

Financial Performance of General Insurance Companies in Bangladesh: A 2003-2020 Evaluation

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Abstract: This paper analyzed the financial performance of the general insurance companies of Bangladesh over the period 2003-2020 by studying 18 general insurance companies out of 46 (including the only government owned company Sadharan Bima Corporation, SBC). In terms of net premium, the study found no definite industry trends; but, the only nationalized insurance company (SBC) has around 1200% higher premium earnings than the private average. Also, SBC has the highest figures for both investment and investment income for the studied period. Average investment has increased in the private insurance sector steadily during 2003-2007, then onward there was sharp ups and downs; but SBC's investment growth has been steady all through. In the studied period, the net claims of most private insurance companies have increased significantly with an overall rising trend. SBC has been incurring the most net claims and its average is 2543.18% more than private insurance companies' average.

Regarding APBT (annual profit before tax), SBC had a much higher figure than any of the private companies and is almost 1200% of the average of the private general insurance companies. ROTA for most of the companies is consistent throughout the studied years. The companies had their highest ROTA during 2008-2010. The average of the private insurances showed much more fluctuation than SBC. The study found very strong correlation between industry net premium and net claims. But majority of the sample companies depict a negative correlation between profit and share price. The study further noted that older companies were financially better off compared to the newly established companies. Also, among the private general insurance companies there is variability in performance. SBC, being the only public insurance company, has a lot upper hand. Overall it can be said that the general insurance sector is doing moderately well.

Key words: APBT, investment, investment income, net claim, net income, ROTA

I. INTRODUCTION

1.1 Background

Insurance is an important sector that fosters financial stability by enabling economic agents to undertake various transactions with the transfer and dispersion of risks. Insurance provides the insured with a means of offsetting the burden of financial losses. Insurers protect individuals and businesses from the adverse effects of losses by peril, hazard, death, accident and many other unwanted happenings. Bangladesh economy holds huge risk in every sector due to its

vulnerability to natural disasters like flood, cyclone, draught, and tornado. There are also other factors like political volatility, and economic concerns like inflation, high interest rate, tax policy, deregulation, etc., (Khan and Uddin, 2020). However, Bangladesh's, insurance market is not very large compared to the degree of risk. Currently, 78 insurance companies, 32 life and 46 general, are operating in the country.

The insurance penetration (ratio of premium underwritten in a particular year to GDP) in Bangladesh, especially non-life insurance, remained static in last decade although 14 new companies entered the market during the period, bringing the total to 78. The overall insurance penetration in Bangladesh stood at a meagre 0.57% in 2018 - the lowest among emerging Asian countries (Swiss Re 2018). In 2018, the insurance penetration was 5.27% in Thailand, followed by 4.77% in Malaysia, 4.22% in China, 3.70% in India, 2.42% in Vietnam, 1.95% in Indonesia, 1.82% in the Philippines and 1.15% in Sri Lanka. Taiwan has the highest penetration rate with 18% (Figure 1). The trend in insurance penetration rate as a percentage of GDP over a period of 10 years (2009-2018) in life, non-life and overall insurance sector shows the gloomy picture of non-life sector in Bangladesh (Figure 2).

