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Analytical Study of Incurred Claims Ratio of Private Health Insurers

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Abstract:

Purpose: This paper aims to explore ten years of data on net premiums received and incurred claims of select health insurance companies and compare it with public sector total health insurance.

Design/methodology/approach: It is an exploratory paper comparing year-on-year premiums received and incurred claims of health during the period 2011-12 to 2020-21. (Indian financial year start from April to March). Data has been shown in charts with trend lines without constants. Further, the Compounded Annual Growth Rate (CAGR) has been calculated using log-linear regression. It is an exploratory paper.

Findings: The private sector is in business to earn profits, while the public sector is liberal in remitting the claims. Private-sector businesses earn more premiums than the public sector. However, the private sector's incurred claims are comparatively much less than the public sector's. The private sector is increasing business, but public sector growth is falling. The difference between year-on-year net premiums and incurred claims of the public sector is decreasing at 6.95%, but the same is increasing in the private sector at 19.63%. However, it cannot be generalised that the private sector is taking over the public sector business. The public is playing its social responsibility with accountability. However, the private sector aims to earn more earnings.

1. Introduction:

Two important ratios in the health insurance sector indicate how good an insurance company is. One is the 'claims settlement ratio'; this ratio gives you an idea of how reliable the health insurance company can be if you need to make a claim. The second is incurred claim ratio'; Incurred claims ratio can be termed as the ratio of net incurred claims to net premiums received by the health insurance company during the year. The insurance company receives some payment from its reinsurer against the total gross claims received during the year. The incurred claims ratio indicates the insurance

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company's ability to pay claims. Net claims incurred are gross incurred claims less all claims recovered from reinsurers related to those gross incurred claims. This ratio indicates how liberal the company is in granting claims. It also indicates the financial health of the insurance company. A lower incurred claim ratio means the insurers have very strict claim processing or tough underwriting parameters against which many policies are rejected. It also shows that it charges a higher premium than the benefit it provides to its policyholders. This paper attempts to observe the trends of incurred claim ratios of five select private health insurance companies and compare the trends with the overall pubic sector health insurance incurred claims. Section 2 reviews the limited literature; section 3 discusses data and its analysis; section 4 discusses and concludes.

2. Literature review

2.1 Health Sector

Three important factors help to develop the insurance sector – new diseases, rising income and awareness among the insured. The results of Mmakgabo, & Athenia, (2022) documented several noteworthy findings. First, income level of people decided the penetration of health insurance. More income means more health insurance penetration, while lower level results in lower health insurance. Second, inflation also plays a major role. Third, interest rates are negatively associated with life insurance demand when using life insurance. Fourth, economic growth is positively and significantly related to life insurance density in BRICS countries. Fifth, life insurance demand is positively related to financial freedom.

Atake, E. (2020) finds that the head-of-household's education level, household size, presence of a household member with a chronic disease, total household expenditure, and presence of older adults in the household all affect the decision to seek health care. In addition, households with private insurance use more medical services in private health centres than those with public insurance. Health Insurance derives its importance by bearing the brunt of increasing medical costs in the light of new diseases surfacing with every minute (Yadavar, 2018).

Key reasons for the underdevelopment of the health insurance sector are a) the lack of awareness among the public, and b) health insurance remaining majorly unrecognised in the past by the Government. The choice offered in terms of differential products is limited. The inability and unwillingness of most people to purchase health insurance add to the stagnancy in the progression of a well-developed health insurance system in the country. (Venkateshwarlu, 2016).

Internal forces affecting the values would be claim receipts, inventories, and processing cycles. External forces from providers would be such items as reporting cycles and increases in hospital and physician costs. Other external conditions such as government controls, weather, and postal strikes, impact the insured, insurer, and provider. An evaluation of internal processing cycles is made to determine if the values calculated via the projection route will tend to overstate or understate. Reporting cycles are analysed similarly.

