurance products that provide guarantees are more exposed to interest rate risk than those which don't provide any guarantee.

Life Insurance firms measure interest rate through following ways:

- Bottom up approach: Interest rate risk is estimated on individual or product basis. Details of data on insurance assets and liabilities are needed. Usually, this information is not easy to gather. Many rating agencies and stock analysts focus on the product mix of insurers and interest rate guarantee products that insurance companies sell.
- Top down approach: It is based on 2 factor market model which has a broad stock market return and government bond return as factors. Coefficient of government bond return factor measures the exposure to risk of interest rates which vary with time.

Some of the reviews in this context are as follows:

1. International Risk Management Institute, Inc. (IRMI), Report August 2011 "Life Insurance Company Valuations and Interest Rates" appreciates the influence of interest rates on company's assets and liabilities. "The sensitivity to interest rate changes of both investment assets as well as policyholders' claims (i.e., liabilities) could have a significant impact on equity value."
2. Valmark Advisors, Inc., Report 2012 "Repercussions of a Sustained Low Interest Rate Environment on Life Insurance Products" talks about "sources of life insurance policy benefits namely from a) guarantees b) pure market returns c) policy credits in excess of guarantees that are items of company discretion". Permanent life insurance products could be of the following form:

P Premium Dependent	WWhole life, Guaranteed Universal Life, Hybrid Variable Universal Life Death benefit guarantees, Indexed Universal Life Death benefit guarantees
D Dividend Dependent	WWhole life with term riders, Modified premium whole life, suspended premium whole life
Cash Value Dependent	Universal Life, Variable Universal Life, Hybrid Variable Universal Life, Indexed Universal Life

Source: Val mark Advisors, Inc., Report 2012 "Repercussions of a Sustained Low Interest Rate Environment on Life Insurance Products"

Cash value dependent products with duration of 25-30 years have less impact of variation of interest rates than the same type of products with duration of 50-60 years. Major risk is experienced by whole life policies with term riders and single premium product designs.

3. "The Effects of a Low Interest Rate Environment on Life Insurers" Sustainable Architecture for Finance in Europe working paper no:65, January 2015 by Elia Berdin, Helmut Gründl

   Says that "Depending on the initial capital endowment and on the capital market development, life insurers might experience severe financial distress over the medium term, with a subset of companies struggling to maintain past promises." This risk can be mitigated by considerable reduction in payments made to policyholders that might improve the position of less capitalized life insurance companies. Probability of default and other adverse scenarios can then be avoided.
4. "UNDERSTANDING THE INTEREST RATE SENSITIVITY OF INSURANCE COMPANIES" FACTSET January 28, 2020By Joel Salomon, FSA says the average stock in the index performed considerably fine in 2019 because the stock market out powered the interest rates.

Source: FACTSET showing the 10 year Treasury note moved to 1.9% at the yearend 2019from 2.7% at the start of the year

Total investment return and the investment base will give a good estimate of the net investment yield. Product distribution of the life insurance companies plays a vital role in determining sensitivity towards interest rate movements.

5. "Measuring Interest Rate Risk in the Life Insurance Sector: the U.S. and the U.K." by Daniel Hartley, Anna Paulson, Richard J. Rosen Federal Reserve Bank of Chicago January 2016 says "residual interest rate risk can be used as a measure that life insurers retain after taking into account their efforts to reduce interest rate risk through asset liability management and other hedging activities." This residual exposure varies from country to country depending upon the properties of life insurance products sold.

6. "Insurance businesses in a low interest rate environment" authored by Tim Goggin, Steven McEwan and Charles Rix dated 20 March 2020 says that if borrowers are unable to payoff their liabilities leading to rise in credit spread then the value of fixed income assets/portfolios held by the insurance companies might fall. This implies a sharp increase in yield that can lead to surrender by policyholders whose policies are not aligned with the fixed income portfolios. This would again give rise to liquidity issues to life insurance companies.

Pressure/Impact upon Life Insurance Companies

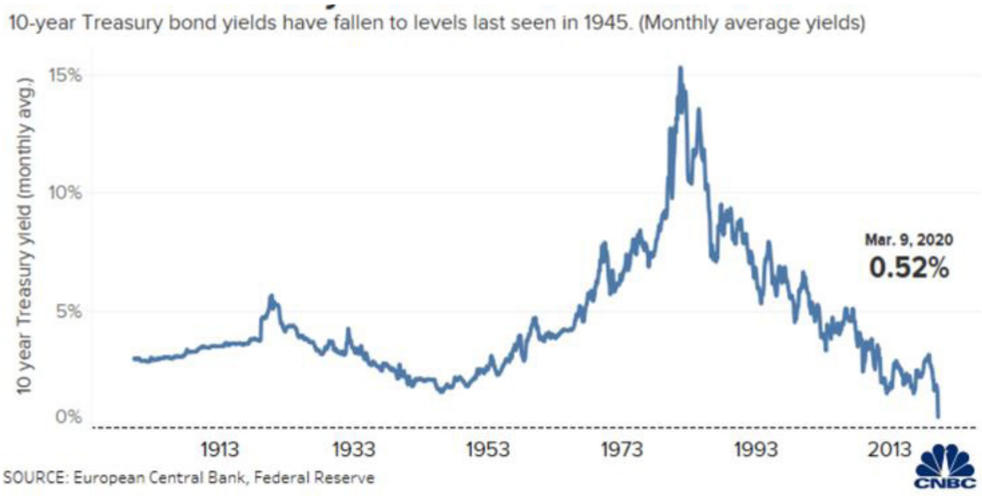

Figure 1- Yield on 10-year US treasury

Figure 1 shows yield on 10-year US treasury touched all time low of 0.318% on 9th March 2020. Following charts provide us an insight about how lowering of interest rate is putting huge pressure upon life insurance companies.

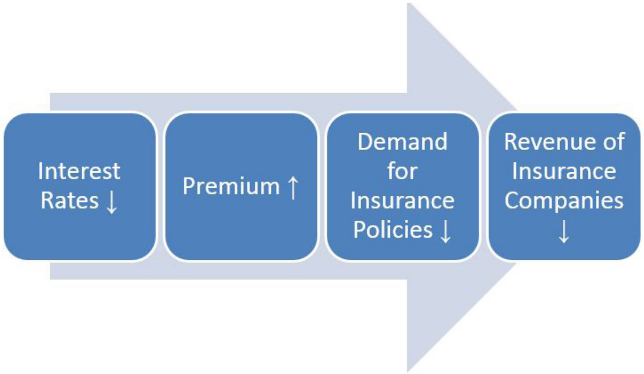

Figure 2- Impact of interest rates on sales of insurer

The above chart shows how the revenue of the insurance companies gets impacted due to decrease in the interest rates. Decline in the interest rates gives a rise in the price of premiums, which lowers the marketability of the life insurance policies, ultimately impacting their sales/revenue.

In addition to this, capital resources also tend to decline and could lead to insolvency of the insurance companies as depicted below:

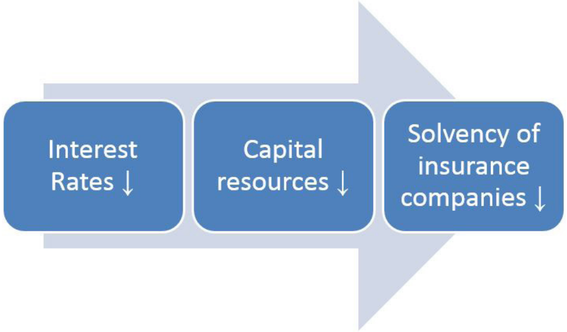

Figure 3- Impact of interest rates on solvency position of insurer

Lowering of the sales/revenue in the insurance policies further lower the profitability of the insurance companies. Reserves also increase when the interest rates are lowered. This again lowers the profitability as money gets locked in the form of reserves.

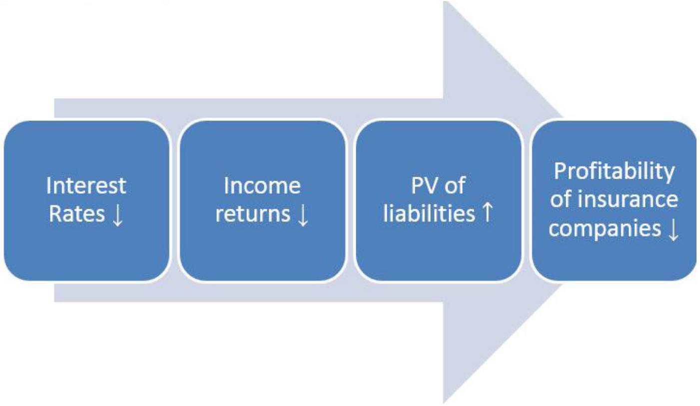

Figure 4- Impact of interest rates on profitability of the Insurer

European Insurance and Occupational Pensions Authority (EIOPA) is a timely reminder of the potential negative side effects of low or negative interest rates on both life and non-life insurance companies.

Insurance companies make their investments on the basis of the tenure of their liabilities and want to maximize their returns within its availability of the financial resources and risk tolerance level. The problem arises when current lower yield investments are unable to meet past return assumptions. Increase in liabilities is not getting offset by the increase in investment returns. Usually, guaranteed returns are covered through risk free assets like government bonds. The tenure of life insurance policies is more than the tenure/maturity term of the assets. So, the duration creates a mismatch between assets and liabilities. This makes the companies exposed to reinvestment rate risk. Insurers search for higher yielding riskier and less liquid products such as infrastructure, loan portfolios, property and private equity as well as equities, real estate, foreign currency denominated assets, other accumulation products etc. to mitigate the deficit capital position created by the fall in interest rates. However, the risk appetite of insurers may constrain them from moving towards risky assets. So, insurers are actually searching for higher yields/returns.

In other words, mismatch in the duration of assets and liabilities could create a situation where life insurance companies could become insolvent. The major reason behind this insolvency is the fall in the investment returns below the level of the guarantees underwritten in the past. Usually these guarantees appear during the tenure of the policy being 30 years or more. All this also depends upon the nature of the insurance products, risk management capabilities, investment situations, solvency position of the insurance companies etc. So, two major things need to be taken into consideration with respect to the time are the in-force policies and newly underwritten business.

Profitability of the insurance companies is derived from interest earned from insurance policies and portfolio earnings. Fixed annuity products are more vulnerable to interest rate risks they guarantee the return.

Below chart shows the sensitivity of life insurance product towards interest rate. Increase in the level of guarantees provided by the insurance companies; increase their susceptibility towards interest rates.

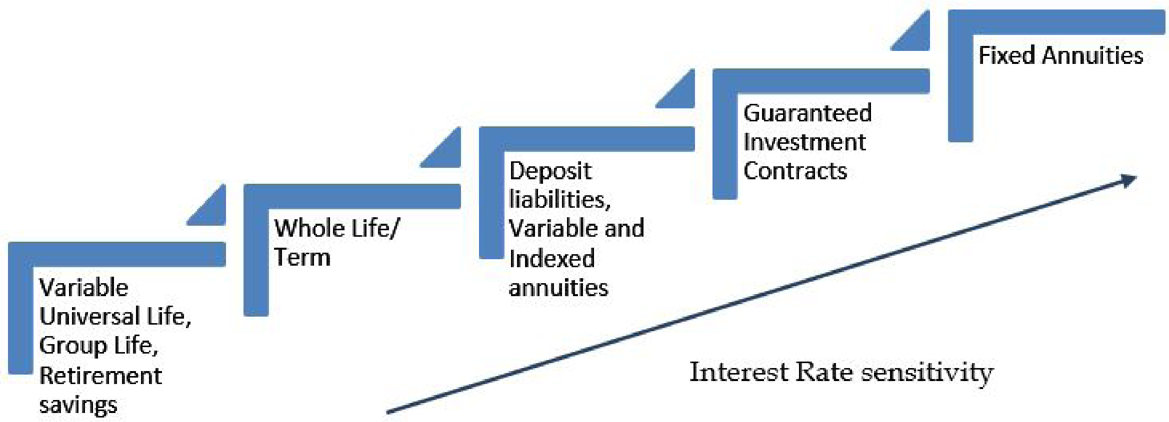

Figure 5- Sensitivity of life insurance products towards interest rates

Fixed annuities are highly sensitive to interest rates. Guaranteed minimum annuity pay-outs are highly exposed as the expected rate used to price the product would be higher than the actual return earned. Even guaranteed accumulation rate in the deferred tenure may incur losses if the actual returns are low. Guaranteed minimum crediting rates on the invested sum are offered in Universal life products, which are the premiums less charges less policyholder withdrawals.

Some of the features that can be considered a threat/problematic to the insurers are depicted in the chart below:

Figure 6- Features of a policy that can pose a threat to the life insurers

Tools for Risk Identification and Assessment

Some of the supervisory tools that can be used to assess the impact of low interest rates could be as follows:

- Stress Tests
- Reverse Tests
- Scenario analysis
- Ad hoc surveys
- Long term solvency projections
- Early warning indicators
- Targeted discussions with life insurance companies and analysis of the insurers' product offerings

Stress Test is most commonly used being a very effective tool involving projection of insurer's financial position using several risk factors upon specific time periods discussing the consequences. But they cannot capture interaction between different variables which is taken care by scenario analysis. Specifying correlations and defining extreme scenarios are the major limitations of the scenario testing. Reverse stress test can also be futile if the company remains to be solvent under all the chosen stresses. Long term solvency projections can also provide a prediction in the future financial position under various scenarios. These help in identifying various interest rates to which an insurance company could be vulnerable. This approach is heavily reliant on these predicted rates of interest.