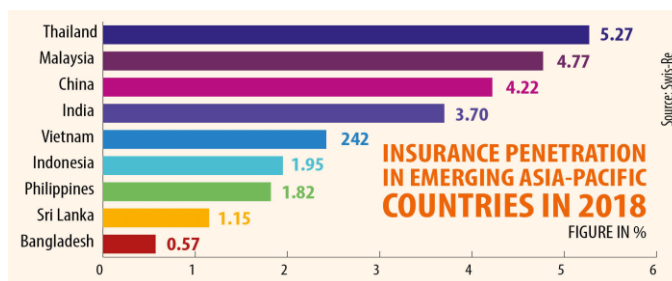


Figure 1: Insurance Penetration in Emerging Asia-Pacific Countries

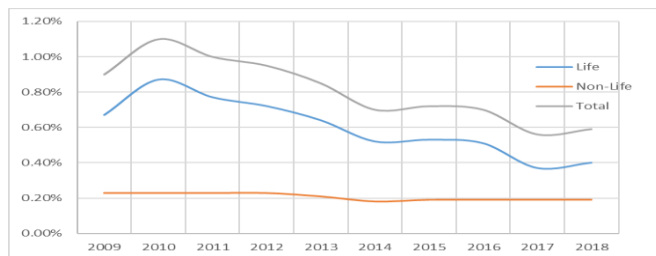


Figure 2: Insurance Penetration in Bangladesh as Percentage of GDP

Interestingly, the high economic development of Bangladesh seems to have no relation with the insurance sector. Insurance is struggling with low penetration rate at a time of high economic growth (7+%). Bangladesh is the most underinsured country in the non-life insurance category, despite to lose as much as 0.8 % of its GDP to natural disasters a year. The insurance gap of the country, which indicates assets at risk that are not covered by insurance, stands at \$5.5 billion, or 2.1% of the GDP. The low insurance penetration rate can be attributed to the absence of any compulsory insurance, poor awareness and trust gap. Countries that have done well in insurance have multiple compulsory insurance systems, supported by the government subsidies on insurance.

In Bangladesh, insurance is not yet a top-priority financial management tool as there is lack of awareness and understanding about insurance among people. This is for lack of insurance literacy and confidence, shortage of diversified products, while mistrust is another big reason for low penetration. Besides, there is no mandatory insurance in some areas such as health and agriculture in Bangladesh, whereas in India, the contribution of health insurance is about \$7 billion. However, the regulator of the insurance sector mentions lacks of diversified products as another reason for the low penetration. Meanwhile, government of Bangladesh is trying to make crop insurance, railway passengers' insurance, building insurance, cattle insurance, education insurance, and health insurance mandatory. With these policy support from the government, insurance penetration will increase considerably.

Policy holders, however, blame delay in fixing claims and ambiguity in terms and conditions during opening a policy. Terms and conditions are not well explained during opening a policy, which creates mistrust (Mamun 2016). Moreover, hassles, procrastination and cumbersome process of fixing the claims are major reasons for low penetration. For a better functioning of the insurance industry and to attain good growth of this sector, it is worthwhile to know the factors which are responsible for low growth of the insurance industry in Bangladesh. Some of the factors include political instability, weak government model, shallow product base, low risk-taking ability due to low capital base, low premium due to low penetration rate and poor skills of employees.

In non-life insurance, the insured is compensated duly the amount of loss sustained by him subject to the ceiling fixed by the sum assured. It includes property insurance, liability insurance and other form of insurance. Fire and marine insurance are strictly called property insurance. Motor, theft, fidelity and machine insurances include the extent of liability insurance to a certain extent. In Bangladesh the marine insurance is the backbone for the non-life insurance business. Marine insurance completely depends on imports which were greatly disturbed by the political unrest time and again. Improving the performance of non-life insurance sector will not only help the insurance companies but will help other businesses, policy holders, and the country. An efficient

insurance sector can contribute to the growth of the economy by facilitating new investments and their sustainability. Keeping these in mind this research investigated the financial performance of the non-life general insurance sector amid the problems, if at all.

1.2 Objectives

The broad objective of the study is to evaluate the financial performance of general insurance companies in Bangladesh over the period 2003-2018. Specifically, the study i) analyzes the trends in the performance of general insurance companies of Bangladesh, ii) evaluates the performance of general insurance companies of Bangladesh on some financial parameters (e.g., net premium, investment & investment income, net claims, profits & profitability), iii) compares the financial performance of private general insurance companies with the only state owned general insurance company in the country - 'Sadharan Bima Corporation (SBC)'.

II. METHODOLOGY

The study is mainly based on secondary data. The main source of secondary data is the reports (2003-2018) published by Bangladesh Insurance Association (BIA). In addition, various books, journals, articles and thesis papers related to prevailing problems and current situation of the insurance industry of Bangladesh is also studied. There are 45 private and one public general insurance company (Shadharon Bima Corporation - SBC) operating in the country. Of the private general insurance companies, 17 private general insurance companies and the only public general insurance company (SBC) were taken for the study. SBC was established in 1973. To get a better representation the insurance companies were selected based on their year of establishment. Among the private general insurance companies 7 companies were established in 1980s, 5 companies were established in 1990s, and 5 companies were established in 2000s. The selection of private insurance companies was based on convenience and judgmental basis.