In most cases, it is impossible to quantify the results, but the movement will generally indicate which results are likely to be the most accurate. In recent years coordination of benefits and subrogation activities have been intensified. A manual adjustment to estimated ultimate values is made until the recovery rate becomes somewhat constant. External provider activities relative to cost are monitored by evaluating reports of past and current items such as hospital charges, physician charges, dental charges, the various elements of the medical component and hospital costs (Strug, E. J., 1980).

When the ICR (Incurred Claim Ratio) ranges below 100%, it is a good indicator as it shows that the premium collected is more than the claims incurred and therefore paid. It reflects the company's ability to be profitable by producing a quality product and pricing it effectively. Normally, from the customer's point of view, a higher ICR would indicate a higher chance of getting a claim. The ICR, however, cannot be the only determinant of the success of an insurance company as it does not mention the time taken to settle the claim. So before choosing a product, the customer should also consider other variables. Private companies have maintained an incurred claim ratio between 50% and 75%, leaving them with enough capital to invest in their research and development, thereby launching new products yearly. The positive relation shows that as the incurred claim ratio increases, the number of products also increases. Since the ideal ratio ranges between 70% to 90%, it give them the leverage to have a consecutively growing ICR and consecutively growing product range. Public companies have had ICR ranging from 95% to 130% because of which their number of products introduced per year has reduced drastically. Since their ICR lies way above the ideal ratio, they are running into losses and cannot take advantage of innovative benefits (Vasisht & Bhattacharjee (2018).

Rohit and Aditya (2021) found that one of the critical challenges insurance companies face is the high incurred claim ratio. Indian health insurance industry is very competitive, and focusing on critical success factors can help insurance companies gain a competitive advantage. The health insurance business model is unique, with varying configurations, and broadly comprises strategic choices and consequences. In this article, drawing from the strategic management literature on the resource-based view (RBV) and insights gained from the interviews of healthcare and health insurance experts, we highlight the six critical success factors relevant for competing in the health insurance business. We also list five strategic choices that can help health insurance companies improve their profitability and gain a sustained competitive advantage. We recommend that the insurance companies design and develop an innovative business model centred around lowering the claim ratio and simultaneously increasing the customer willingness to pay. To increase the customer willingness to pay and reduce the claim ratio, the insurance companies should focus on the six critical success factors and invest in the five strategic choices.

2.2 IRDAI Report

In the annual report of 20-21, IRDAI says that among the various segments, the Health segment had the highest claims ratio at 89.51 per cent against a claim ratio of 85.70 per cent in the previous year (2019-20). The underwriting losses of the general insurance companies decreased to ₹20,039 crores in 2020-21 from ₹23,720 crores in the previous year. The underwriting losses decreased by 15.52 per cent over the previous year. The public sector insurers' underwriting losses decreased to ₹13,498 crores in 2020-21 from ₹18,741 crores in 2019-20. The private sector insurers reported an increase in underwriting losses at ₹4,053 crores in 2020-21 as against an underwriting loss of ₹3,647 crore in 2019-20. Standalone health insurers reported an increase in underwriting losses in 2020- 21 which was ₹2,374 crore compared to an underwriting loss of ₹651 crores in 2019-20. The underwriting losses of Specialised insurers decreased to ₹115 crores in 2020-21 from ₹680 crores in 2019-20 (IRDAI Annual Report 20-21)

During the year 2020-21, the net profit of the general insurance industry was ₹3,853 crore as against a net loss of ₹1,494 crore in 2019-20. On the other hand, the public sector companies reported a loss of ₹1,467 crores against a loss of ₹5,701 crores in 2019-20. The private sector insurers reported a Profit After Tax (PAT) of ₹5,729 crores against a PAT of ₹4,037 crore in 2019-20, and specialised insurers have reported a profit after tax of ₹951 crores against a PAT of ₹501 crore in 2019-20 whereas the standalone health insurers reported the loss of ₹1,360 crores against a loss of ₹331 crores in 2019-20.