Some of the early warning indicators could be of the following nature, requiring continuous monitoring and supervisory attention:

- Asset liability duration mismatch
- Difference between guaranteed interest rates and actual investment returns
- Difference in inflows and outflows of cash
- Changes in solvency ratios
- Change in risky and non-risky assets

- Change in profits with the changes in interest rates
- Change in reserves, provisions, bonuses etc
- Changes in sum at risk

These indicators require close monitoring and proper interpretation of results. Major issue with early warning indicators is the scarcity of the data and unavailability of comparable results across various insurance companies due to difference in product mix. Annual cash flow testing is also a statutory requirement for insurance companies where financial model is built on the basis of their assets and liabilities. Projections are done till the time the liabilities are immaterial. Sometimes state insurance regulators also provide some scenarios so testing is done on the basis of stochastic and deterministic interest rates.

Measures Adopted

For the asset liability management, some of the life insurance companies keep an additional asset/liability mismatch reserve. Major challenges in asset liability management are how much guarantees should be allowed and what are the investment strategies that can be adopted to support those guarantees. Some of the companies also employ buy and hold strategies to spread their volatility and match assets and liabilities. Duration of the assets can be increased to ensure matching. Duration for a bond investment is defined as "the number of years until the investor receives the present value of all income from a bond (including interest and principal) and is used to gauge a bond's sensitivity to interest rate changes." This implies higher duration has more sensitivity towards the changes in interest rates. Tenure of new policies can be reduced. Additionally, guaranteed rates can be lowered so that liabilities will get reduced. Some of the features and options available in the life insurance policies can be restricted that can prove to be a threat in low interest rate scenarios like putting a restriction on underwriting new insurance policies and focussing more on protection policies like death and disability. Interest payments on accumulated funds can be reduced for the ongoing active policyholders.

There has been a divergence to Unit Linked Insurance Products in the recent years to bridge the gap created by the mismatch of low rates of interest. Premiums received in these products are invested in funds that are at the risk of the policyholder. So ULIPs are a way for the convergence of the banking and the insurance industry. Shifting of risk to the policyholder lowers the amount of capital required, thereby reducing the volatility involved. Insurers can also opt for reduction in operational costs. Apart from this, economic conditions, competition and savings in the market also play a key role in the revenue generated through Unit Linked Insurance Products.

Let us consider few scenarios which could be an advantage in disguise. If investment returns earned by life insurers is lower than the guaranteed return required to be paid to the policyholders, then surrender in these cases would be beneficial to insurance companies as they would not be undertaking any future losses. But mass surrenders can pose solvency and liquidity strain on the insurers.

Another scenario could be when bonds are purchased at high rates of interest will be in large unrealized gains when interest rates fall. This could be an advantage to insurers if they sell the assets in order to meet the surrender value payments. But if the duration of assets is more than that of the liabilities then capital resources will fall and will weaken the solvency position.

Life insurance companies are in favour of long-term rates for competitiveness as the tenure of the policy is also long. They benefit from steep yield curve by investing in long term investments like real estate, equities etc. One of the investments could be in fixed annuities that help them in volatile and uncertain scenarios.

"State Insurance regulators have provided the following set of stress tests to solve the mismatch of assets and liabilities:

- Level interest rate scenario
- Uniform increase/decrease over 10 years at 0.5% pa and then level
- Uniformly increase/decrease over five years at 1.0% pa and then uniformly decrease/increase over five years at 1.0% pa and then level

➢ Immediate decrease of 3% and then level"

Additional reserve is required to bridge the gap between the assets and liabilities as per Standard Valuation Law (#820). Academy of Actuaries (AAA) has come up with an Economic Scenario Generator to randomly provide interest rates and market rates.

Enterprise Risk Management (ERM) is another technique to monitor positions of assets and liabilities taking account of duration, convexity, earnings, cash-flow analysis, expected shortfall, tail returns and capital at risk. Diversification in the investment strategies/portfolios can also ensure some amount of hedging for interest rate risk. Derivatives enable the companies to lock in higher interest rates although they come with other risks such as counterparty risk, which increases with time needed for hedging strategy. Interest rate swaps are most common and 73% of the hedges have the maturity dates of 2021 and beyond. Fixed income futures, floors and swaptions could be another measure for hedging techniques using derivatives.

Some of the studies also focus on macro prudential framework to mitigate low interest rates. Macro stress tests, macro scenario analysis, sensitivity testing and sector wide risk aggregation is commonly used to address these challenges. Again, the major challenge lies in the availability of the data.

Periodic revisions and revising policies as per the market developments could also provide some relief to the fluctuations of low interest rates. Regular discussions on asset mix, market perspective, duration targets, hedging or reinsurance etc. can prove to be an asset to actuaries and investment managers in adverse situations. Some of the other supervisory actions could also include benefit cuts, restricting dividend distribution, benefit deferrals, imposing higher capital requirements, capping investment guarantees for new insurance businesses, imposing strict profit-sharing rules, etc.

Overall, we can summarize some of the recommendations to National Supervisory Authorities (NSAs) as follows:

- Regular monitoring and supervising the life insurers who are highly exposed to low interest rates
- Discussing undertaking actions to improve financial stability
- Analysing the low interest rate scenario and enabling systematic risk potential
- special attention to pre-emptive recovery and resolution planning to reduce the likelihood and impact of insurance failures.
- Empowering themselves with new tools

Conclusion

Rise in interest rates might improve the condition of the life insurance companies related to reserves but only to some extent. Value of fixed income assets lowers in case of rise in interest rates. Value of liabilities should also fall to the same extent. If this doesn't happen then, capital resources of the insurance companies will fall leading to increased insolvency condition. Even in case of much surrender, there is a threat to liquidity and solvency position of the insurers. The need of the hour is to integrate actuarial and financial risk management. Mitigation of interest rate risk is needed with better product development. Life insurance companies should understand their product distribution. This will yield "risk adjusted return on capital". More risky business requires higher amount of economic capital and profits compensating for high risk. Supervisors and insurers are working at their best to curb the challenges posed by low interest rates but lack of data on duration raises a big question to them while evaluating life insurance contracts. Balance has to there between financial stability of the life insurance companies and policyholders' interests. Accordingly impact upon assets and liabilities of the life insurance business should be analysed in various interest rate environments.

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A Study on Role of life Insurance Agents in Facilitating Settlement of Claims

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Purpose: This paper investigates the services rendered by life insurance agents and policy holder expectations and perceptions about the services provide by life insurance agents. It also derives the effectiveness of services and quality of service with the help of purposed questionnaire

Methodology: Descriptive research was undertaken on the basis of primary data collected from the respondents who are residing in delhi region as well as NCR few of the respondents were from part of Jharkhand. Sampling method using a structured Questionnaire. The data which is collected were further analyze by SPSS software.

Findings: Term insurance is the most known and purchased product across all categoriesPolicy holder have mix responses when it comes to change in services of life insurance agents. The agents in half of the cases explained all the terms and conditions of the contract and half in of the cases they lack in explaining the concept of assignment and other clauuses which is very important.

Research limitations/Implications: The study is limited to a specified geographical area of Delhi NCR and part of Jharkhand

Originality/Value: the paper reflects the insight about the perception and the services rendered by the life insurance agents and the customer expectations from the services provided bt life insurance agents.it also derives the most favored product among the respondents and the best insurance companies to purchase the product.

Keywords:-insurance, life insurance, agents, claims, services, products

Introduction

Indian insurance industry has been at the forefront of economic development in India. Gross premiums have grown over the last decade at a 7.2% CAGR, pushing the India's insurance sector into the league of globally large insurance economies. During this period, mindset of customers has also changed substantially, with 20–25% of them now using various digital platforms to understand and compare various insurance products. Moreover, with the swift adoption of the technologies like Internet of things (IoT), insurance companies have become more connected and aware.

The connected world and rise of insurtech are leading to a more precise and data-driven era, creating huge opportunities for insurance companies to demonstrate their value bytapping the untapped market and reap the monetary profits. Today's consumers are being prompted with the relevant information even before it has been identified a need. They also have a greater access to information wherever and whenever they want it, thus escalating competition. Lack of brand loyalty in the industry is also heightened by the expectation of seamlessly delivery of the exemplary customer service provided through different communication platforms. Post liberalization, the insurance industry has recorded significant growth due to higher personal disposable incomes and solid economic growth in the country. Currently, there are 33 non-life insurance, 24 life insurance and 7standalone health insurance companies. The industry has also been driven by new product innovation and huge distribution channels, along with targeted promotional campaigns.

The Government of India had amended Insurance Law (Amendment) Bill in 2015 to increase the FDI limit for an insurance company from 26% to 49%, which would further help in attracting investments in the insurance sector.The Insurance Regulatory and Development Authority of India (IRDAI) has also recently allowed life insurance companies that have surpassed 10 years of operations to raise capital requirements through initial public offerings (IPOs). Insurance products have been also covered under the exempt exemptexempt (EEE) method of Indian taxation system, which provides an additional tax benefit of 30% approximately on selected investments. In 2015, the government also introduced the Pradhan Mantri Suraksha Bima Yojana (PMSBY) along with Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJBY) to add more people under the insurance umbrella.

In future with the increase life expectancy, favorable savings and greater employment in the private sector it is also expected to fuel demand for pension plans. Likewise, strong favorable growth in the automotive industry in the coming decade would be a key influencer for the motor insurance market. During the first part of 2016–17, life insurance industry reported around 20% increase in the overall annual premium equivalent (APE) occurring due to strong outcome of both private players and LIC.

The Indian insurance sector is on its path to achieve a significant growth in the future years. Lowpenetration, favorable demography, initiatives like the Pradhan Mantri Jan-Dhan Yojana, increase in financial literacy and demand for insurance, and rising of per capita incomes are expected to fuel further the growth of the Indian insurance sector.The main aim of life insurance companies to share the risk of day to day life of human beings. It provide safety and security from the unexpected event like Death, old age benefit, Disability, illness or business risks (unexpected and uncertain) i.e. fire, earthquake, theft, accident etc. life insurance industry in India performing various economics activities such as manufacturing, trading, banking, transportation and insurance

Private insurers in India have recorded impressive growth of 26% in annualized new business premium for the month of May 2016.LIC has also recorded a record growth of 22% (year-on-year).All the insurance companies in India functioning under the control of IRDAI.

Insurance industry in India has seen a major growth in the last decade along with an introduction of a huge number of advanced products. This has led to a tough competition with a positive and healthy outcome. Indian Insurance Industry is considered as one of the fastest growing insurance industry in the world. The Indian insurance industry is expected to grow to US$ 280 billion by Financial Year 2020. Solid economic growth and increasing personal disposable income are the main factors fueling this growth. Insurance penetration rate is steadily increasing and has reached 3.49 % in FY 2017 from 2.71 percent in 2001.

Insurance sector has also played an influential role in ensuring the wellbeing of the Indian economy. It has substantially increased various savings opportunities amongst the individuals, by safeguarding their future and also helping the insurance sector to build a big pool of funds. With the support of these funds, the insurance sector has also supported the capital markets, thereby powering large infrastructure developments in India.

Life insurance density declined continuously from 2011 (55.7 USD) to 2014 (41 USD). While density picked up in 2015 (44 USD), penetration reduced by around 40% from 4.4% in 2011 to 2.6% in 2015. In the case of non-life insurance, the insurance density (premium per capita) improved from 2.4 USD in 2001 to 11 USD in 2015. Moreover, insurance penetration rates in India have been around 0.7% for the last five years—which is one of the lowest rates in the world.

Creating better awareness to gain market share

With a population of over 1.34 billion, India’s life insurance penetration rate is still below 3% of GDP. Awareness about the true purpose of life insurance or long-term savings and protection instrument, is still low. As a result, neither are the households fully protected from unforeseen disruption caused by the death of bread winner, nor are they equipped to adequately provide for longer term life stage goals such as retirement. The financial portfolio of most Indian households is highly fragmented without a clear focus. Indian life insurance industry will have to make a concerted effort towards increasing life insurance awareness so that people invest in life insurance for the justified reasons and more importantly, stay invested over the long run.

Changing demographic and social milieu to open new opportunities

India offers tremendous growth opportunity to life insurance industry at both ends of age spectrum. On one hand, India’s millennial population is expected to cross 45 crore and on the other hand the elderly population will be over 10 crore by 2020. The gradual movement of India's population to urban areas will continue and in few years around 40% of India's population will be living in urban areas. Nuclear households that constitute 70% family structures now, is expected to touch 74% in 2018. This will offer life insurers a concentrated market of households who do not have the traditional security of joint family.

Millennials will be become more important as they will play the role of key decision maker early in their life in nuclear households. As they are more open to share their data in the virtual world to get exactly what they are looking for, data analytics and insights curation will open some new opportunities for the industry. With higher risk taking ability and greater awareness of the need to hedge those risks in life, the demand for protection oriented financial products will witness further increase. While millennials may prefer the convenience of online purchase journey, a large set of Indian will still need the support of physical sellers. And between the two extremes will be those who will research online but prefer to buy offline. These multiple customer segments will touch various distribution channels in a single purchase journey making it necessary for life insurers to offer a seamless omni-channel experience.

Digital transformation to be at its peak

Expect a chatbot to be solving your problems as basic as suggesting a suitable plan or complex problems such as suggesting an investment decision based on your investment risk profile in the coming year. Human intervention will decrease and reliance on digital will increase with rapidly changing technology. Artificial intelligence (AI) based programmatic marketing will be customized to suit differently to each customer. It will be important to meet the customer's demand for customized products. Speed will be of extreme importance. Your day to day wearables will broadcast data about your health which will allow the insurers to reach out to you with pre designed customized solutions. The possibility of instant issuance with no medical and financial under writing using IOT (Internet of Things) and AI based technologies will also go up many folds. However increased dependency on digital will also lead to more security risks. AI based phishing scams will become harder to catch and spurious calls might sound even more genuine with the info collected from customer's social media assets. Insurers will have to work on improving IT system security and protect customer data.

Customer service and engagement to be the key differentiator

In the information age, ideas are the key differentiator. Customer information is available in abundance but what is going to be critical is to utilise that to create actionable insights. Data and analytics capabilities will assume even greater significance to reshape how life insurers connect, serve and engage with its existing customers. With a large set of existing customers and each customer having 5-6 life stage based opportunities to buy life insurance products, long term efforts towards customer loyalty will become critical for business success. A superior customer engagement effort will not only drive superior renewal book and cross sell opportunity for life insurers, it will significantly enhance customer returns as they will remain invested for longer tenure.