III. ANALYSIS & FINDINGS

The analysis of the collected data has been done according to the specific objectives and parameters of this study. In the following subsections the data analysis is provided aligned with the six specific financial parameters to evaluate the performance of general insurance sector of Bangladesh.

3.1 Trend of Net Premium

Premium is an amount paid periodically to the insurer by the insured for covering the risk. Net premium is the expected present value of a policy's benefits less the expected present value of future premiums. The net premium calculation does not consider future expenses associated with maintaining the policy. The main revenue source of general insurance companies is the net premium. For the period 2003-2018, the net premiums of most private insurance companies have increased significantly with varied fluctuations (average

deviation 46%); but the overall trend was a rise in net premium with positive CAGR (cumulative annual growth rate) of 12%. The same trend can be seen with SBC with quite high fluctuations (deviation 41%, CAGR 11%).

The increase in premium indicates that more companies are considering insurance policies indicating a growing non-life insurance industry of Bangladesh. Increased awareness of the benefits of insurance and increased competition in the sector that have made companies to promote more may be the reasons that have fueled the growth. Again, a high net premium doesn't necessarily indicate high performance because there are other costs such as claims, associated with the net premium to consider before obtaining the bottom-line figure of profit. A high net premium does, however, indicate a higher amount of revenue earnings from the insurance policies provided.

Average annual growth in net premium of insurance companies was erratic with a lot of fluctuations (Figure 3). However, it was always mostly positive. The highest growth of private insurance companies occurred in 2007 and the lowest was in 2015. Fluctuation for SBC was greater with highest growth of in 2004 and 2012. It also saw 0% and even negative growth in this time period.

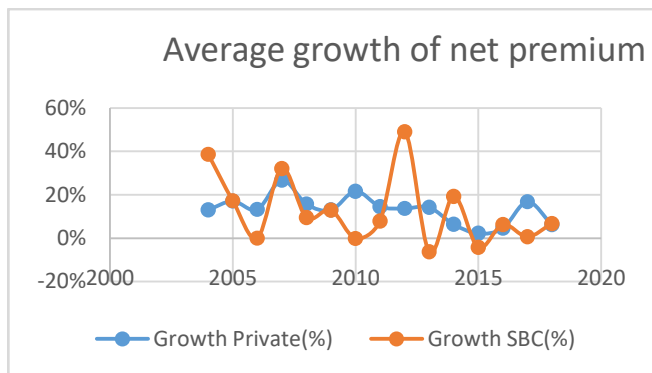


Figure 3: The Average Annual Growth of Net Premium (Private Insurance Companies and SBC)

As noted, the net premium growth among the private companies has shown a lot of deviation. Some are doing good; some are performing poorly. To analyze this, the companies were divided in 3 categories based on the decade they started their operation: i) Companies established in 1980s, ii) Companies established in 1990s, and iii) Companies established in 2000s. Based on these three divisions the study tracked their performance in the studied period. It is found that the older companies established in 1980s have significantly higher average net premium (Figure 4). This group is followed by the 1990s group and 2000s group respectively. The newly established companies net premium income is not very impressive lately.

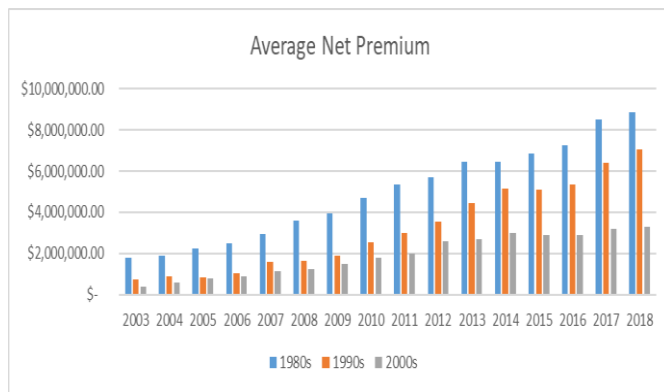


Figure 4: Average Net Premium of the Companies Categorized into Decades

Regarding growth (CAGR) the older companies are quite steady with less deviation, but the 1990s and 2000s companies net premium growth fluctuates a lot (Figure 5). One possible reason is that the older companies had more time to settle down and make a name and brand image for them. Furthermore, these companies started in an era of less competition. The combined effects of sustainable reputation and less competition contributed to the benefits of the 1980s companies. But the newly formed companies started hurriedly without much market survey and need analysis.