3. Data Analysis

IRDAI reports four public health insurance companies, twenty-one private and seven standalone health insurers. Available data is from 2001 to 2022 in the insurance handbook of statistics. For the purpose of this study, ten years of data from 2011-12 (in short 2020) to 2020-21 (in short 2020) have been taken from various issues of the handbook of insurance statistics from the IRDAI database. The year 2021-22 has not been considered due to extreme volatility due to Covid-19. The five private insurance companies selected based on their size, reach, and brands are - Cholamandalam MSG Insurance, ICICI Lombard General Insurance, Reliance General Insurance, Royal Sundaram General Insurance Co. Ltd, and Star Health & Allied Insurance. Star Health & Allied is a private standalone health sector company. CAGR of Public Sector, Private sector, Stand Alone, and Health insurance data was calculated by log-linear regression method as $Ln(Yt) = Ln(a) + t*Ln(b)$ where b is the growth rate.

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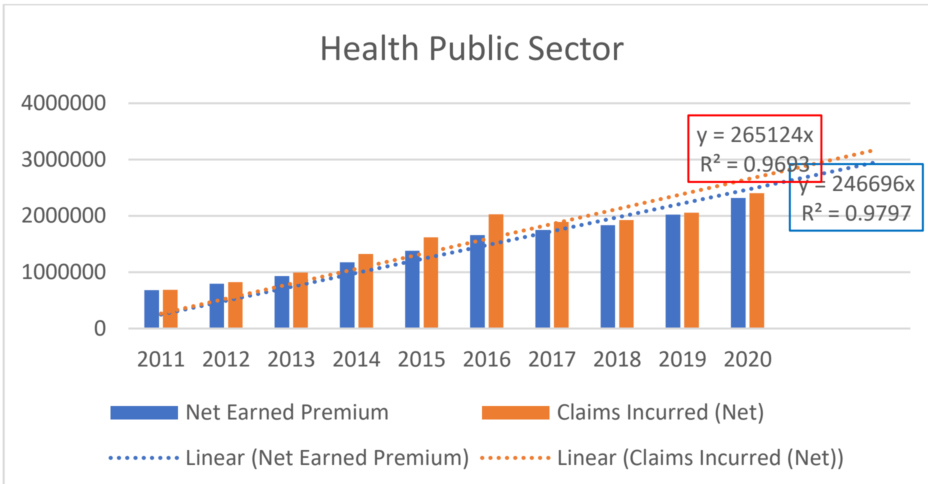
Figure 1: Public Sector Total Health Insurance



Similarly, data from five companies were analysed with CAGR, as in Table 2. Trend lines were set on time with a constant as zero to observe how much each sector or company. The difference of coefficients of net premiums and incurred claims were calculated as in table 1.

The table and especially the graphs (Fig 1 to 8) depict quite vividly the variance in development patterns for the health insurance sector. Figure 1 shows the trends in net premiums and incurred claims of the total Public Sector health sector from 2011 to 2020. It can be seen that incurred claims have always been more than net premiums. Coefficients of trend lines also show that claims rise by 265124 overtime while net premiums rise by 246696 overtime. This is because the public sectors are very liberal in granting the claims.

Figure 2 shows the trends in net premiums and incurred claims of the total Private Sector health sector from 2011 to 2020. It can be seen that incurred claims have always been lower than net premiums. Coefficients of trend lines also show that claims rise by 79504 per year while net premiums rise by 95110 per year. It appears the private sector is not liberal in granting claims.

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Figure 2: Private Sector Total Health Insurance