Insurance intermediaries code of conduct

Insurance intermediaries facilitate the placement and purchase of insurance, and provide services to insurance companies and consumers that complement the insurance placement process. Traditionally, insurance intermediaries have been categorized as either insurance agents or insurance brokers. The distinction between the two relates to the manner in which they function in the marketplace.

Insurance agents are, in general, licensed to conduct business on behalf of insurance companies. Agents represent the insurer in the insurance process and usually operate under the terms of an agency agreement with the insurer. The insurer-agent relationship can take a number of different forms. In some markets, agents are "independent" and work with more than one insurance company (usually a small number of companies); in others, agents operate exclusively – either representing a single insurance company in one geographic area or selling a single line of business for each of several companies. Agents can operate in many different forms – independent, exclusive, insurer-employed and self-employed.

An agent is a primary source for procurement of insurance business and as such his role is the corner stone for building a solid edifice of any life insurance organization. To effect a good quality of life insurance sale, an agent must be equipped with technical aspects of insurance knowledge, he must possess analytical ability to analyze human needs, he must be abreast with up to- date knowledge of merits or demerits of other instruments of investment available in the financial market, he must be endowed with a burning desire of social service and over and above all this, he must possess and develop an undeterred determination to succeed as a Life Insurance Salesman. In short he must be an agent with professional approach in life insurance salesmanship. Such an agency force is expected to be helpful not only in proper field underwriting but also after sales, servicing, concomitant and essential elements for higher retention of business.

Literature Review

(1) Attitude of policy holder towards insurance services: attempt to illustrate the attitudes of Indian consumers towards the various insurance services by collating responses of total 377 consumers through a questionnaire on 5-point Likert scale. Responses were collected to assess the different level of awareness and customer's attitude towards various insurance services. Findings of the research shows that basic economic variables and socio demographic factors have a significant impact on customers attitudes towards various insurance services in Indian Industry.(Gautam and Kumar 2012)

(2) Astudy on the Expectations and Perceptions of the Services in Private Life Insurance Companies: reveals that the policyholder's satisfaction are well met in the case of certain factors reacting to service quality. But in the case of other factors, there exists a considerable gap which indicates lower level of service satisfaction. If all companies in the Life insurance industry emphasize their focus on the ensuringeffective delivery of services, they would be able to win the hearts of customers and thereby anticipate increase in their market share (Keerthi, P. and Vijayalakshmi, R.2009)

(3) Customer perception among life insurance services through agents:in this thesis it was attempted to study the satisfaction of the customers towards the service quality of 5 selected life insurance companies in India and also performed a comparisonby analysingvarious advisory services by the insurance agents and bank employees selling the different life insurance products. Both primary as well as secondary data was collected from three major cities of the state Punjabnamely Ludhiana Amritsar, and Chandigarh. Primary data was collected using a descriptive questionnaire whereas secondary data was collected from various published reports of IRDAI,research papers, journals, newspapers, websites etc. The sample size comprised of 750 customers and 200 insurance intermediaries. SERVQUAL model comprising of 22scaleswas used to study the customer perceptions towards the service quality. (Arora 2008)

(4) Competencies required for selecting the effective agents: toexplore the managerial changes of agents taken place in liberalized economy. The objectives were todiscovervarious factors and the methodology for selecting an effective agent. A samplecomprising of 15 agents ranging between 28-47 years,was taken for qualitative result. The findings founds that professional proficiency is required to operate a successful insurance agency. The study also highlightedthe analysis of the industry on how to build and manage while the selection of agents(vasanthi Srinivasan, Prakash and sithramu 2001)

(5) Post sale services by the life insurance agents:in his article entitled, The Insurance Customer TheConsumer Protection Act, 1986, in was observed that policyholders are more fulfilled with various post sales services such as sending premium reminder notice intime, processing of required data, showingan active response to the customer needs and claimservicing engagement especially during the claim settlement (Gopalakrishnan 2008). in an article entitled, Claims on Customer Satisfaction ,observes that for policies with high return and post -sale advisory interactions such as providing guidance in financial planning,frequency of contact, and friendliness, increases the policyholder's satisfaction(Nani Javeri2006). in their study captioned, Total Quality assessment in Insurance, observe that pre sales services like product knowledge, advice rendered during selection of policy, explaining variety of policy featuresin detail and after sales services like notifying of premium due dates, aidin premium transfer and various other services of the agents have increased the policyholder satisfaction (Steward Doss and Kaveri (2000)

(6) Satisfaction of Customer and agents regarding service offered by life insurance companies:in her study captioned, Brand Positioning ofInsurance Industries –A study on Private Player, to examine the customer and agents satisfaction level regarding the customer services offered by the insurance company. She findsthat most of the customers are dissatisfied with the insurance company services dueto the non -availability of flexible mode of premium payments, policies offered are not upto their need and lack of multiple channels like brokers, banc assurance, corporate agentsfor professional approach towards customers(Nalini Prava Tripathy (2006)in his study entitled, A Study on Life Insurance awareness and Customer Perception portrays thatcustomers' awareness on policies and facilities, effective claimsettlement and agents response to the customer needs influence their level of satisfaction (Pillai (2004).

(7) Duties of agents and service rendered by the officials: Attempts to assessduties of agents and to evaluate whether the existing products are satisfying the requirements of the policyholders in Life 73 Insurance Company branches of Gulbarga district (a backward area of Hyderabad –Karnataka) during the period 1999. The sampleconsisting of policyholders and agents of 1921, representing 0.2% of the insured population. The finding of the study revealed thatproducts with less premiums and covering more risk arefavored by policyholders and demonstration of the various product features by the insurance agent is not satisfactory. It is found that rapport between the development officer andagents is not customary and majority of were dissatisfied with the services rendered by the officials (Patil Kallinath, S. 2003)

(8) Active service agents and transparency in claims: in his study entitled, Insurance Perspective in EasternUP –An Empirical Study, discloses that proactiveservicing of agents and policyholders' trust on their insurers influence the satisfaction level of policyholders in life insurance(Ravi Kumar Sharma 2005).in his article entitled, New Initiatives in the Insurance Sector: Opportunities and Challenges, reveals that the friendly approach with transparency in handling of claims are the key influencers for policyholder satisfaction(Mony 2005)

Objective of the Study

- To study the role that life insurance agents are expected to play a major role in the claim settlement process as per IRDAI guidelines.
- To study life insurance policyholder's perception about the extent at which the agents perform the role.
- To study policyholder's expectations about the role to be played by insurance agents of their claims.

Research Methodology

The study is descriptive inferential in nature that describes theRole of life insurance agents in facilitating settlement of claims. The study was undertaken with the objective to identifyRole of life insurance agents in facilitating settlement of claims. A sample of 250 will be selected from the agents of LIC of India, icici prudential life insurance and shriram life insurance company. Effort has been made to collect the data from samples with different profiles. The secondary data related to conceptual framework and review of literature was collected through reference books, journals, newspapers, websites.

A Structured questionnaire/schedule will be used to collect primary data from the respondents. The schedule was divided into different parts. The questions in the schedule will be close ended and codified so as to facilitate data feeding and analysis. The first part of schedule consisted of information related to the perception and expectations of the customer for the services rendered by life insurance agents and the second part entailed of twelve statements related to role of respondents in facilitating claim settlement process in life insurance. The statistical tools percentage, mean, SD, one sample't' test, and ranks will be used for analysis and interpretation. One sample 't' test will be applied to test the hypothesis and to draw the conclusions. SPSS software will brought in use for analysis. The secondary data was also tabulated and then processed using MS Excel.

Findings

1) Have you ever bought a life insurance policy?

`Yes	No	N
86	32	119
72.27%	27.73%	100.00%

The survey was conducted with a sample of 119 individuals andnearly 72.27% of respondents have bought the life insurance policy.

2) What type of life insurance policies are you aware of?

Insurance Policy	N
Term Insurance	102
Endowment Plan	98
Money Back Policy	82
Children Plan	74
Pension Plan	86
Unit Linked Insurance Plans (ULIP)	81
None	0
Total Responses	117

From the above table, we can see that no respondent is unaware of the plan. Only 15 respondents were not aware of Term insurance Plans. So, hence we can conclude that people have a good knowledge of Insurance.

3) What type of policy have you purchased?

Insurance Policy	N
Term Insurance	44
Endowment Plan	39
Money Back Policy	32
Children Plan	16
Pension Plan	11
Unit Linked Insurance Plans (ULIP)	23
None	23
Total Responses	117

From the above table, we can see that the most common product purchased by the respondents is Term Insurance. Other common types were Endowment Plan and Money back policy. Also, there were 23 people who were uninsured which is approximately 20% of the total respondents.

4) From which company have you taken the above policy?

Life Insurance Company (LIC)	N
Life Insurance Company (LIC)	59
Bajaj Allianze Life Insurance	13

Max Life Insurance Company	14
ICICI Prudential Life Insurance Company	21
Others	10
Total Responses	95

From the above table, we can clearly see that most of the policies sold was by LIC, which is the leader in Insurance Business in India. Other top selling companies are Bajaj Allianze, Max Life and ICICI Prudential. It can be concluded that people still have more trust and believe in LIC than in any other company being a government company. It can also be attributed to high number of LIC agents in India.

5) How have you bought the above policy?

	Frequency	Percent	Cumulative Percent
Valid	24	19.7	19.7
Directly from the company	26	21.3	41.0
Through insurance agent	65	53.3	94.3
Through online intermediaries	7	5.7	100.0
Total	122	100.0	

From the above respondents it appears that out of 122 responses 24 people don't have life insurance policy. 53.3% of people have bought life insurance policy through agentswhich indicates that life insurance is still sold on trust. twenty-six respondents purchased policy directly from the company which is second highest 21.3%.As compared to above channels online purchase of insurance seems to be low in above category which is just 5.7%.

6) If you have taken life insurance policy through agent. Please rate the following factors on a scale of 1 to 5 (1 being the least important and 5 being the most important) on the satisfaction level with the agent services?

Summary of all the responses is as follows:

Groups	Count	Sum	Average	Variance
Product Knowledge	83	291	3.506024	1.643256
Periodic premium collection	84	290	3.452381	1.624211
Risk profiling exercise	82	265	3.231707	1.51355
Assisting in filling of proposal form	83	294	3.542169	1.617103
Assisting in claim settlemnent	80	272	3.4	1.559494
Suggestion about the type of policy best suited to me	83	268	3.228916	1.446959

The summary data clearly indicates that the mean ratings of all the consumer satisfaction ratings is approximately 3.39 which indicates that all the measures of satisfaction are fairly important. To analyse the information further we are using one-way ANOVA with the following hypothesis and conclusion :

H0 There is no significant difference among the mean ratings of different factors measuring customer satisfaction from the agent services.

H1 There is significant difference among the mean ratings of different factors measuring customer satisfaction from the agent services.

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	7.574733	5	1.514947	0.966348	0.437894	2.232448
Within Groups	766.6071	489	1.567704	Total	774.1818	494

Since the level of significance,0.437894 is lower than the level of significance specified by the researcher (.05), so there is insufficient evidence to reject null hypothesis thus the null hypothesis is accepted and alternate hypothesis is rejected, which implies that there is no noteworthy difference among the mean satisfaction ratings of different factors measuring customer satisfaction from the agent services.

7) Has the agent explained the terms and conditions of the contract?

	Frequency	Percent	Cumulative Percent
No	25	20.5	20.5
Yes	60	70.6	100.0
Total	85	100.0	

From the above responses almost 70.6% respondents say that the agents have explained all the terms and condition of the contract and rest 20.5% of the respondents says that the agents don't explained terms and condition of the contract while offering life insurance policy.Hence, majority of the agents are selling the product properly only 20.5% of the agents are doing mis-selling. This percentage is still large and appropriate measures such as proper training, strict rules, fines, periodic inspection of agents work, etc. must be taken to reduce it.

8) Has your agent explained the following at the time of buying life insurance policy?

Factors	Yes	No	Percent of Yes	Percent of No	N
Risk coverage	73	10	86.9	13.1	84
Premium Payment	79	4	94.0	6	84
Penalty Provisions	44	37	52.4	47.6	82
Maturity Benefits	76	6	90.5	9.5	83
Loan facility	41	41	48.8	51.2	83
Tax Benefits	67	14	79.8	20.2	82

Majority of the respondents answered yes in risk coverage, premium payment term, maturity benefits and the tax benefits which is a good indication as these are considered to be most important things while purchasing a policy.

There were fairly equal responses for penalty provisions and loan facilities. This indicates that most respondents weren't clear about these facilities. Hence, appropriate measures should be taken to make consumer aware about these benefits as loan facility can be a big motivating factor to purchase the policy and penalty provisions can stop mis-selling and frauds.

9) How frequently does your agent communicate with you?

	Frequency	Percent	Cumulative Percent
Never	11	12.94	12.94
Once in 6 months	10	11.76	24.71

Once in a month	20	23.53	48.24
Once in a quarter	22	25.88	74.12
Once in a year	22	25.88	100.00
Total	85	100	

Out of the 85 respondents it concludes that nearly half or 50% agents visit the client at least once in a month or once in a quarter. Nearly 12.94% agents never visit the client again. This data shows how frequent the agent visits the client. This can be due to multiple reasons such as premium collection, policy changes, new-business, advertisement of new product, changes in existing product, loan, surrender, maturity, nomination, assignment, etc.

10) What is the medium of communication

	Frequency	Percent	Cumulative Percent
Email	3	3.57	3.57
Message	2	2.38	5.95
Personal Visit	46	54.76	60.71
Telephone	33	39.29	100.00
Total	84	100	

The data clearly shows that most of the agents still follow the traditional way i.e. personal visit which is 54.76% and followed by telephone which is 39.29%. Only around 5.95% agents follow advance ways of communication. This clearly indicates the importance of personal touch and personal service in life insurance.

