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CAPITAL ADEQUACY RATIO ANALYSIS OF STANDALONE HEALTH INSURERS IN INDIA

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Abstract:

The Insurance sector plays a significant effect on the over economy by mobilizing domestic savings. Insurance turn accumulated capital into productive investments. Insurance also enables mitigation of losses, financial stability and promotes trade and commerce activities those results into sustainable economic growth and development. Insurance for health being the utmost necessity today, health insurance is a growing industry in India. Under the regulation of the IRDAI, currently, thirty insurance companies operate in India that offer reliable health insurance plans. Among this twenty-five are general insurance companies, and the remaining five are solely health insurance companies. These private companies have been allowed to carry on health insurance business along-with; therefore, it has become essential to understand, whether health insurance industry is financially solvent, operationally sound and have adequate capital base, so the present study has been undertaken vide which five health insurance companies to arrive at the framed objectives their Capital Adequacy position have been tested using the respective ratios and its' constituents have been tested using one tailed ANOVA.

Introduction:

The India health insurance market size was valued at USD 12.86 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 11.55% from 2023 to 2030. Health insurance coverage is rapidly increasing in India due to the rising costs of high-quality healthcare coupled with rising income levels, longer life expectancies, and an epidemiological change towards no communicable diseases. The outbreak of COVID-19 has made individuals more aware of life's unpredictability and uncertainties and their lack of preparations in the occurrence of a medical emergency. As a result, over the past two years, the health insurance industry in India has undergone a significant shift. Customers' attitudes have changed considerably, as has their need for health insurance. The COVID-19 pandemic and rise in premium prices have contributed to the massive rush by people to insure themselves and their families against catastrophic out-of-pocket medical costs, as the total health insurance premium collected in India increased by a whopping around 25% in a year.

Review of Literature:

1. Suman Devi (2021) Health coverage to all" should be the motto of the health insurance sector. Easy access to healthcare facilities and cost controlling measures should be undertaken by insurance companies. Health insurance will grow more in the current liberal economic set-up. But a less regulated health insurance sector can attract & concentrate only on a small proportion of population. The main challenge for health insurance sector is to help in health care financing of economically weaker section of the society. If the government, service provider, health care industry, insurance companies, health insurance customers, IRDA etc. incorporate all these suggestions given in the

ISSN PRINT 2319 1775 Online 2320 7876

Research paper Volume 12, Iss 7, 2023

study, then the concept of health insurance will reach at new heights in the near future and India will be the healthiest nation in the world definitely.

2. Martin, Hartman, Washington, and Catlin (2020) looked into numerous health-care spending indicators in the United States. They discovered that, compared to 2014, nominal US health care spending climbed by 5.8% to 3.2 trillion dollars in 2015, with per capita health care spending as a percentage of GDP increasing to 17.8% due to coverage expansion as a result of the ACA positively affecting overall healthcare spending.

3. Sarvan Kumar (2020) studied concerning the state of insurance in terms of its performance satisfaction and its prospects. He used range of policies issued by non- life insurers and gross direct premium financial gain information from IRDA hand book and annual report. He found that insurance education among the plenty is should and health care transformation should specialize in access, price and quality. He prompts that targeted development, proximity to shopper and investment rising technology area unit key for health care transformation

4. Aamir Hasan (2019) studied on 'Impact Analysis of FDI on Insurance Sector in India' mentioned that Insurance in India is a flourishing industry in India with both national and international players competing and growing at rapid rate. Together with banking and real estate it constitutes 12.9% of GDP in India. However the penetration of insurance coverage for both life and non-life insurance is still very less and was 3.9% in 2013. The present paper focuses on the overview of the Indian insurance sector along with the opportunities due to expansion of FDI in insurance in India and the major challenges that it faces. He concluded his paper with the fundamental regulatory changes in the insurance sector would be significant for the future growth and would have huge impact on various sectors of economy. Active foreign participation is crucial for the sector as it would bring the best know how and implementing the best practices. India is one of the fastest growing insurance markets and it is expected that Indian insurance industry can grow up to 125 % in the next decade. However there is also a risk that unless given the management control the foreign insurers would be reluctant to invest in India.