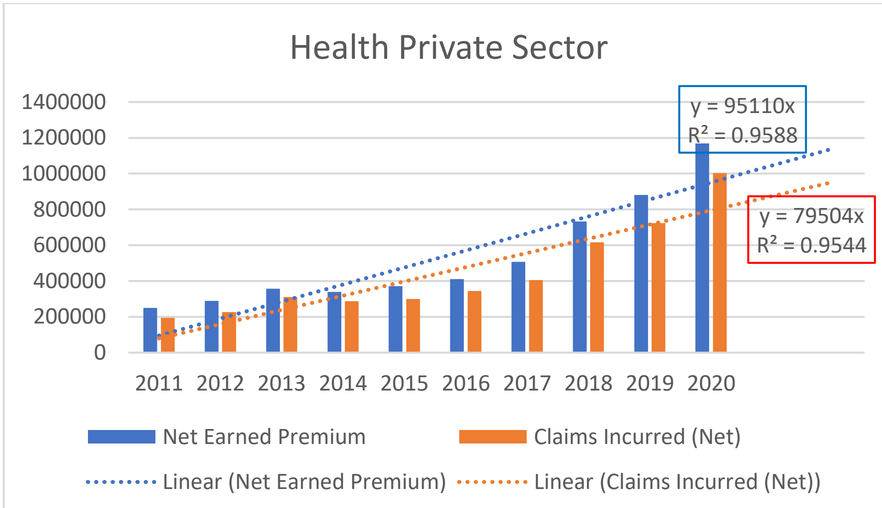

Figure 3 shows the trends in net premiums and incurred claims of the total Standalone private Sector health sector from 2011 to 2020. It can be seen that incurred claims have always been lower than net premiums. Coefficients of trend lines also show that claims rise by 55540 per year while net premiums rise by 82746 per year. It appears the private sector is not very liberal in granting claims. Profit appears to be the motive behind the strategy.

Figures 4 to 8 show the trends in net premiums and incurred claims of the five select private companies from 2011 to 2020. The companies include Star health which is a standalone private-sector company. It can be seen that incurred claims have always been lower than net premiums in the case of Cholamandalam MSG, ICICI Lombard General Insurance, Star Health and Royal Sundram. In the case of Reliance General Insurance, incurred claims are almost the same as net premiums. Coefficients of trend lines also show that net premiums are higher than the incurred claims of all four companies. Differences in these coefficients are shown in table 1.

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Figure 3: Stand Alone Sector Total Health Insurance

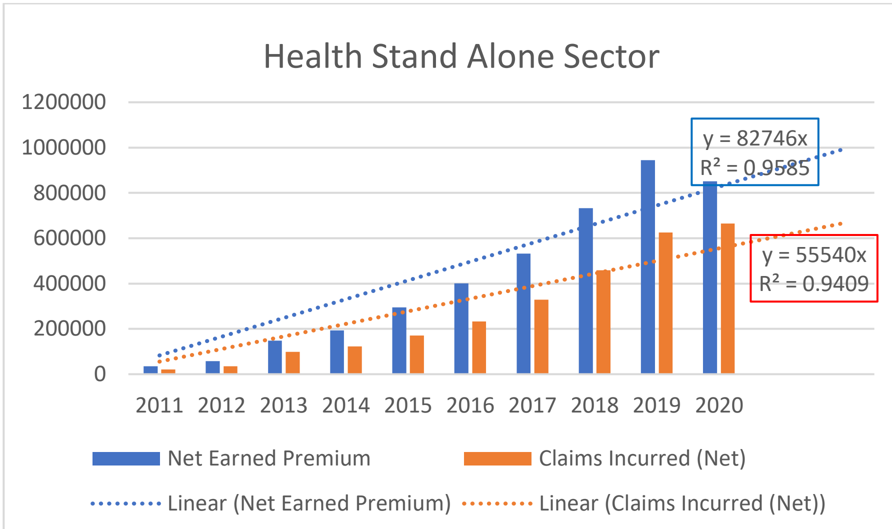

Figure 4: Cholamandalam MSG Insurance (Health Insurance)