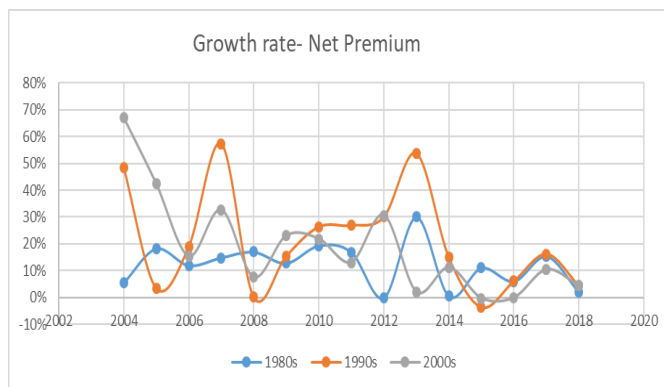


Figure 5: Growth Rate of Net Premium of the Companies Categorized into Decades

As noted, SBC's net premium is much higher compared to any of the private insurance company. It can be mentioned here that as per Insurance Corporation (Amendment) Act 1990 50% of all insurance business relating to any public property or to any risk or liability appertaining to any public property shall be placed with the SBC and the remaining 50% of such business may be placed with this Corporation or with any other insurers in Bangladesh. But for practical reason and in agreement with the Insurance Association of Bangladesh, SBC underwrites all the public sector business and 50% of that business is distributed among the existing 45 private general insurance companies equally under national co-insurance scheme.

In respect of reinsurance, the same act provides that 50% of a company's reinsurance business must be placed with the SBC

and remaining fifty percent may be reinsured either with this Corporation or with any insurer in Bangladesh or abroad. The main pillar of the SBC is insurance, as well as, reinsurance business. SBC is the largest non-life insurance underwriter in Bangladesh in terms of gross premium, network of offices & trained manpower. On the other hand, SBC reinsures the risks of private insurance companies operating in Bangladesh. This is the main reason why SBC has such high insurance premium.

The study further undertook the time series analysis of net premium of the insurance companies. The regression analysis is showing the trend of the net premium with time of the studied companies (Table 1). The F-statistics confirmed the validity of the models (Sig F<0.05). For private insurance companies studied, the R² value of 12 companies are found to be above 90%, 3 are above 80%, and only 2 company are below 80% showing the high explanatory power of time in measuring the net premium. The R² of the private industry average is also very high (99%) explaining high variability of the net premium of the private insurance industry. For SBC the R² is 96% showing the strong explanatory power of the model.

Table 1: Regression Models of Net Premium of the Insurance Companies

Serial No	Company Name	Regression Model	R Squared	F Significance
1	Agrani	Y= 0.11195X + 0.60012	95%	2.06E-10
2	BGIC	Y= 0.24909X + 0.77277	76%	1.02E-05
3	Bangladesh National	Y= 0.27794X - 0.49088	80%	3.21E-06
4	Continental	Y= 0.23985X + 0.22506	89%	3.23E-08
5	Green Delta	Y= 1.19636X + 0.10344	97%	8.03E-12
6	Nitol	Y= 0.45513X - 0.86359	88%	7.06E-08
7	Mercantile	Y= 0.12107X + 0.43578	92%	6.07E-09
8	Peoples	Y= 0.24398X + 0.89195	94%	8.17E-10
9	Phoenix	Y= 0.24899X + 1.4887	90%	2.57E-08
10	Pioneer	Y= 1.18136X - 2.44588	96%	6.32E-11
11	Pragati	Y= 0.42845X + 2.03189	96%	2.59E-11
12	Prime	Y= 0.15009X + 0.76576	61%	0.000383756
13	Reliance	Y= 0.86996X + 0.01909	95%	1.05E-10
14	Republic	Y= 0.30604X - 0.30661	93%	1.58E-09
15	Sonar Bangla	Y= 0.22971X - 0.06026	94%	7.68E-10
16	Takaful	Y= 0.15948X + 0.24279	94%	7.71E-10
17	United	Y= 0.17523X + 0.23532	93%	1.75E-09
18	Average (Private)	Y= 0.39087X + 0.21444	99%	3.20E-14
19	SBC	Y= 4.19927X + 9.18030	96%	3.78E-11
20	Industry Average	Y= 0.60244X + 0.71254	99%	2.87E-14