5. Bondia Abhishek (2019) is studied on 'Achieving Universal Health Insurance through the private sector participation', and study concludes as Universal health insurance in an environment where universal food security is absent, is certainly a very difficult task. However, it is possible; beyond the scope of this essay there are challenges around intermediary training & education, availability of capital and many others. Experts among many other measures argue for opening up of the sector to greater foreign investment to attract better capital, technology and knowhow. However, the first step towards this journey is getting the appropriate mindset. There is no alternative to a private health insurance model. In our model, we have recommended the role of the Government to be limited to only a Payer and leave the rest to the Private hands, letting free-market evolve.

6. Sahu, B.K (2018), focused on 'Affordable Health care for all in India'. As per his views mentioned that economic Times in its Hyderabad edition dated 05.12.2014 has carried a news that India ranks third among the top three medical tourism destinations in Asia due to low cost treatment, quality health care infrastructure and availability of highly skilled doctors in our country. In fact, as per the report published by FICCI, Medical Tourism is emerging as one of the largest sectors from economic financial point of view in India. An

ISSN PRINT 2319 1775 Online 2320 7876

Research paper Volume 12, Iss 7, 2023

Analysis of factual situation as described above brings out the importance of strengthening primary health care which is affordable and reachable by the 70% of our population who presently stand deprived of such minimum health care and other social security protection in contingencies of sickness, accident or death etc. Through this article, an attempt has been made to ignite necessary debate and discussion to realize a strong secured satisfying work force and citizens in totality to achieve the goal of “Make in India” Concept of our Honorable Prime Minister to a reality by 2020.

Objectives of the study:

To compare the Capital Adequacy position Standalone health insurance corporations in India which are Aditya Birla Health Insurance Co Ltd, Care Health Insurance Ltd, Manipal Cigna TTK Health Insurance Co Ltd, Niva Bupa Health Insurance Co Ltd and Star Health and Allied Co Ltd to test with the application of Ratio analysis.

Research Methodology:

The period of present study is 2016-17 to 2022-23, the nature of information used is past data, which has been collected from the annual reports and financial statements of selected private health insurance companies, after collecting required data from annual reports different ratios have been calculated using Capital Adequacy Ratio. Ratio which are used in study have been tested with the help of statistical technique like mean, standard deviation, F Test and one tailed ANOVA 99% level of confidence and 01% level of significance. The Capital Adequacy Ratios are given below.

Table-1: Capital Adequacy Ratio

Sl. No	Category	Ratio	Methodology Applied
1.	Capital Adequacy	Solvency Ratio	(Net income after tax + Depreciation)/ Total Liabilities inclusive of both short and long term liabilities.
		Capital to Asset Ratio	Capital to the total assets of the firm

Hypothesis:

- H0 = There is no significance difference between the selected health insurance companies with respect to Capital Adequacy Ratio.
- H1 = There is a significance difference between the selected health insurance companies with respect to Capital Adequacy Ratio.