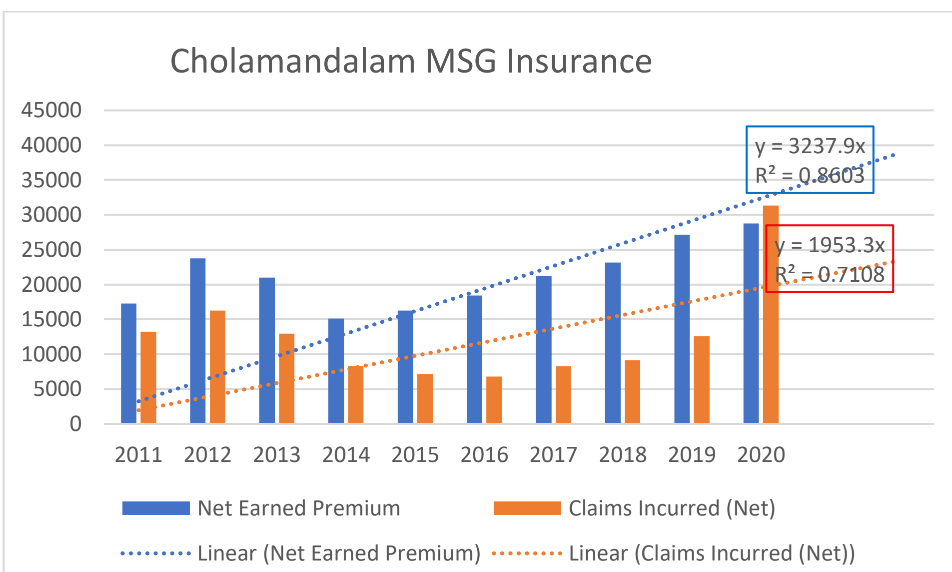

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Figure 5: ICICI Lombard General Insurance (Health Insurance)

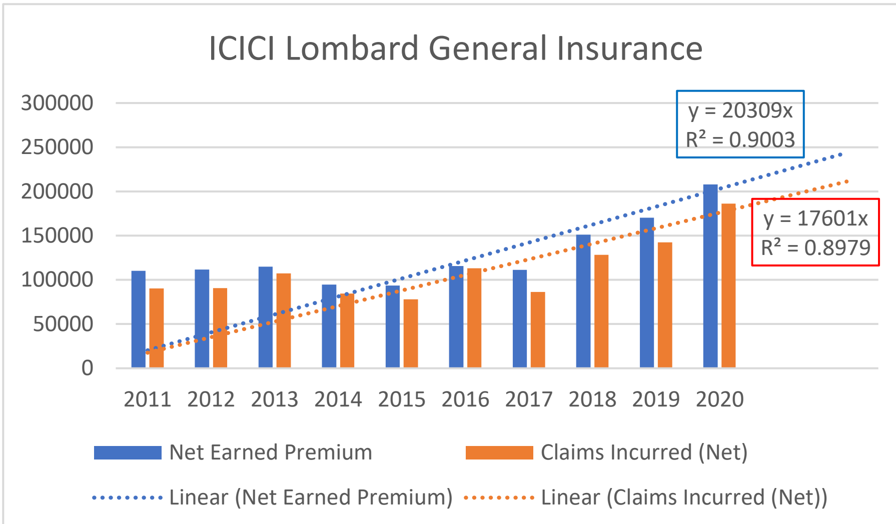

Figure 6: Reliance General Insurance (Health Insurance)