3.2 Trend of Investment & Investment Income

3.2.1 Trend of Investment

Insurance companies try to increase their wealth not only through gaining premium, but also investing that premium income into different profitable ventures. The growth of insurance companies depends on efficient mix of portfolio that consists of profitable investments. Data of investment of the general insurance companies showed that the average investment has increased in the private insurance sector steadily from 2003 to 2007; then after, there was four significant jumps in 2008 (\$1.16 million to \$2.05 million), 2010 (\$2.4million to \$3.7 million), 2011 (\$3.7 million to \$ 5.3 million) and 2017 (\$6.5 million to \$ 9.0 million) and a big drop in 2012 (\$5.3 million to \$ 4.2 million).

The average investment of the private insurers found to be \$3.9 million with 60% deviation. SBC’s investment was comparatively higher (\$28.5 million) with 50% deviation. But, overall, the private industry growth rate was much higher (18%) than the SBC (11%). SBC is the sponsor shareholder of ICB (Investment Corporation of Bangladesh), IDLC (Industrial Development and Leasing Company), NTCL (National Tea Company Limited), NHFIL (National Housing Finance and Investment Ltd), Aramit Ltd, CDBL (Central Depository BD Ltd), etc. This gives a picture of the strong investment portfolio of SBC. Comparison of the average growth in investment in private sector is shown in Figure 6. It has shown an erratic growth over the years. For SBC, the fluctuation in growth of investment over the years is comparatively low.

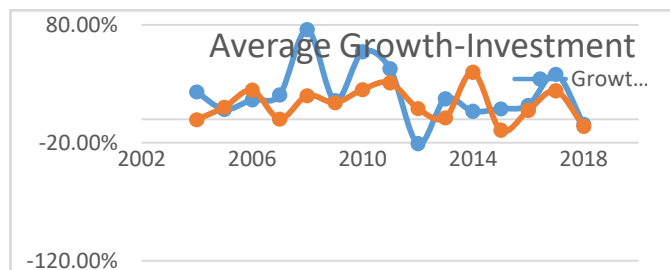


Figure 6: The Average Annual Growth of Investment (Private Insurance Companies and SBC)

Further analysis showed that the companies established in 1980s have a significantly higher average investment, followed by the 1990s and 2000s companies (Figure 7 and Figure 8). The average growth of 1980s was negative in 2012, 2015 and 2018. The 1990s companies also had an almost zero growth in investment in 2012 and 2014. The 2000s company’s growth was slower than normal generally. However, the companies observed significant growth in 2017 (over 200%). Fluctuation in investment can still be seen in both the private and SBC with high deviations of 46% and 41% respectively.