11) Problem faced by you while utilizing the various services of the agent?

Summary of all the responses is as follows:

Groups	Count	Sum	Average	Variance
Lack of the product knowledge	79	221	2.797468	1.932814
No interest after the issue of policy	79	238	3.012658	2.243427
Too much dependency of agent on his/her supervisor in clearing your doubts	79	236	2.987342	1.884453
Over selling/ Pressure selling	79	236	2.987342	1.756248

The summary of the data clearly indicates that the mean ratings of all the reliability ratings is approximately 2.9 which indicates that the problems faced by the policyholders are approximately average. indication.To further analyse the information, we are using one-way ANOVA with the following hypothesis and conclusion:

H0There is no significant difference among the mean ratings of different factors measuring problems faced by the customer while utilizing services of the agent.

H1 There is significant difference among the mean ratings ofdifferent factors measuring problems faced by the customer while utilizing services of the agent.

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2.363924	3	0.787975	0.403214	0.75079	2.633547
Within Groups	609.7215	312	1.954236			
Total	612.0854	315				

Since the level of significance 0.75079 is higher than the level of significance specified by the researcher (.05), so there is sufficient evidence to reject null hypothesis thus the null hypothesis is rejected and alternate hypothesis is accepted, which implies that there is significant difference among the mean rating factors measuring problems faced by the customer while utilizing services of the agent.

12) Do you require any change in the services provided by the life insurance agent?

	Frequency	Percent	Cumulative Percent
No	40	45.98	45.98
Yes	47	54.02	100.00
Total	87	100	

Out of 87 respondents 54.02% of the response reflects that the policy holder wants the change in the services rendered by life insurance agents and 45.98% of the respondents says that they don't need any changes in the services provided by life insurance agents. Since majority of the respondents wants changes in the services provided by the customer, it is a matter of high concern and further survey or analysis needs to be done to find an appropriate solution.

13) Reliability of the agent.

Summary of all the responses is as follows:

Groups	Count	Sum	Average	Variance
Providing Services at the right time	82	273	3.3292	1.828516
Error free and speedy documentation of the policies	80	275	3.4375	1.565665
Guiding the policyholders as regards the policy status and new products	79	272	3.4430	1.583252
Sincere interest of the agents and employees in solving the problems of the policyholder	80	268	3.35	1.546835

The summary data clearly indicates that the mean ratings of all the reliability ratings is approximately 3.34 which indicates that agents are considered to be fairly reliable on various parameter. To analyse the information further we are using one-way ANOVA with the following hypothesis and conclusion:

H0 There is no significant difference among the mean ratings of different factors measuring reliability from the agent services.

H1 There is significant difference among the mean ratings of different factors measuring reliability from the agent services.

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.833061	3	0.277687	0.170103	0.916534	2.633093
Within Groups	517.4909	317	1.632463			
Total	518.324	320				

Since the level of significance 0.916535 is higher than the level of significance specified by the researcher (.05), so there is sufficient evidence to reject null hypothesis thus the null hypothesis is rejected and alternate hypothesis is accepted, which implies that there is significant difference among the mean satisfaction ratings of different factors measuring reliability levels from the agent services.

14) Service quality assurance.

Summary of all the responses is as follows:

Groups	Count	Sum	Average	Variance
Adequate knowledge about various policies	81	275	3.39506	1.566975
Assistance by the agent in selection of most suitable policy	80	273	3.4125	1.283386
Clarification of doubts by the agents	80	280	3.5	1.493671
Timely reminder of premium payment	79	278	3.51899	1.355404
Understanding of specific need of policyholders	80	273	3.4125	1.485918

The summary data clearly indicates that the mean ratings of all the reliability ratings is approximately 3.4 which indicates that agents services are considered to be fairly good based upon various parameter. To analyse the information further we are using one-way ANOVA with the following hypothesis and conclusion:

H0 There is no significant difference among the mean ratings of different service quality assurance factors measuring service quality from the agent services.

H1 There is significant difference among the mean ratings of different service quality assurance factors measuring service quality from the agent services.

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.042956	4	0.260739	0.18137	0.948002	2.394533
Within Groups	567.8545	395	1.437606			
Total	568.8975	399				

Since the level of significance 0.948002 is higher than the level of significance specified by the researcher (.05), so there is sufficient evidence to reject null hypothesis thus the null hypothesis is rejected and alternate hypothesis is accepted, which implies that there is significant difference among the meanratings of different factors measuring service quality assurance levels from the agent services.

Questions based on general details of policyholder

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
	Valid	1	.8	.8
Female	35	28.7	28.7	29.5
Male	86	70.5	70.5	100.0
Total	122	100.0	100.0	

As per the responses we conclude that mostly male respondents purchase life insurance which is highest as 70.5% and only 28.7% female respondents have purchased life insurance products.

Age group

	Frequency	Percent	Valid Percent	Cumulative Percent
18-25	72	59.0	59.0	59.0
26-33	17	13.9	13.9	73.0
34-49	25	20.5	20.5	93.4
50-59	6	4.9	4.9	98.4
60 and above	2	1.6	1.6	100.0
Total	122	100.0	100.0	

Responses reflects that the age group 18-25 is very much aware about life insurance which is 59% followed by the respondents age bracket 34-49 which is 20.5%. this percentage also reflects the purchaser of life insurance products.

Occupation

	Frequency	Percent	Valid Percent	Cumulative Percent
Government Employee	9	7.4	7.4	7.4
House Wife	3	2.5	2.5	9.8
Private Employee	39	32.0	32.0	41.8
Self Employed	22	18.0	18.0	59.8
Student	47	38.5	38.5	98.4
Unemployed	2	1.6	1.6	100.0
Total	122	100.0	100.0	

Based on the responses 38.5% were students followed by private employees which is 32% and self-employee which is 18%.

Monthly Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1.6	1.6	1.6
0- 10,000	48	39.3	39.3	41.0
10,000- 20,000	10	8.2	8.2	49.2
20,000-30,000	10	8.2	8.2	57.4
30,000-40,000	19	15.6	15.6	73.0
40,000-50,000	7	5.7	5.7	78.7
Above 50,000	26	21.3	21.3	100.0
Total	122	100.0	100.0	

Mainly the above respondents were students with income slab from 0-10k followed by the income above 50k which is 21.3%.

Conclusion

LIC is the most favored life insurance company when it comes to purchasing life insurance products

Customer generally choose life insurance agents while purchasing life insurance products irrespective of choosing alternative which is cost and time saving.

Term insurance is the most known and purchased product across all categories

Policy holder have mix responses when it comes to change in services of life insurance agents.

The agents in half of the cases explained all the terms and conditions of the contract and half in of the cases they lack in explaining the concept of assignment and other clauses which is very important.

Research Implications, Limitations Of The Study, and Scope For Further Research

The geographic area of the study is limited to NCR of Delhi. Therefore, further research may be undertaken covering a wider geographic area. Application of the findings at pan India level might be limited due to various factors such as lack of mobility, lack of time, absence of a platform that could reach masses and lack of infrastructure or resources needed to conduct a wider research at pan India level.

The respondents were mainly of age bracket 18-25 if the respondents were the mix of all then findings and results may be different.

This research provides valuable input to the researcher to gain the overall concepts and through this paper insurance companies and other researcher can conduct micro research paper.

This paper also provides the overall overview of the services rendered by life insurance agents and policy holders perception and expectations.

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''A Study of Pradhan Mantri Fasal Bima Yojna And Its Impact on Marginal Farmers''

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Purpose: This paper investigates the influence of the scheme Pradhan Mantri Fasal Bima Yojna (PMFBY) on marginal farmers and the services rendered by general insurance company by providing satisfaction among farmers. It also derives the perception and expectation of the farmers with the help of purposed questionnaire.

Methodology: Descriptive research was undertaken on the primary data collected fromthe respondents who are residing in village Barkagaon region district of Hazaribagh, Jharkhand, India. Sampling was done using a planned Questionnaire and further analysis of the data was done by SPSS software.

Findings: Most of the farmers are not alert of the scheme Pradhan Mantri Fasal Bima Yojna (PMFBY) launched by central government in the year 2016. It is also find that there is lack of efforts in reference to non-loanee farmers. Private insurance companies is more concerned in making profit out of the scheme. There are various gaps appears in the scheme which need to be bridge that helps the farmers particularly marginal farmers who are holding less land.

Research limitations/Implications: The study is limited to a specified geographical area of Hazaribagh, village-Barkagaon which are part of Jharkhand.

Originality/Value: the paper reflects the insight about the impact of the scheme Pradhan Mantri Fasal Bima Yojna and the farmer's perception about the services and difficulties inenrolling under the scheme PMFBY. It also reflects the expectations of the marginalfarmers from the scheme.

Keywords: -PMFBY, crops, insurance, marginal farmers, services, Technology.

Introduction

Insurance is a cooperative device which shares risk the premium collected through many individual hence form a pool which is compensated to the individual who suffered losses from uncertain events. Crop insurance is a medium to protect the farmers against catastrophic and financial losses mainly arising out of natural calamities which are beyond the control for an example fire, flood, pest and diseases etc. The sum insured would be the full expenditure or a part of full expenditure or a percentage of anticipated earnings from crops for which premium is paid for. The indemnity (claims payable in opposition to out of pocket costs) is paid on the basis of the average yield shortfall from the assured yield (threshold yield). The claims are paid only after the losses in harvest is ascertained. Weather primarily based crop coverage is some other road for moving production threat to the insurer. The main objective is to mitigate the complication of the insured farmer against the expected probability of monetary loss attributable to expected crop loss because of the unfavorable conditions of climate parameters like rainfall, temperature, frost, and humidity and so forth. Whilst crop coverage generally indemnifies the cultivator against a reduction in crop yield, weather insurance is based completely on the fact that the area weather situations affect the crop yield even if a farmer has taken all the due care to make the sure appropriate harvest. Research of ancient correlation of crop yield with weather parameters assist us in developing weather thresholds (triggers) past which crop begins getting affected adversely. Payout structure can be evolved the usage of the weather activates to compensate farmers on the total volume of losses estimated to have been agonized by them. The real loss in the earnings or income isn't always determined for worthiness for claims. In can be also be determined using various climate parameters for crop yields in reimbursing the farmers for estimated crop losses due to the reduction in yield.

Evolution of Crop Insurance in India

The query of introduction of crop coverage in India turned into engaged up for investigation quickly after independence in 1947. A special take a look at to exercise on session modals of crop insurance was commissioned in 1947-48 following an assurance was given through the Ministry of Food and Agriculture to introduce cattle and crop insurance within the country. The first factor regarding the modalities of harvest coverage considered was whether or not it has to be on individual method or Homogenous area method. The individual technique pursues to indemnify the farmer till the maximum extent his losses and the premiums paid by him is decided close to his own past harvest and loss experience. As such it requires dependable and correct information of crop harvests of the individual and marginal planters for an adequately lengthy period of a premium on a sound actuarial basis. The homogenous region approach envisages that within the absence of trustworthy data of the marginal and discrete farmers and in opinion of the ethical we can say as moral hazards concerned in the individual technique, a homogenous vicinity would form the simple unit, in place of a particular farmer. The homogeneous region could contain of villages which are homogenous from the factor of view of crop production and whose annual variability of crop productivity would be similar. To take a look at the favored homogenous region approach. Various agro-climatically homogenous areas are to be handled as separate units and the individual farmers working in those areas would give same rate of remuneration and thus receiving the same aid, regardless of each unit distinction losses in their respective yields. The ministry heavily advertised the scheme so to get widely adopted with the aid of the state governments however the states did no welcome.

In 1965, central government delivered and circulated a Crop coverage bill as a scheme based on the model of crop insurance on the compulsory foundation to constituent state government. The invoice provided for the significant authorities modeling a reinsurance scheme to include indemnity duties of the states but due to very high monetary obligations none of the states agreed to accept the scheme. On receiving the responses of state governments, the problem was taken into consideration in the element by using an Expert Committee headed by the then Chairman.

Agricultural fee commission established in July 1970 for a complete examination of the monetary, administrative, financial and actuarial implications of the situation. One of a kind experiments on crop coverage on a confined, advert hoc and scattered scale commenced in 1972-73. By using now we have the background with of various weather coverage. In what follows is a short at the beyond enjoy and availability of various products at present. Though, agricultural insurance is essentially within the public domain some private insurance efforts specifically in weather insurance have additionally been there for some time. Their revel in isn't always all that discouraging. The real challenging part is to scale up the fast and speedy claim settlement. India, as a consequence, has an openly managed scheme since 1972. All of the editions of the scheme added earlier has significant flaws. India is not the alone public crop coverage that has not been successful. Each developed and developing international locations such coverage schemes have incurred losses without having the effective products. Public crop coverage schemes are to be had to cultivators as method of lowering the cost associated with crop failure. The schemes, however, suffer from high level of moral hazard and unfavorable choice and are very pricey as fee eligibility is decided via many crop damage assessments for every individual farmer.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

Objectives of the Scheme:

Pradhan Mantri Fasal Bima Yojana (PMFBY) targets at assisting sustainable construction in agriculture area via manner of

- imparting economic assist to farmers who are suffering crop loss/harm out of unexpected events
- Stabilizing the profits of farmers to ensure their continuance in farming activities.
- Inspiring farmers to undertake innovative and cutting-edge agricultural practices

- Guaranteeing waft of credit to the agriculture zone with a purpose to make contributions to food security, crop modification and enhancing increase and attractiveness of agriculture zone except for defensive farmers from crop production risks.

Risks to Be Covered & Exclusions

Yield Losses (status crops, on notified area foundation): complete chance coverage is provided to cover yield losses due to non-preventable dangers, such as

1. Common fire and Lightning
2. Hurricane, Hailstorm, Cyclone, storm, Tempest, storm, tornado.
3. Flood, Inundation, and Landslide
4. Drought, Dry spells
5. Pests/ diseases etc.