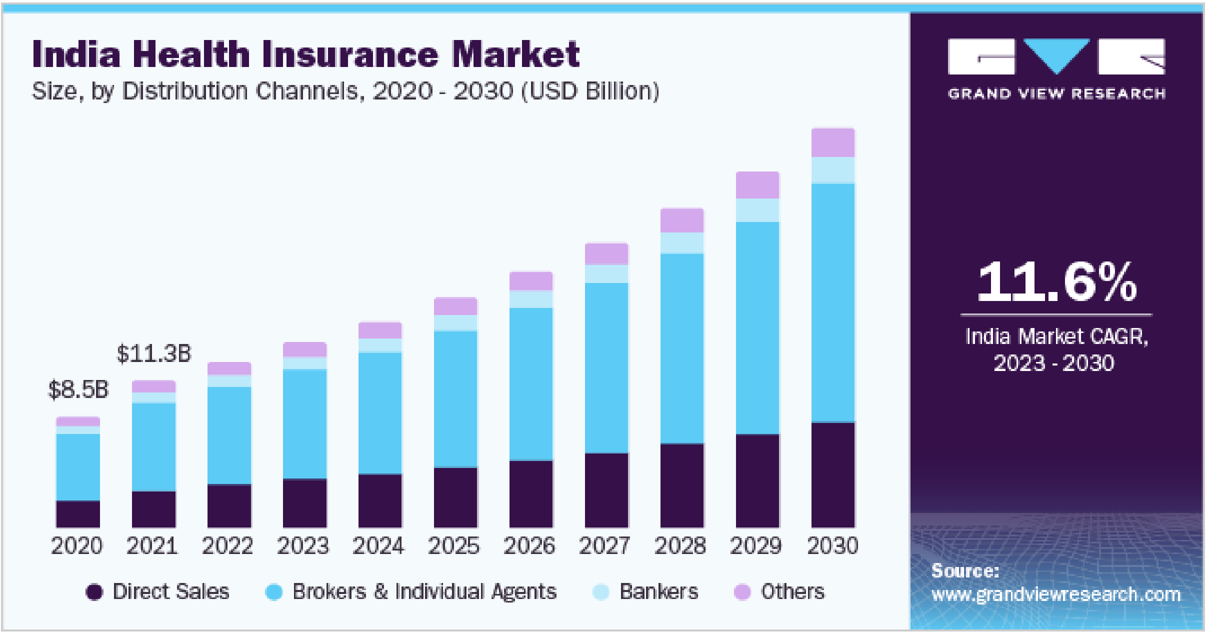
Sampling Area:

In India the health insurance companies are 30 out of those 5 companies are exclusively offering health insurance services, it is difficult study all health insurance providers, keeping in view money and time constraints, however on the basis of homogeneity of the companies the Aditya Birla Health Insurance Co Ltd, Care Health Insurance Ltd, Manipal Cigna TTK Health Insurance Co Ltd, Niva Bupa Health Insurance Co Ltd and Star Health and Allied Co Ltd. These are private health insurance companies exclusively providing health insurance products

ISSN PRINT 2319 1775 Online 2320 7876
Research paper Volume 12, Iss 7, 2023

Significance of Study:

In this competitive world the peoples are very busy with their works, there is always a probability of unexpectedly becoming sick and requiring expensive treatments. There is always a slight chance that someone dear to us might be at the mercy of a chronic condition which requires long-term care. Fortunately, there is health insurance services. This ensures that undergoing long term treatment does not throw a family into dire financial straits. By paying a small amount of premium to the insurer, the policy holders can take a cover under a comprehensive health insurance plan. This will protect the savings from unexpected hospital treatments. In this regard, health insurance working as a protective cover for both savings and health care so the peoples can enjoy the life with their families continuously. This study will provide a help to investors to understand financial soundness of health insurance companies.



Source: Grand View Research, Report ID: GVR-4-68040-049-0

Data Analysis and Interpretation:

Capital Adequacy Ratio:

It is a one of the ratio of CARAMEL approach and a ratio of an insurance company it shows the relation of risk weighted assets and current liabilities. It is designed by the regulatory authorities to prevent insurance companies from using excess leverage and become insolvent in process, according to the recent guidelines issued by Reserve Bank of India investment about investments in instruments issued by insurance corporations, which are not deducted from capital of the investing insurance company, shall attract 100% risk weight for capital adequacy purpose. The CAR of insurance companies can understand with help of solvency ratio and capital to asset ratio. The Capital Adequacy ratio is a measurement which is to understand and demonstrate company have sufficient capital at fund and company level. The Asset Dissolvability Prerequisite is applied to each support whether taking part or non-taking an interest. To meet the Monetary Strength Rating, a backup plan should have