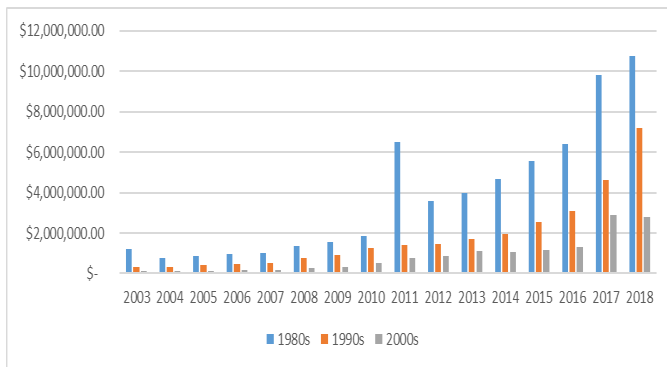


Figure 7: Investment of Companies Categorized into Decades

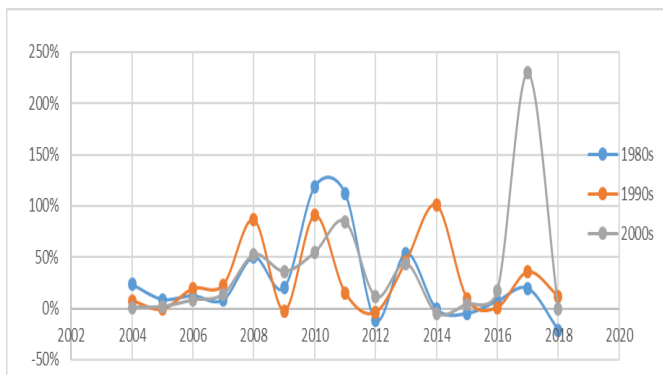


Figure 8: Growth Rate of Investment of the Companies Categorized into Decades

The regression models of investment with time indicated reliable F-significance of the models (Table 2). Overall, it is found that all models except two companies are found to be significant (Sig F<0.05). The coefficient of determination (R²) of the private sector is 94%, of SBC is 96%; while the whole industry has a value of 92%. This explained strong explanatory power of these three models with time (Sig F<0.05).

Table 2: Regression Models of Investment

Serial No.	Company Name	Regression Model	R Squared	F-Significance
1	Agrani	Y=11.42X+2.46	92%	1.83E-08
2	BGIC	Y=2.59X+3.08	62%	4.93E-04
3	Bangladesh Nation	Y=13.38X+2.98	91%	2.73E-08
4	Continental	Y=10.73X+3.09	74%	3.64E-05
5	Green Delta	Y= 0.28X+1.69	93%	8.11E-09
6	Nitol	Y=.029X+0.095	8%	2.84E-01
7	Mercantile	Y=10.61X+2.15	88%	2.74E-07
8	Peoples	Y=1.46X+7.30	10%	2.47E-01
9	Phoenix	Y=1.15X+4.47	79%	1.09E-05
10	Pioneer	Y=0.40X+6.24	60%	6.96E-04
11	Pragati	Y=3.43X-4.728	68%	1.45E-04

12	Prime	Y=4.19X+3.47	57%	1.08E-03
13	Reliance	Y=0.28X+4.86	72%	6.09E-05
14	Republic	Y=0.22X-1.09	38%	1.05E-02
15	Sonar Bangla	Y=2.54X+5.80	72%	6.10E-05
16	Takaful Islami	Y=4.98X+2.64	97%	6.87E-11
17	United	Y=1.20X+4.39	37%	1.56E-02
18	Avg (Private)	Y=1.59X+2.45	94%	2.83E-09
19	SCB	Y=0.27X+0.95	96%	3.71E-10
20	Industry Avg	Y=0.88x+1.99	92%	1.32E-08

3.2.2 Trend of Investment Income

Large portions of revenue of insurance companies come from investment income. Apart from the premium income, insurance companies use the income from investments as a source for further funding. In other words, it can be said that the general insurance companies use the premiums earned from clients as capitals for investing in productive channels to generate revenues/income. These revenues are used for further growth and the settlement of claims of clients. Hence, it can be said that increased amount of income from investment would make it easier for insurance companies to settle claims and further reinvest in diversified portfolios not to mention increase the bottom line of the insurance company.

Data of investment income of the general insurance companies showed that the average investment income of SBC (\$ 6.5 million) is almost 7.6 times that of private insurance companies (\$792,020) but with very high deviation of 88%. Also, the income from investment of the private insurance companies is not very steady. It has fluctuated considerably (44%) in the observed period with occasional ups and downs but much lesser than the SBC. But the average growth of investment income for both SBC and private sector is quite close (SBC's 12% versus Private's 10%).

Figure 8 showed that the annual cumulative percentage growth of the total average investment income for private insurance companies and SBC. For private insurance companies it was highest in 2013 at 127%; also 2007 and 2010 values were high at around the 100% mark. The SBC's fluctuations are higher with sharp increases and falls in the same time period reaching a high of 965% in 2011.