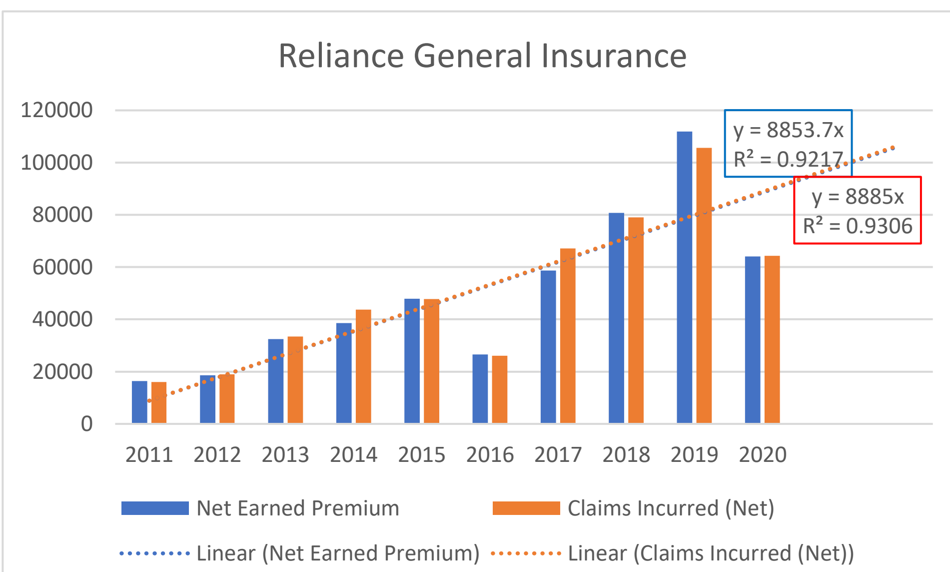

Figure 7 Star Health & Allied Insurance (Health Insurance)

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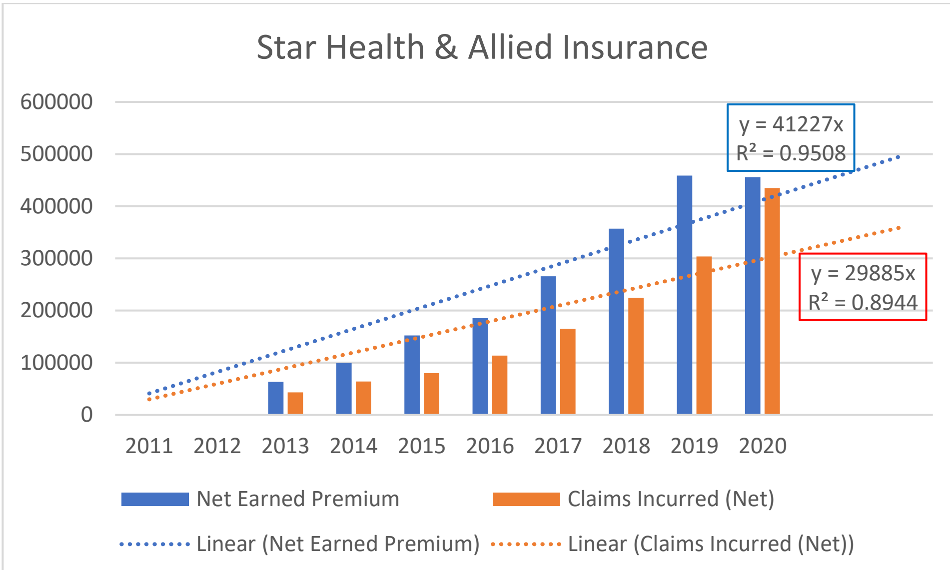

Figure 8: Royal Sundaram General Insurance Co. Ltd (Health Insurance)