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ISSN PRINT 2319 1775 Online 2320 7876

Research paper Volume 12, Iss 7, 2023

adequate monetary assets in overabundance of Exchange Archive Detailing of each asset. For a non-taking part store the FR is essentially the overabundance of resources over liabilities, for a partaking reserve, the FR is comprised of 50% of the arrangement for future rewards or non-ensured benefits, a safety net provider should have a Vehicle of something like 100% in India.

a. Solvency Ratio:

The solvency ratios is a metric to understand how well the insurance company can cover the both the short and long term outstanding financial obligations. It shows the ability of honor to claim the excess of assets over liabilities maintained prudently. On the off chance that it is under 20%, it shows an improved probability of default, as it estimates genuine income as opposed to net gain, not which may all be promptly accessible to an organization to meet commitments. It is best utilized in examination with comparative firms inside a similar industry, as specific industry will in general be fundamentally more obligation weighty than c others. According to the IRDAI guidelines the insurance companies in India required to maintain a solvency ratio is 150% or 1.5 to minimize the risk of bankruptcy.

Table 2: Solvency Ratios of Selected Health Insurance Companies:

Year/ Insurer	Aditya Birla Health Insurance Co Ltd,	Care Health Insurance Ltd,	ManipalCigna TTK Health Insurance Co Ltd,	Niva Bupa Health Insurance Co Ltd	Star Health and Allied Co Ltd
2016-17	2.22	1.58	2.13	1.99	1.53
2017-18	1.67	1.56	2.06	2.11	1.77
2018-19	1.59	1.52	1.86	1.52	1.81
2019-20	1.81	1.55	1.9	1.77	1.88
2020-21	1.61	1.81	1.65	1.65	1.65
2021-22	1.77	1.85	1.68	1.72	1.67
2022-23	1.73	1.82	1.56	1.81	2.14

(Source: Annual Reports of IRDAI 2011-12 to 2021-22)

Solvency Ratio of Standalone Health Insurance companies in India have above the standard limit of IRDAI. The Aditya Birla Health Insurance Co Ltd., and Manipal Cigna TTK Health Insurance Co Ltd., have the highest solvency ratio among the standalone health insurance companies i.e., 2.22 and 2.13 in the year of 2016-17. The financial year of 2017-18 Niva Bupa Health Insurance Co Ltd have highest ratio of solvency. As per the table 2016-17 to 2021-22 the companies solvency ratio is decreasing comparatively but ever year they are above standard limit. The financial year 2022-23 the star health insurance have the highest solvency among standalone health insurance companies.

ANOVA single factor:

Summary: Table: ANOVA calculation and Analysis of the Ratio

Year/Groups	Count	Sum	Average	Variance
2016-17	5	9.45	1.89	0.10055
2017-18	5	9.17	1.834	0.05833
2018-19	5	8.3	1.66	0.02665
2019-20	5	8.91	1.782	0.01957
2020-21	5	8.37	1.674	0.00608

ISSN PRINT 2319 1775 Online 2320 7876

Research paper **Volume 12, Iss 7, 2023**

2021-22	5	8.69	1.738	0.00547
2022-23	5	9.06	1.812	0.04447

ANOVA

Source of Variation	**SS**	**df**	**MS**	**F**	**F crit**
Between Groups	0.21372	6	0.03562	0.954887	3.527559
Within Groups	1.04448	28	0.037303		
Total	1.2582	34			

(Excel)