Prevented Sowing/Planting/Germination threat: Insured location is averted fromsowing/ planting/ germination because of deficit rainfall or destructive seasonal/climate conditions.

Standing Crop (Sowing to Harvesting): comprehensive chance insurance is provided tocowl yield losses because of non-preventable dangers, viz. Drought, Dry spell, Flood, Inundation, enormous Pests and ailment assault, Landslides, fire due to natural reasons, Lightening, typhoon, Hailstorm, and Cyclone.

Post-Harvest Losses: insurance is to be had only up to a most duration of weeks fromharvesting, for those plants which are required to be dried in cut and unfold / small bundled circumstance inside the discipline after harvesting in opposition to precise perils of Hailstorm, Cyclone, Cyclonic rains and Unseasonal rains.

Localized Calamities: The loss or damage is to be informed to insurer about the insured crops resulting from various situations of identified under localized risks of various natural calmatives like Hailstorm that can occur due to due to lightning stirring isolated farms within the notified location.

Add-on coverage for crop loss due to attack by wild animals: The States can also allowto provide add-on coverage for crop insurance due to attack by wild animals given the risk is observed to be identifiable and substantial. Comprehensive protocol and procedures for are required to be issued individually by GOI in discussion with Ministry of Environment and Forest & GIC Re. However, it will be optional for the farmers and small amount of applicable premium will be borne by the farmer himself. The State Government may also consider giving substantial subsidy on the add-on covers. The premium rates according to the actuarial models should be written in the bid by the Insurance Companies. However the extra premium rate on add-on covers will be measured independently and won't be included as a part of evaluation.

Exclusions: Following Risks from the following perils shall be excluded: - War & relatedperils, riots, nuclear risks, theft, malicious damage act of enmity, any destruction by domestic and/or wild animals. In case of Post–Harvest risks or losses the reaped crop bundled and piled at a place before winnowing or other avoidable risks.

Premium Rates

S.No	Season	Crops	Maximum Insurance charges payable by farmer (% of Sum Insured)
1	Kharif	Food & Oilseeds crops (all cereals, millets, & oilseeds, pulses)	2.0% of SI or Actuarial rate, whichever is less
2	Rabi	Food & Oilseeds crops (all cereals, millets, & oilseeds, pulses)	1.5% of SI or Actuarial rate, whichever is less
3	Kharif & Rabi	Annual Commercial / Annual Horticultural crops	5% of SI or Actuarial rate, whichever is less

Fig 1:- premium rates for season crops

Sharing of Risk: All the risks will be borne by Insurance Companies and the Governmentas follows: Insurance company's liabilities in case of catastrophic losses, shall be up to 350% of total premium collected (Government subsidy and farmers share) or 35% of all the sum insured combined by the companies, whichever is higher. The losses in a crop season at the National level beyond this maximum limit will be met in 50:50 bases by respective State Government and Central Government.

Indemnity Level (IL) And Threshold Yield (TY):

There are 3 different levels of Indemnity, 70%, 80% and 90% corresponding to crop Risk of the area and it shall be applicable for all crops.

The Threshold Yield (TY) shall be the standard yield level for Insurance protection shall to all the insured farmers belonging to a particular Insurance Unit.

The Threshold Yield in an Insurance Unit will be based on average yield for the last 7 years while not including two years of declared catastrophe if any, which will be multiplied indemnity level of that area.

How Does PMFBY Funding Different From Earlier Scheme

In 2015-16, the countrywide Agricultural coverage Scheme accounted for 70% of the sum to 64% of the insured farmers. The alternative schemes, primarily based at the insurance model, now not only had a far smaller footprint, but most farmers also enrolled in them had been compelled to take the coverage at the side of public area loans. Voluntary participation became actually non-existent inside the changed countrywide Agricultural coverage Scheme at the same time as less than 3% of farmers have been enrolled inside the weather based Crop insurance Scheme. In 2016, all three schemes had been changed by Modi's PMFBY, which followed the coverage model with actuarially decided rates, averaging 12%-15% for kharif vegetation nationally. The authorities fixed the charges will be paid by means of farmers at fees similar to those of the national Agricultural Coverage Scheme and paid the relaxation with contributions from the states.

For insurers, the PMFBY became a great deal greater appealing than preceding schemes. The bounds for the sum insured & the top rate subsidy provided by way of the government were attractive. This intended insurer may want to stay up for doing potentially extra business from better sums assured and higher enrolment. Because the farmers might be paying low fixed rates, the government could be largely footing the bill.

The Need of Urgent Repair

Aside from immediately solving the scheme in favor of farmers, the assessment with the aid of the Union Ministry of Agriculture and farmers' welfare (MoA&FW) also encouraged the authorities to cap the "top notch-the profit of insurance companies. The primary such look at also encouraged the use of crop-reducing technology that allows measuring yield, increasing operational efficiency for coverage corporations, and decreasing the wide variety of insurance companies under the scheme.

Even though the assessment was submitted in August 2018 to the ministry, it changed into not released inside the public domain. in step with the file, this scheme covers an area over the preceding national Agriculture Coverage Scheme (NAIS) but then again requires to offer insurance companies overall incentive based on the performance or penalize them for below-par overall performance. The document suggested contribution of various insurance corporations to be restricted up to 10. Presently around 18 companies are collaborating on this scheme.

Poor Performance of the Scheme

Saying that the enrolment of farmers has decreased appreciably in the past 2years, the report delivered that even the region covered is reducing. 3-fourth of total claims and 3-fourth of overall premium is focused most effective in 25 percent of the districts, said the study. The entire place insured under the above scheme decreased by 13.27 in keeping with percent from 2017-18 to 2016-17. The area insured consistent with farmer within the crop in 2017-18 became 0.02 hectares lesser than that in 2016-17.

Jammu & Kashmir, Assam, Manipur, Meghalaya and Sikkim noticed the best profits in area coverage, while the states of Goa, Karnataka, Maharashtra and Tripura saw big falls in the region covered under insurance.

The full region insured in 2017-18 the Rabi crops reduced by 20 according to the percent from 2016-17. Andhra Pradesh, Jammu & Kashmir, Manipur and Uttarakhand noticed the very best increment in area coverage, whereas the states of Goa, Karnataka, Maharashtra and Tripura noticed a massive fall in region included beneath PMFBY in Rabi season. The overall farmers insured below the scheme reduced from five crore in 2017-18 to 3.6 crore in Kharif 2017. Farmers' enrolment in Rabi 2017-18 decreased by using 16.12 according to cent from 2016-17. While states like Jammu & Kashmir, Assam, Karnataka, Orissa, and Meghalaya noticed the very best gain in registration, Rajasthan Bihar, Kerala Goa, , and UP noticed a decline. Assam, Karnataka, Kerala and Rajasthan noticed the most important dips in Rabi enrolment compared to 2016-17.

Marginal Increase in Sum Insured

The full sum insured for this scheme in 2017-18 changed into Rs. 1.91 lakh crore, a marginal boom of 0.12 according to the percent from 2016-17. whilst the sum insured in line with farmer increased torso 4,597 consistent with the farmer, the sum insured consistent with hectare extended with the aid of Rs. 3,580 in 2017-18 compared to 2016-17. The sum insured in Kharif 2017 became Rs. 1.22 lakh crore, which became 1 % decrease than Kharif 2016. In Rabi 2017-18, sum insured become sixty eight thousand crores which changed into 3.16 % better than Rabi 2016-17

Premium Increased but Claim Lowered

The report stated that the premium collected with the insurance companies expanded via 11.6% compare to 2016-17 to 2017-18. The rates paid by using the center and state governments have been Rs. 9,679 crores each. In 2017-18, the overall premium paid via farmers changed into 3,916 rupees crores, 1% less than the past 12 months. The common premium paid by means of every farmer become Rs. 4,634, that's 20% extra than 2016-17.

Literature Review

Gangopadhaya (2004) In his study he suggested different approach for crop insurance, forsmall and marginal farmers the scheme is not workable for them as a solution.the premium rates are very high to cover the risk insured while the farmers have very low capacity to absorb the losses. In his study he suggested to implement scheme with the necessary help of micro finance, non-govt organization and working with the group of peoples in the village.

Mahul and Stutley (2010) crop insurance is a way to protect the farmers against uncertainand unspecified perils from the losses which are beyond the control of the farmers. Wherein the developing countries it has not been successful either. According to these countries crop insurance is just 1.99% of the total agriculture GDP.

Rajeev et al. (2016) describes that the crop related scheme has gain huge responses invarious American and Asian countries as the schemes were attached to the seasonal loans disbursed to the farmers and the government push private insurance companies to participate in the agriculture sector as well.

Cole et al. (2017) found in his research that with adequate crop based insurance coverthe farmers can easily shift towards the great return. Adequate risk cash crops. It reflects that better change in the provisions to crop insurance leads to overall farmer's wellbeing.

Raju and Chand., 2007, Roy et al., (2018) in the country India there has been a steady, although occasional, attention and effort to insured the farmers against remaining risks from time to time.

Raju and Chand. (2007) the crop insurance provide adequate protection against criticalunspecified weather related events which is voluntary for the farmers to avail or not.

Prabhu & Ramachandran (1986) They analyzed the effect of newly crop related insurancescheme with the official credit system applicable for agriculture, with the help of secondary data concern with the overall premium rates proposed by ISPE.it was also analyzed that the society which is the area of providing agriculture credit with inequitably as per the access and coverages bound in credit linked crop coverages scheme, which mostly reflect it will help the large farmers compared to small and marginal farmers.

Mishra, P.K. (1994) He examined the effect of the credit-linked comprehensive CropInsurance Scheme (CCIS) consideration with crop loans, particularly to the small farmers in the state Gujarat. It was also detected that the CCIS has a guarantee outcome asreproduced through the enlarged loan sum per debtor and the decrease in the amount of non-borrowers amongst marginal & small farmers in the region. The inferences of praise growth are that enlarged accessibility of praise can improve contribution usage and production and service that enlarged segment of minor farmers in the entire loan can have needed belongings on fairness and competence thoughts. Though crop insurance scheme is built on part yield, it safeguards the loan sum. This principal to healthier admission of small and marginal farmers to recognized praise and that the insured families capitalize extra on agricultural efforts foremost to advanced production and revenue per element of land. Founded on 1991 data, CCIS was originate to pay 23 %, 15 %, and 29 % rise in income of covered farmers in the state Orissa, Gujarat and Tamil Nadu correspondingly.

Jennifer (2001) by observing the different crop related schemes and it was observedcertain flaws in the scheme as compared to the scheme of different countries. In the developed and developing countries the government schemes found to be fail due to not delivering the products as per the needs of the farmers. The main reason of failure found to be the scheme compulsory to the loanee farmers, unmatched premium with risk covered were the important element/reason for the failure of NAIS. The study also suggested that the government should increase investment in agriculture infrastructure instead giving subsidy in crop insurance.

Singh, S. (2004) it was examined the burden of the farmers for crop failure only is resolvedthrough crop insurance which benefits the farmers in compensating the losses arising out of adverse and unforeseen events. Crop insurance increase its reach over the period of time by providing the farmers the coverage thus increases large investment in the area of agriculture and the production as well.

The National Council for Applied Economic Research (1974) It was examined that bystudying on the overall credit needed for crop it reflects that the small farmers access approx. 49% of the farm loans from the moneylender with interest rates extending from 18 to 24% as per the study the interest rates will goes up to 80% in 17% of the cases. The rates offered by the cooperatives and government institutions tends to be lower.

Rudra (1982) It was examined that the small farmers in almost all of the specified areasuse great quantity of labor per hectare of land where large farmers use less labour .

Skees,Varangis and Larson (2001) It was studied the overall expansion of weatherinsurance on rainfall to cover against the effect of drought in specified four state of Mexico. The study based on two components first is the relation between rainfall and actual yield to reflect the exposure of loss due to absence of rain. Second one was used to examine the insurance distress the modification of the revenues from the listed crops. It was observed that the crop insurance only feasible for about 40% of the grown plants in the above four states of Mexico and also the insurance based of weather reduce the risk by 30%.

Objective of the Study

- To study the effect of the scheme on marginal farmers.
- To study the awareness of the farmers about performance and benefits of the scheme.
- To study the farmer's expectations about the delivery of services through private insurance players.

Research Methodology

The study is descriptive inferential in nature that describes the impact of PMFBY on marginal farmers. The study is undertaken with the objective to identify the level of impact and awareness of PMFBY and services rendered by insurance companies. A sample of 101 was selected from the farmers of Hazaribagh the village name Barkagaon (Jharkhand, India). Effort has been made to collect the data from samples with different profiles. The secondary data associated to theoretical framework as well as review of literature was composed through reference books, newspapers, journals and websites etc.

A Structured Schedule was used to collect primary data from the research respondents. The agenda was separated into various parts. The questions in the agenda was close ended and organized so as to ease data nourishing and analysis to get suitable results. The first part of agenda consists of data related to the farmer's alertness about the scheme PMFBY and questions related to the economic and social background. The second part consisted of statements related to perception and expectations of the marginal farmers with the servicesprovided by insurance companies as well as from the scheme PMFBY launched by government of India. The descriptive statistical tools percentage, mean, SD, one sample's' test and frequencies is used for analysis and SPSSsoftware brought in use for analysis. The secondary data was also tabulated and then processed using MS Excel.

Interpretation

If yes, Please rate the following factors on a scale of 1 to 5 (for changes in the scheme PMFBY offered by central government) 1 being the least important & 5 being the most important.	N	Mean	Std. Deviation	Std. Error Mean
Linking share croppers/ Tenants under PMFBY	43	4.21	1.059	.162
Including mix crop under scheme	43	4.07	1.316	.201
Crop cutting experiment should be notify well in advance	42	4.12	1.131	.174
Improvement in efficiency of staff involved in PMFBY	41	4.02	1.255	.196

As we can clearly see that from the most respondents the mean response is greater than four. This clearly indicates that all the recommend changes are very important. And the government should amend these recommendations as soon as possible. Also changes like Linking sharecrops/tenants and including mix crop insurance should be included under the current premium rules and not including as an add on cover because it would make the scheme more complex and hence making it hard for uneducated farmers to understand it. The other two recommendations clearly indicate that the farmers aren't fully satisfied with the services provided by government and implementation these two small changes can tremendously increase the trust of farmers on the government. Also implementing these 2 changes won't involve too much costs and can be implemented without changing the scheme as a whole.