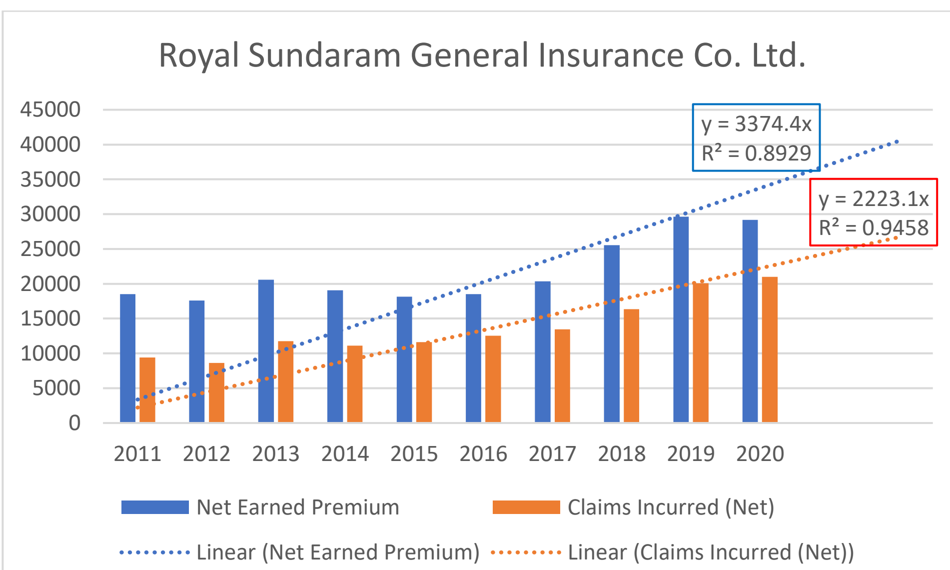

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Table 1 shows the difference in coefficients year on year. The public sector difference is 6.95%. Reliance General Insurance's percentage difference is almost negligible. However, private total and standalone total differences of coefficients are very high. Private sector differences are rising at the rate of 19.63%. The highest is Cholamandalam MSG, with a rising difference of 65.77%. Royal Sundaram difference is 51.79%

Table 2 shows CAGR calculated with a log-linear method for 2011 to 2020 and 2013 to 2020. Two CAGRs have been shown as there was a big change in India in 2014. Table 2 shows that the CAGR of Public sector health premiums has decreased from 14.48% (2011-20) to 12.64% (2013 to 2020). Similarly, incurred claims have decreased from 14.48 to 11.12% from 2013 to 2020. On the other hand, the growth rate of private sector net premiums has increased from 17.51 (2011-202) to 20% (2013-20). As the standalone sector is still in the budding stage, it shows a declining growth rate as the base years have a smaller business. On the other hand, growth rates of premiums and claims of all other companies have increased except Reliance General Insurance. Not all companies are ungenerous in granting claims. In the selected sample, Reliance appears to be quite liberal.

Table 1: Coefficients of Time and Difference

Sector or Company	**Coefficient of NEP**	**Coefficient of IC**	**Difference**	**Percentage difference**
Public Sector Total	246696	265124	-18428	-6.95
Private Sector Total	95110	79504	15606	19.63
Stand Alone Sector Total	82746	55540	27206	48.98
Cholamandalam MS General Insurance Co. Ltd.	3237.9	1953.3	1284.6	65.77
ICICI Lombard General Insurance Co. Ltd.	20309	17601	2708	15.39
Reliance General Insurance Co. Ltd.	8853.7	8885	-31.3	-0.35
Star Health & Allied Insurance Co. Ltd.	41227	29885	11342	37.95
Royal Sundaram	3374.4	2223.1	1151.3	51.79

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Table 2 CAGR of Premium Earned and Claims Incurred

Sector or Company	CAGR 2011-12 to 2020-21		CAGR 2013-14 to 2020-21	
	Net Earned Premium	**Claims Incurred (Net)**	**Net Earned Premium**	**Claims Incurred (Net)**
Public Sector Total	14.48	14.48	12.64	11.12
Private Sector Total	17.51	18.18	20.00	19.77
Stand Alone Sector Total	43.72	45.87	31.83	34.38
Cholamandalam MS General Insurance Co. Ltd.	4.43	2.53	7.83	11.53
ICICI Lombard General Insurance Co. Ltd.	6.72	6.90	10.64	9.61
Reliance General Insurance Co. Ltd.	19.94	19.58	15.93	14.58
Star Health & Allied Insurance Co. Ltd.	102.90	102.72	33.62	38.60
Royal Sundaram	5.63	9.79	7.10	10.14

4. Concluding Remarks

Charts and figures show that private-sector businesses earn more premiums than the public sector. However, the private sector's incurred claims are comparatively much less than the public sector's. The private sector is increasing business, but public sector growth is falling. The difference between year-on-year net premiums and incurred claims of the public sector is decreasing at 6.95%, but the same is increasing in the private sector at 19.63%. However, it cannot be generalised that the private sector is taking over the public sector business. The public is playing its social responsibility with accountability. However, the private sector aims to earn more earnings.

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