From the above ANOVA calculation, the sum of squares between insurance companies is 0.21372 with the 4 degrees of freedom within the groups the sum of squares is 1.04448 with the 25-d. f. the mean sum of squares between the group is 0.03562 and mean sum of squares with in groups 0.037303 respectively with the 1% of level of significance. The F ratio between the groups is 0.95 and the table value is 3.52, $F<F_{01.}$, The calculated value is less than the table value is, therefore Ho is accepted and H1 is rejected. It concludes the that there is no significance difference between the selected standalone health insurance companies all are having the greater than standard solvency ratio as per the guidelines of IRDAI.

b. Capital to Assets Ratio:

Capital to Total Assets ratio indicates that the proportion of capital in the total assets portfolio of the companies, growth in the assets of the business indicates how efficiently the capital has been invested to create assets. Lower ratio may be preferred to higher one, as higher ratio indicates high reliance on capital and inefficient use of capital to create assets, whereas lower ratio indicates the greater assets base of the company.

3 Table : Capital to Assets Ratios of Selected Health Insurance Companies:

Year/ Insurer	Aditya Birla Health Insurance Co Ltd,	Care Health Insurance Ltd,	Manipal Cigna TTK Health Insurance Co Ltd,	Niva Bupa Health Insurance Co Ltd	Star Health and Allied Co Ltd
2016-17	0.99	0.82	1.87	1.27	0.46
2017-18	0.98	0.54	1.70	1.12	0.38
2018-19	0.86	0.44	1.57	0.98	0.36
2019-20	0.88	0.33	1.60	0.91	0.35
2020-21	0.84	0.38	1.41	0.74	3.19
2021-22	0.82	0.17	1.42	0.65	0.53
2022-23	0.99	0.29	1.20	0.53	0.75

(Source: Annual Reports of Health Insurance Companies2016-17 to 2022-23)

The table shows the ratios of Capital to Total Assets. From the standalone health insurance companies' annual reports the capital and total assets are have identifies and applied into the ratio and in result above information is generated. The ratio implies that how much assets are being funded by the capital of the company. Perhaps, because of the absence of minimum and maximum ratio requirement, it is indeed important that a higher ratio may prove better from short term point of view but in the long run it is better that the company has

ISSN PRINT 2319 1775 Online 2320 7876

Research paper Volume 12, Iss 7, 2023

lower ratio indicating towards stronger assets base of the company. The financial year 2022-23 show the low ratio for Care Health Insurance and high ratio for Manipal Cigna TTK Health Insurance Company. Comparatively among the companies from six years of journey the Star Health Insurance Company having the low ratio it conveys it is a strong asset base company.

ANOVA: Single Factor for Capital to Asset Ratio: Summary

Groups	*Count*	*Sum*	*Average*	*Variance*
2016-17	5	5.41	1.082	0.28007
2017-18	5	4.72	0.944	0.27128
2018-19	5	4.21	0.842	0.23582
2019-20	5	4.07	0.814	0.27023
2020-21	5	6.56	1.312	1.23877
2021-22	5	3.59	0.718	0.21087
2022-23	5	3.76	0.752	0.13002

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.333749	6	0.222291	0.590066	0.735399	3.527559
Within Groups	10.54824	28	0.376723			
Total	11.88199	34				

The above ANOVA table generated with the help of excel worksheets by using the ratio of insurance companies in different period. It show the average and variance of the collected data as 0.752 and 0.130. The sum of squares between the groups is 1.33, within insurance companies sum of square is 10.05, the mean of sum of squares between the groups is 0.22 and within the group is 0.376. The F value is 0.59 which is a calculated value and the table value with one percentage level of significance is 3.52, instance the table value is greater than the calculated value it results the Ho is accepted and H1 is rejected. There is no significance difference between the standalone health insurance companies Capital to Asset Ratio. It states that all insurers level of capital adequacy i.e., Aditya Birla Health Insurance Company, Care Health Insurance company, Manipal Cignal TTK Health Insurance Company, Niva Bupa Health insurance Company and Star Health & Allied Health Insurance Companies no significant differentiation between them.

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Research paper Volume 12, Iss 7, 2023

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