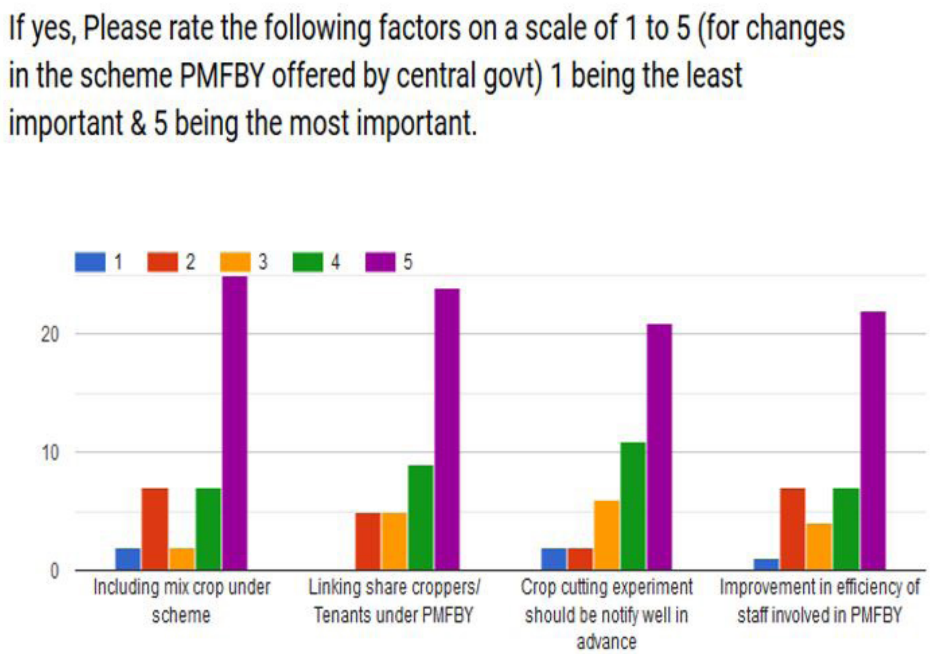

Fig: 2- Interpretation of the results

Research Implications, Limitations of the Study and Scope for Further Research

- The geographic area of the study is limited to Barkagaon village district Hazaribagh. Therefore, further research may be undertaken covering a wider geographic area. Application of the findings at pan India level might be limited due to various factors such as lack of mobility, lack of time, absence of a platform that could reach masses and lack of infrastructure or resources needed to conduct a wider research at pan India level.
- The respondents were the mix of marginal, small and medium farmers if the respondents were not the mix of all then findings and results may be different.
- This research provides valuable input to the researcher to gain the overall concepts and through this paper insurance companies and other researcher can conduct micro research paper.
- This paper also provides the overall insight about the services rendered by general insurance companies and the farmer's perception and expectations from the scheme PMFBY.
- This paper also throws some light on the awareness of the scheme among farmers and various challenges faced by the farmer while enrolling under the scheme.

Recommendations

After the failure of NAIs the scheme PMFBY had been introduces across entire country in the year 2016 as expected it seems much superior to preceding scheme but to bridge the gap several recommendations are as follows for its betterment based on perception and expectation of stakeholders.

- As the mixed crops are not included under the scheme PMFBY therefore including mix crops in the tilt of informed crops will benefit the farmers.
- In the state Jharkhand the share croppers and tenants were not enrolled under the scheme Pradhan Mantri Fasal Bima Yojna in Kharif 2016 and Rabi -2017 it would be good if they include above under the scheme.

- As the non-loanee farmers having percentage of 38.6% in the region therefore it is suggested to make joint efforts to pursue the non loanee farmers for linking under the scheme PMFBY by conducting seminars, fairs at particular panchayat level.
- A separate budget should be allotted to promote the scheme in a better and bigger way it would result in adding non-loanee farmers to link them with the scheme.
- The crop cutting experiment (CCE) should be notified well in advance by publicized the experiment through newspapers etc. that CCE will be held in a particular village or area on such date.
- The compensation should be made as early as possible to enhance the trust and quality.
- By adopting technology like remote sensing satellite, imagery as well as digitalization of land records should be widely adopted to minimize the area discrepancies.
- It is very much important for the state government to increase the involvement and efficiency under the scheme PMFBY.
- It is recommended for the insurance companies to appoint trained and motivated agents to link non loanee farmers under the scheme.
- Damage caused by other than natural peril like through wild animals frost to crops and cold waves should be considered under PMFBY.
- Private GIC should not be always indulge in making profit out of scheme but have necessary duty to cater society at large.
- A toll free number should be spread to resolve the queries and complaints against inefficiency under the scheme.
- All the above mentioned recommendations and suggestions related to PMFBY is built on the perception and expectations of the stakeholders. We arrived to the conclusion to add all the above recommendations in the operational guidelines to improve the effectiveness and impact on the farmers as well as marginal farmers.

Conclusion

PMFBY is a good initiative taken by the central government to uplift the farming and farmers across the countries. It is somehow improved than the previous scheme which are costly compared to the premium as well as the level of coverage. In this scheme 98.5% for Rabi crops and 95% for commercial crops is shared among the center and state government as subsidy towards PMFBY. But farmers are getting less amount of claim. In the year 2016-17 the insurance companies established an overall gross premium of Rs. 22,180 crores out of which 4,383 crore obtain from farmers & 17,796 crore from the central as well as state government as subsidy. Out of the total gross premium which the insurance companies received hence paid out only 12,949 crores by way of claim to the 1.2 crore farmers. It implies that the revenue model needs restructuring. Within the non-life insurance the crop insurance is the third largest sector after motor and health after the introduction of PMFBY has increased the crop insurance take from 22% to somehow 40% now from 2015. It is to be said that more than 60% of crops in India are in uninsured category. It’s just the number which appears increasing but the ground reality is that we are moving towards agricultural distress. PMFBY is the contributing factors towards the growth of non-life insurance since the insurance programs of all insurance companies are highly dependent on reinsurance support which result in GIC re has become the world’s largest agro reinsurer.as the scheme is obligatory for the loanee farmers. The off take of non loanee farmers the scheme being voluntary is less than 5% despite of the subsidies available at various level. The responsiveness about the scheme PMFBY is very less as expected among marginal farmers even most of the farmers are still not aware about the benefits of the scheme. As per the data collected the farmers who are holding land up to 2.5 acre finds difficulty in arranging documents for getting insurance. At end of the day government have to take crucial decisions to eliminate the gaps thus improve the efficiency in the scheme and to restructure the revenue model to benefit the farmers in getting satisfactory claim amount.

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Competing Products - Personal Financial Planning and Investment vs. Insurance Protection

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Personal financial planning is the use of income generated into productive use to generate capital appreciation and fulfill the various needs of individuals. The two broad objectives of financial planning are – Capital appreciation and savings through investments and Risk protection through insurance products. In the Indian psyche, insurance protection always takes a back seat and is considered more as an unwanted expense than a necessity. Insurance is an important financial risk transfer tool. The risk is being transferred from the insured to the insurer on the payment of consideration called as the premium. In India, due to lesser awareness levels and education on insurance, the sector has not been able to see the desired results. The assets of individuals are left unprotected. Also the sector had not been able to reach its potential as custodian of funds for national development and protection of assets. But things are changing in India as well. The government initiatives in terms of providing protection to the uninsured population for life, health and crops are steps to improve insurance coverage and penetration levels. However creating more awareness at the individual level and designing products keeping in view the general population needs for protection are the needs of the day. This paper discusses insurance market in India as a risk protection tool and how the industry is placed as per the Personal Financial planning of individuals are concerned. It discusses on the insurance products available in the market and how the industry is doing in catering to the protection needs of individuals.

Keywords - planning, investments, protection, insurance, awareness

Introduction

Personal financial planning is the use of income generated into productive use to generate capital appreciation and fulfill the various needs of individuals.

The two broad objectives of financial planning are –

1. Capital appreciation and savings
2. Risk protection

There are various options available for personal finances for capital appreciation and savings, depending on the needs – short and long term objectives are enlisted below:

1. **Bank Fixed deposits –** This may be both short and long term. The major need that this investment fulfills is that of liquidity and assured savings
2. **Mutual funds –** There are several funds available – Liquid, Debt, Equity, Balanced, etc. Each fund is intended to take care of the specific needs. The liquid funds are the most short term investment options and the least risky. The debt funds also carry lesser risk and may be in short or long term. The equity funds are more risky and should be opted for a longer term to reap the benefits. Balanced funds are hybrid in nature and are a combination of debt and equity. The investments also depend on the risk taking ability of the investor.
3. **Pension funds –** The pension funds are long term investments to build up a retirement corpus that can provide a regular income after retirement from active employment
4. **Provident fund –** This is also a long term investment that is intended to build up a savings kitty for the future which is safe and secured. There are both employee and public provident funds.
5. **Equity investments –** These are the investments in stocks and are highly market linked and are not advisable for everyone. These are usually risky investments with high return potential and only for people with

awareness of the capital markets and should be only done by people with higher risk appetite. Value investments are ideally long term but there are traders taking short term positions in the market also.

6. **Bond market –** These are investments in debt instruments of government or private companies and are low return but comparative less risky. These may be long term and short term.
7. **Government bonds –** Government bonds are sovereign bonds with almost zero risk but with lesser and assured return
8. **Gratuity –** This is a fund arranged by employers to award people who had been loyal to the employee in rendering their valuable service for a long tome.
9. **Property investment –** Investment in property is also considered another mode of investment which has got a long term capital appreciation objective

Risk Protection

1. **Life insurance –** Life insurance is the protection of life which is invaluable. Life insurance is of various types – Term plan, endowment plant, ULIPs, etc. The term plan is the real life protection that provides relief to the family in the event of the death of the breadwinner or near and dear ones. The other plans of endowment and ULIP are basically hybrid plans that take into account both risk and investment aspects
2. **Health insurance –** With burgeoning healthcare expenditure, health insurance has become indispensable part of personal financial protection. Health is the most valuable asset and so in today's world health insurance is a must
3. **Home and property insurance –** The financial protection in case of any accidental loss to property due to fire, burglary, machinery breakdown, electronic equipments, etc are becoming increasingly important
4. **Personal accident insurance –** The personal accidents can cause loss of earning capacity for individuals. The personal accident insurance has also become a must have in the personal financial protection plan of individuals
5. **Professional indemnity –** Error and omissions by professionals can cause loss of fortunes. So professional indemnity policy should form a part of the insurance portfolio for professionals
6. **Travel policy, motor policy, etc –** These are some other policies required for people owning motor vehicle or going abroad on trips.

These are some basic financial products offered by insurers and government and other companies to meet the financial needs of protection and savings. However depending on particular needs of individuals, there may be other products customized to meet individual needs.

Investment and savings Vs Risk protection and Insurance

According to RBI Annual Report of 2018-19, the rate of gross domestic saving had increased marginally to 30.1 per cent of gross national disposable income (GNDI) in 2017-18 from declines in the previous two years (Table I.4).While the saving of private non-financial corporation's had increased marginally, the general government's dis-saving had increased. The household financial saving – the most important source of funds - had increased by 0.3 percentage points of GNDI, though it had remained much lower than 7.3 per cent during 2011-16 (Table I.3).The saving-investment gap has come down over the years, indicating that a larger part of the requirement to fund investment is being met through domestic resources and conversely, the net inflow of resources from abroad has declined, which corresponds to the degree of openness of the economy. The household sector continues to remain the net supplier of funds to the deficit sectors, i.e., non-financial corporations and general government. In recent years, however, it is evident that resource gap of nonfinancial corporations, both public and private, has got significantly reduced, indicating that their investment needs are met through their internal resources. The drawdown on saving by the general government sector continues to remain at an elevated level.

FINANCIAL SAVINGS OF THE HOUSEHOLD SECTOR

(In percent of GNDI)

Item	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
A. Gross financial savings of which	**10.4**	**10.5**	**10.4**	**9.9**	**10.7**	**9.2**	**10.8**
1. Currency	1.2	1.1	0.9	1.0	1.4	-2.0	--
2. Deposits	6.0	6.0	5.8	4.8	4.6	6.3	--
3. Shares and debentures	0.2	0.2	0.2	0.2	0.3	0.2	--
4. Claims on government	-0.2	-0.1	0.2	0.0	0.5	0.4	--
5. Insurance funds	2.2	1.8	1.8	2.4	1.9	2.3	--
6. Provident and Pension funds	1.1	1.5	1.5	1.5	2.1	2.0	--
B. Financial liabilities	**3.2**	**3.2**	**3.1**	**3.0**	**2.7**	**3.0**	**4.3**
C. Net financial savings (A-B)	**7.2**	**7.2**	**7.2**	**6.9**	**7.9**	**6.2**	**6.5**

GNDI - Gross National Disposable Income; --: Not Available
Note: *Figures may not add up to total due to rounding off.*
2. Data on components of gross financial saving are as per First Revised Estimates of 2016-17.
Source: *NSO as published in RBI Annual Report 2018-19, Appendix Table 3B*

Risk protection is one area which is seen in India as more of expenses than being put into proper use. This is reflected in the low insurance penetration in India.

Penetration (premium as percentage of GDP)	World	India
Life insurance	3.31	2.74
Non Life insurance	2.78	0.97
Overall	6.09	3.7

Life Insurance – The below table gives an estimate of the number of new life insurance policies underwritten in India

NEW INDIVIDUAL POLICIES ISSUED BY LIFE INSURERS IN FY 2018-19

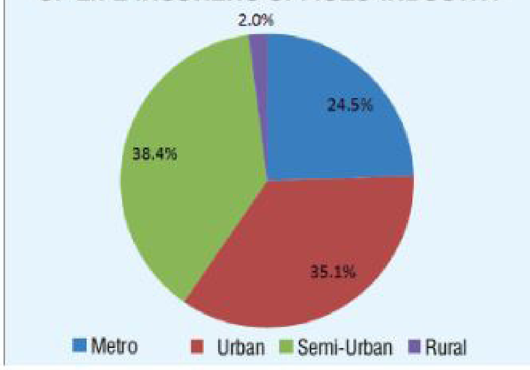
(in lakh)

Insurer	2017-18	2018-19
LIC	213.38 (5.99)	214.04 (0.31)
Private Sector	68.59 (8.47)	72.44 (5.61)
Total	**281.97 (6.58)**	**286.48 (1.70)**

NOTE: *Figures in bracket indicates the growth (in percent) over the previous year in percentage terms.*

The geographic spread of Life Insurance offices shows the low presence in rural areas at only 2% of the total number of offices that indicates low spread and awareness levels and is an indication of the lower penetration levels in rural areas which constitute the majority of the Indian population of about 1.3 Billion people

CHART I.14: GEOGRAPHICAL DISTRIBUTION OF LIFE INSURERS OFFICES-INDUSTRY



The total market size of Life insurance products in India in reference to the total premium underwritten is as follows:

TABLE I.9
PREMIUM UNDERWRITTEN AND MARKET SHARE: LIFE INSURERS

(Premium in ₹crore) (Market Share in percent)

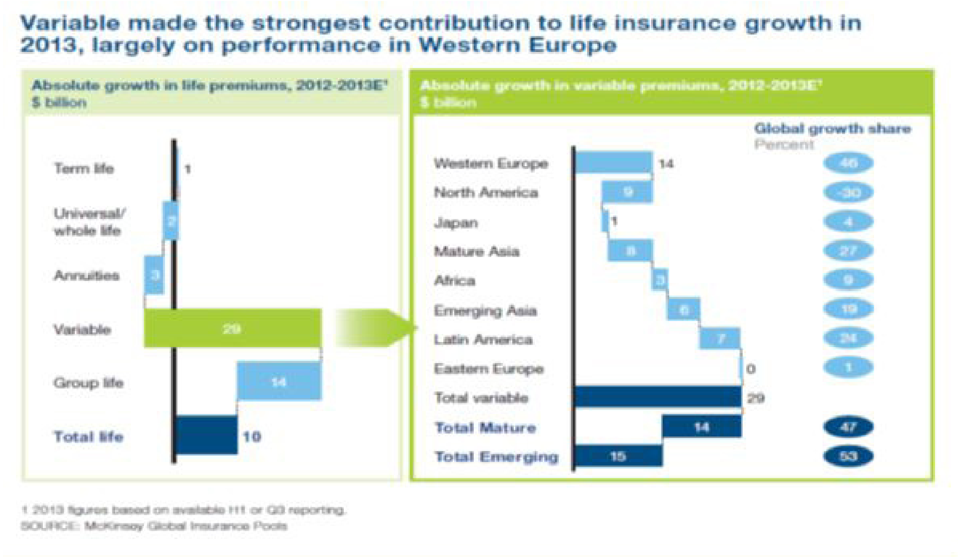
Insurer	Premium		Market Share	
	2017-18	2018-19	2017-18	2018-19
First year premium (1)				
LIC	28146.40	31326.22	42.82	42.79
	(7.02)	(11.30)		
Private Sector	37581.33	41887.02	57.18	57.21
	(13.71)	(11.46)		
Total	**65727.73**	**73213.24**	**100.00**	**100.00**
	(10.75)	**(11.39)**		
Single premium (2)				
LIC	106525.29	111009.74	82.95	78.29
	(8.39)	(4.21)		
Private Sector	21900.88	30780.06	17.05	21.71
	(24.65)	(40.54)		
Total	**128426.17**	**141789.80**	**100.00**	**100.00**
	(10.85)	**(10.41)**		
New Business Premium (3 =(1+2))				
LIC	134671.69	142335.96	69.36	66.20
	(8.10)	(5.69)		
Private Sector	59482.21	72667.08	30.64	33.80
	(17.51)	(22.17)		
Total	**194153.90**	**215003.04**	**100.00**	**100.00**
	(10.82)	**(10.74)**		
Renewal Premium (4)				
LIC	183551.51	195169.11	69.35	66.58
	(4.35)	(6.33)		
Private Sector	81104.03	97959.88	30.65	33.42
	(20.39)	(20.78)		
Total	**264655.54**	**293129.00**	**100.00**	**100.00**
	(8.79)	**(10.76)**		
Total Premium (5 =(3+4)=(1+2+4))				
LIC	318223.20	337505.07	69.36	66.42
	(5.90)	(6.06)		
Private Sector	140586.24	170626.96	30.64	33.58
	(19.15)	(21.37)		
Total	**458809.44**	**508132.03**	**100.00**	**100.00**
	(9.64)	**(10.75)**		

Note: *Figures in brackets indicate the growth (in per cent) over the previous year.*

Life insurance – Global Markets

The following table gives the trend of the global markets for Life insurance business as part of individual financial portfolio –

However the matured markets are making the maximum contribution to life insurance products in the world.



General and Health Insurance –

The penetration of General (Non Life) insurance and Health insurance in India is even lower than the Life insurance market. This is primarily because of very low level of awareness about General Insurance in India. The following table shows the market size for general insurance and health insurance companies in India in terms of premium underwritten in these segments.

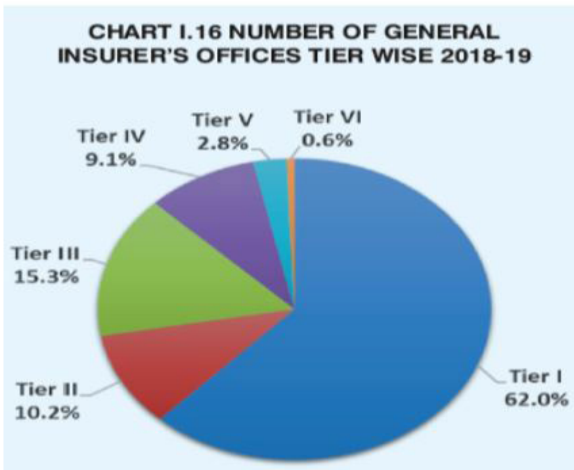
GROSS DIRECT PREMIUM INCOME IN INDIA GENERAL AND HEALTH INSURERS

(₹crore)

Insurer	2017-18	2018-19
Public Sector Insurers	67,794.23	68,658.85
	12.58%	1.28%
Private Sector Insurers	65,419.82	81,287.15
	21.59%	24.25%
Standalone Health Insurers	8,314.28	11,354.03
	41.93%	36.56%
Specialized Insurers	9,133.81	8,148.42
	10.75%	-10.79%
Total	**1,50,662.13**	**1,69,448.46**
	17.59%	**12.47%**

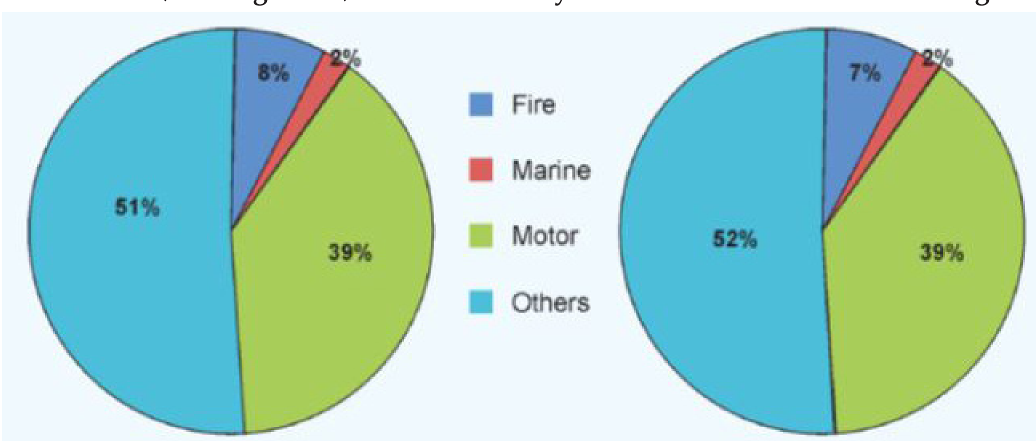
Note: *Figure in percentage indicates growth over previous year. Reclassification/Regrouping in the previous year's figures, if any, by the insurer has not been considered.*

The following table shows the spread of general insurance offices in India. Here again this points towards the poor coverage in rural areas.



The product wise market of general insurance product in India is illustrated in the following chart –

Chart I.17 Premium (Withing India) Underwritten by General and Health Insurers-Segment wise



Thus the majority of the market is constituted by Motor and others which consists of Health insurance also. Though there had been some push in the market in regard to Health insurance due to increased awareness particularly among the middle class population and also due to Government schemes, but the proportion of other important lines of General insurance products like Fire is very low.

Around 60% of the Indian subcontinent landmass is vulnerable to earthquakes and other natural catastrophes, and at least 38 Indian cities lie in high-risk seismic zone. Further, most Indian cities are densely populated and do not adhere to best architectural layout standards. Also, a majority of both residential and commercial premises do not comply with earthquake and flood resistance safety guidelines. These aspects make them highly vulnerable to natural and man-made perils.

As regards, health insurance in India, the top 5 states account for 66% of the total Health Insurance premium.

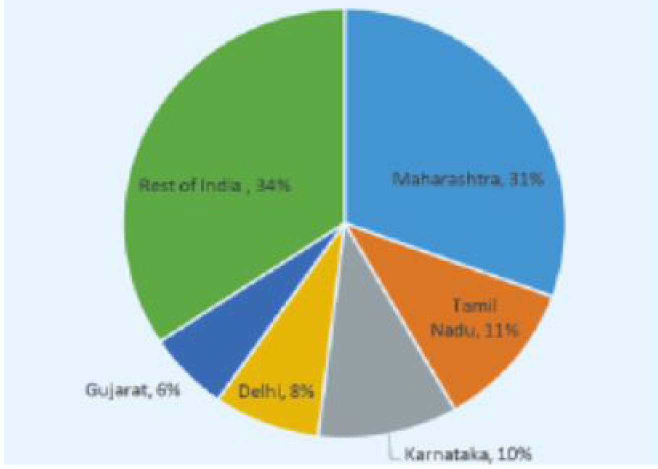


CHART I.21 Share of top 5 states in Total Health Insurance Premim 2018-19

Government Schemes

During 2018-19, the insurance industry has covered a total of 120.75 crore number of lives under Personal Accident Insurance. It includes 94.71 crore number of lives covered under Government Sponsored Schemes namelyPradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jan Dhan Yojana (PMJDY) and IRCTC Travel Insurance for e-ticket passengers. During 2018-19, the gross premium income from Personal Accident insurance business was 5209 crore, with a growth rate of 13.63 per cent over the previous year. While private sector general insurers have contributed 57 per cent of total premium, public sector general insurers contributed 32 per cent of premium and the rest 11 per cent was contributed by the stand-alone health insurers. The ICR for this line of business was 72 per cent for FY 2018-19.

NUMBER OF LIVES COVERED & GROSS DIRECT PREMIUM UNDER SOME OF THE MAJOR GOVERNMENT SPONSORED SCHEMES DURING 2018-19

(In Lakh)

Name of the Scheme	No. of lives Covered in Lakh	Gross Direct Premium Lakh
IRCTC	3099	1566
PMJDY	5030	1505
PMSBY	1342	16103
Industry Total	**9471**	**19174**

Note: *It is to be noted that under IRCTC Scheme, PA cover is offered to railway passengers only for a specified journey undertaken by the passenger and one person may undertake multiple journeys during the reported period.*

Micro insurance

While the individual new business under the micro insurance segment for the year 2018-19 stood at 8.65 lakh new policies with a premium of Rs.32.10 crore, the lives covered under group Business was Rs. 12.13 crore with a premium of Rs. 3205.74 crore. LIC contributed to the business procured in this portfolio by garnering Rs. 6.18 lakh individual policies with a premium of Rs. 20.91 crore and in group insurance LIC does not have any business.

NEW BUSINESS UNDER MICRO-INSURANCE PORTFOLIO FOR 2018-19

(Premium in ₹ lakh

Insurer	Individual		Group		
	Policies	Premium	Schemes	Premium	Lives coverec
Private Total	247444	1118.44	931	320573.78	121307855
LIC	617653	2091.43	0	0.00	0
Industry Total	**865097**	**3209.87**	**931**	**320573.78**	**121307855**

***Note:** New business premium includes first year premium and single premium.*

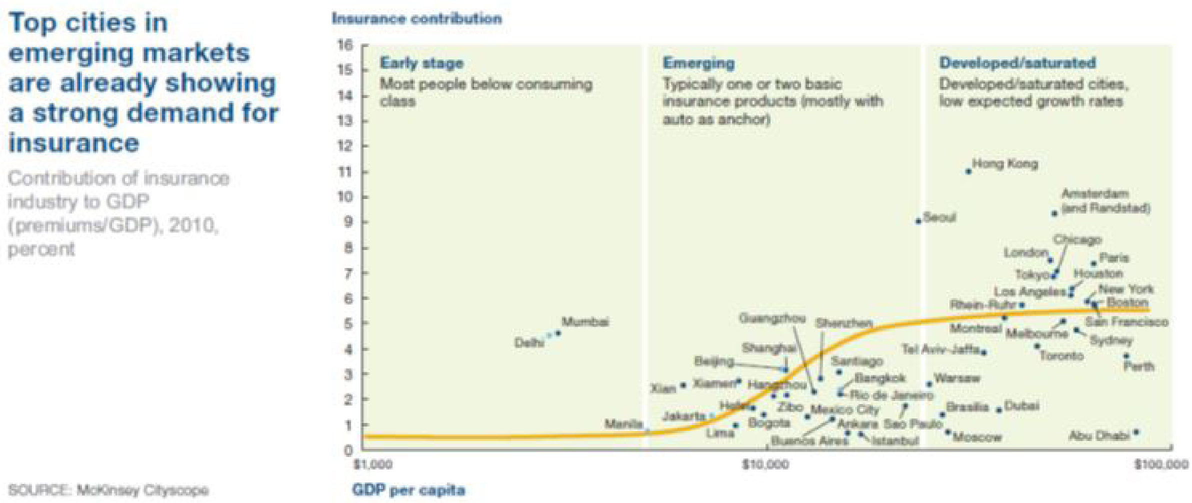
General Micro Insurance Products cover health insurance, cover for belongings, such as, hut, livestock or tools or instruments, personal accident, either on individual or group basis with a maximum amount of cover of Rupees one lakh (2.5 lakh for family/group health) and for a period of one year. Total number of general insurance policies procured by Micro Insurance Agents in the year 2018-19 is as follows:

Channel	Private	Public	Total*
Micro-Insurance Agents	6,168	7,956	14124

Note: *Does not include Micro Insurance policies issued by Standalone health insurers*

Trend of growth in Insurance Business in Emerging Cities

The following table shows the trend in emerging cities of the world for insurance products and services -



Conclusion

In the Indian psyche, insurance protection always takes a back seat and is considered more as an unwanted expense than a necessity. Insurance is an important financial risk transfer tool. The risk is being transferred from the insured to the insurer on the payment of consideration called as the premium. This is an important financial product and is designed to take care of the interests of the insured in case a loss happens. The loss can be of life, health, assets. Thus taking into account various needs of reaching higher penetration, awareness, innovation in the industry, opening up of sector, globalization, etc, the government decided to liberalize the industry in 2000 allowing new private sector and also FDI in the sector.

Worldwide, insurance forms the backbone of the financial sector and the economy. The insurance companies are cash rich ones that hold the funds for investment in the various sectors of the economy. Conventionally, the insurance companies play a big role in the economic development of the nations. Also in developed markets they play a greater role in protection of the assets and lives. In India, due to lesser awareness levels and education on insurance, the sector has not been able to see the desired results. The assets of individuals are left unprotected. Also the sector had not been able to reach its potential as custodian of funds for national development and protection of assets.

But things are changing in India as well. The government initiatives in terms of providing protection to the uninsured population for life, health and crops are steps to improve insurance coverage and penetration levels. However creating more awareness at the individual level and designing products keeping in view the general population needs for protection are the needs of the day. This calls for more innovation, larger investment in technology to reach out to the masses at the different segments of the population. Also in several insurance product lines, misspelling is a big issue. Thus insurance sector requires developing and distributing innovative and appropriate products to fulfill the needs of the different sectors of the economy and different segments of the population by creating awareness and reach.

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Impact of Covid 19 on Non-Life Insurance Industry in India

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India is among the top worst-hit countries by COVID-19, which has impacted almost all industries across the world, including the insurance industry. Over the last 18 months, the insurance businesshas been facing the impact of a regressing economy due to Corona virus and the need to come up with products to suit the demand with COVID-19 specific policies. A large chunk of the General Insurance business is dependent on the performances of industries and businesses units. Thus with the lockdown causing a hitch in the business sector, the General Insurance market has subsequently suffered. "The overall sector is believed to look up as the global economy stabilizes by 2022" (Journal from IIFL). "Based on the emerging experience of Covid-19 claims, insurance companies will need to test the hypothesis of the state-wise or district-wise possibility of escalation of claims"(as per PWC report).The pandemic has posed few challenges to insurance companiesconcerning the existing policy wording interpretation across Property, Casualty and Liability insurance.

Key words: Covid-19, pandemic, lock-down, work from home.

Introduction

COVID-19 which started as a health crisis in South East Asia has now taken over as a financial crisis across the globe. With the global economy crashing and multiple sectors taking a major financial hit, the insurance industry has also been affected significantly by the outbreak of the pandemic. India is among the 15 worst COVID-19 affected economies.A McKinsey report suggests that the national GDP reverting to pre-COVID levels can take place as early as the Q-4 of 2020 or as late as the Q-3 of 2022. The outbreak has decreased the global insurance index by22.6% leading to a decline in share prices by25.9%

COVID 19 has impacted the income of people. It also shows a negative impact towards overall general insurance sector. The income of the people of India dropped significantly due to covid19 pandemic. The prospective buyers have restrained from buying new insurance products and the existing policy holders have been postponing renewal of their policies. Insurance companies have been facing procedural and operational challenges, fall in revenue and reducing reserves as well as the directives to meet the growing coverage requirements of the market. Insurance players should address the concern such as-business continuity, employee wellbeing, crisis management, capital adequacy, IT infrastructure and cyber security.

Literature Review

To conduct this study, researchers have extracted secondary data from research papers published in various national and international journals, published by eminent newspapers articles, blogs and websites. He also discussed the matter in detail with the Insurance professionals, intermediaries and corporate and individual customers.

Objectives of the Study:

The main objectives of this paper are:

- To explore nature and intensity of Impacts caused by the lock down imposed to prevent further spread of the pandemic in the non-life insurance industry in the 2020-21 FY.

- To focus on the impact of outbreak of pandemic on customers and other stakeholders.
- To explore the possibilities of increase in adoption of advanced technologies by insurers in view of shifting to 'Work from home'.

Research Design & Methodology

The nature of this study is descriptive and exploratory, wherein relevant data has been collected on secondary basis from various sources such as published research papers in national and international journals, published reports, newspapers and websites. The researchers have used content analysis technique to analyze the collected secondary data. From the study, the findings identified from the responses of individuals, were based on Likert Scale.

The Pandemic & the Indian Insurance Industry

As with the global insurance industry, the Indian insurance industry too was faced with multiple constraints when the pandemic emerged. Since General Insurance undertakes the valuation of assets and businesses as well as their overall economic activity, it is benchmarked with the GDP of a country to measure the insurance penetration. Hence, a large proportion of the General Insurance sector is dependent on the performances of industries and individual businesses. So, with the lockdown causing a hitch in the Manufacturing sector, Service sector, Core sector industries, Transportation Sector, textile industry etcthe General Insurance market has subsequently suffered. The overall sector is believed to look up as the global economy stabilizes by 2022.

Indian non-life insurance industry before Covid-19

The premium received by the non-life insurers grew 11.6% in the financial year ended March 31, 2020.The non-life insurance industry underwrote a total direct premium of INR Rs 1,88,916 crore in India for the financial year 2019-2020,as compared to INR 1,69,448 crore in 2018-2019.The total premium underwritten by 25 private and public insurers had increased by 9.5% at 1,64,192 crore (1,49,946 crore in 2019) while seven standalone private health insures had witnessed higher growth in premium at 27 per cent with a total premium of 14,410 crore as against 11,354 crore in the year-ago period. The specialized public sector insurers - Agricultural Insurance Company Ltd and ECGC, have posted 30.24% increase at 10,612 crore (8,148 crore).

Lockdown and the Non-life Insurance industry: Nature of impacts

The non-life insurance business is evidently hit by the Covid-19 pandemic threat and subsequent lockdown in March, 2020.

The premium earnedin March this year was 15,784 crores showing a steep decline compared to 17,672 registered the march last year.In October 2020, health insurance witnessed an increase in premiums at Rs. 4,074.8 crore (US$ 553.93 million) compared with Rs. 3,840.6 crore, recording 6% growth. Retail health also witnessed a 30% increase in premiums to Rs. 1,982.6 crore.

Indian non-life insurance industry during the first Financial Year(2020-21) of Covid-19

The growth rate of the non-life insurance industry has been the lowest in the last 3 decades. The non-life insurers recorded a 5.2%(against 11.6%in the previous FY) growth in gross direct premium at Rs 1,98,734 over Rs 1,88,916 in FY20.Among the large private insurance companies, ICICI Lombard recorded a 5% growth in premiums in FY21 while Bajaj Allianz General saw its premiums de-grow by almost 2% in the same period. HDFC Ergo, on the other hand, saw its premium collection rise 27.68% in FY21 over FY 20. The specialized public sector insurers - AIC Ltd and ECGC, have posted26.23 (against 30.24% in the previous FY) increase at 13,174 crore (10,612crore).

Covid-19's impact on different Segments of non-life insurance business

Motor Insurance: 2020-21 was a weird Financial year for the general insurance industry as the motor segment, the biggest portfolio (35%) in a general insurance companies' book, which was already witnessing a slowdown prior to onset of COVID-19, saw a huge contraction in the early months of the pandemic owing to imposition of complete lockdown but afterword has since slowly recovered as the economy opened up.

During lockdown there has been declinein purchase of new vehicles which also resulted in fewer vehicles on roadsresulting in reduced the chances of accidents leadingto a decline in issuance of new policies and reduced claims on existing policies. A shift caused by Covid-19 can be seen in usage-based motor insurance policies. These modified products were launched recently, to allow owners to ensure vehicles for the distance they intend to drive.

This blow turned out to be a major wake-up call for the industry experts who then started foraging for innovative approaches and solutions to keep their customer base engaged and interested. One of the innovative approaches is the "Pay-as-you-drive" model.

With most companies adopting the work-from-home policy, there has happened a drastic reduction in the number of motor vehicles on Indian roads resulting in a nationwide reduction in the number of kilometres driven. Thus, insurance customers who see a reduced usage for their vehicles this year and show a lower chance of availing a high-priced insurance coverage can avail of an insurance policy at a discounted rate under the "pay-as-you-drive" model. This new type of Motor (Private car) insurance policy allows car owners to insure their vehicles for only the kilometres that they tend to drive against a general average yearly driving distance.

At a larger scale, the introduction of pay-as-you-use shall prove to be a significant shift in the history of automobile insurance in India as it seeks to become more responsive to the usage (and consequently) needs of the customers.

Liability Insurance: Consequent to the outbreak of the pandemic, directors and officers of insurance companies may face litigation from employees who may have been infected by Covid-19 whilecommuting to work place or during working hours.The failure to protect against and insure for privacy or cyber liabilities may lead to Director & Office liability.

Cyber Insurance: Cyber risks have increased by 500% since the first lockdown was imposed in India in March 2020. The surge in use of IT and the wholesale shift to operate businesses online have considerablyamplified the risk of cyberattacks. Reports suggest that cyber frauds and ransomware constitute 36% of the mass risks and are perceived as long-term threats to the smooth operation of the business organizations.

Huge rise in cyber threats can be noticed, seeing the number of people who have faced such threats and companies in news headlines suffering huge losses for the same. The pandemic, which has caused huge losses to economies and swept away people's resources, has resulted in growth for cyber insurance. The sales of cyber insurance policies have indeed grown in the last financial year.

Health Insurance:It may be noted that India has traditionally been an underinsured country, with private health insurance schemes covering only 18% of the population in urban areas and a little over 14% in rural areas. Due to pandemic, there has been greater concern and awareness about health, and enquiries about health insurance policies have increased by 30–40%. The pandemic also provides an opportunity for insurance companies to innovate and serve the evolving needs of a more informed population.On the other hand, health insurance premiums have seen a huge growth as demand for health products, especially retail ones', surged since the outbreak of the pandemic.

Travel Insurance: According to a recent report by PwC India, reduced travel has hit the airline industry badly and hasresulted in considerable decline in the travel insurance segment, which has beenhighly profitable portfolio for several of the general insurers,

How the Insurance (Non-life) Industry is Rising up to the Challenge?

The insurance industry rides on the back of other industries. Hence, unless the overall economy bounces back or the insurance industry finds business in hitherto uncovered areas, the industry is likely to struggle in maintaining its momentum.

The COVID-19 crisis has given rise to both immediate and potential challenges for the insurance industry in near future.Insurance companies are taking required measures to ensure a smooth transition of the industry into the post COVID world. From the front offices encouraging their customers to connect digitally to supporting their agents financially in these uncertain times by providing them advance commissions, the insurance industry is set to witness a major transition. The major disruption will be caused by digitization which was already taking place in the insurance industry globally but the onset of the COVID crisis has accelerated the transition process. This would effectively mean that in the coming days the digital customers of the industry can expect only better choices and smoother delivery systems.

While the front offices are changing the way the insurance industry operates and interacts with its customers, the back offices are set to provide several relaxations and updated guidelines for insurers.

The industry deals with the possibility of claims being made on a policy for the next seven years in the case of some risks. Hence, for long-term contracts in life and pension, the sustainability of investment returns and margins will have to be recalibrated. Finally, the future of doing business has to be relooked at. While the insurance industry has to plan for long-term consequences, immediate focus should be concentrated on the following aspects:

1) Traditionally, the insurance industry has been employee-centric. With the advent of digital disruption of the industry, there will be an impact on its vast employee bases in the foreseeable future. However, despite the switch to digital mode, a vast majority of the business will require one-on-one communication or face-to-face interactions. As a result, companies need to ensure that their agents have access not only to safety equipment in the office but also required data and applications to safely work from home.

2) The insurance industry is supposed to help other industries and hence, cannot overlook any risks to its own existence. They must plan for business continuity in the light of future disturbances such as natural disasters, environmental issues, geopolitical crises, and the resulting instability of global regulations.

3) The industry must be prepared for reduced cash flows due to the non-payment of premiums or delayed renewals.

4) It also needs to carefully monitor decreased yield from the investment portfolio as interest rates fall from governmental actions to ease business.

Conclusion

Hopefully, we will soon be able to leave the phase of Covid-19 behind us. It is almost certain that the world post Covid-19 will never be the same. All of us will have to look for silver linings everywhere to emerge stronger and fortified to face the challenge. It is expected that the insurance ecosystem will realize the benefits of going digital. In other words, Covid-19 will trigger a tipping point that results in more aggressive digital transformation plans for insurance industry. Insurance industry must learn from the past and choose solutions with a preference for a pragmatic and fast approach rather than looking for perfect solutions to meet the future industry challenges.