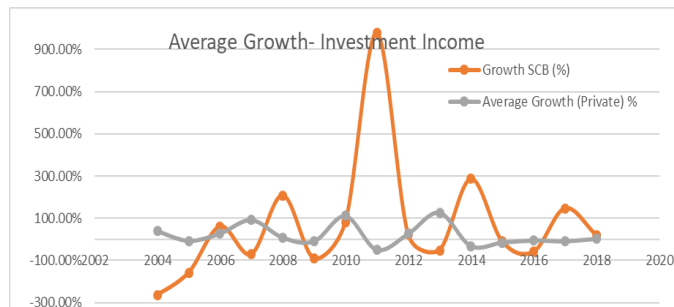


Figure 8: The Average Annual Growth of Investment Income (Private Insurance Companies and SBC)

Analysis of the average income from investment as per year of establishment shows that, in general, 1980s companies investment income is always higher (Figure 9). Average of the 2000s companies has always been lower compared to the other two categories. Sometimes this difference is quite large. From Figure 10 it can be seen that percentage change in the average of the 2000s companies has been mostly positive except in 2011, 2015, 2016 and 2017. There were more fluctuations in the other two groups regarding this which means they were less consistent or steady in their growth.

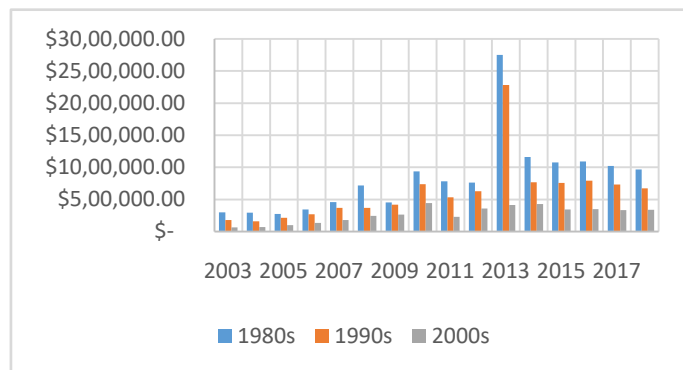


Figure 9: Investment Income of Companies Categorized into Decades

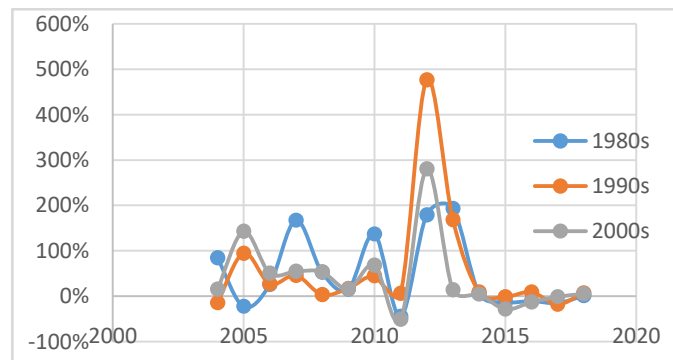


Figure 10: Growth Rate of Investment of Companies Categorized into Decades

The regression analysis showing the trend of the investment income noted that, all models except for four companies are reliable at 5% level of significance (Table 3). The average R^2 for private companies is 0.50, but for SBC it is quite low (0.37). Overall, for the industry, a significant relationship is observed between time and the investment income (Sig $F < 0.05$, $R^2 = 0.64$).

Table 3: Regression of Investment Income

SL	Company Name	Regression Equation	R^2	Sig F
1	Agrani	$Y=0.018 X + .102$	71%	3.84068E-05
2	BGIC	$Y=0.037 X + .286$	14%	0.153580418
3	Bangladesh National	$Y=0.0495 X - .082$	77%	8.64252E-06
4	Continental	$Y=0.016 X + .058$	37%	0.013106129
5	Green Delta	$Y=0.014 X + 1.24$	18%	0.101224934

6	Nitol	$Y=0.031 X + .0525$	59%	0.000523592
7	Mercantile	$Y=0.066 X - .039$	79%	4.2193E-06
8	Peoples	$Y=0.072 X + 0.347$	27%	0.03790449
9	Phoenix	$Y=0.089 X + .108$	27%	0.037581165
10	Pioneer	$Y=0.133 X + .38$	9%	0.262767681
11	Pragati	$Y=0.040 X + .096$	2%	0.571775357
12	Prime	$Y=0.0017 X + .038$	0%	0.915383248
13	Reliance	$Y=0.27 X - 0.303$	89%	5.09944E-08
14	Republic	$Y=0.0307 X + .002$	63%	0.000237474
15	Sonar Bangla	$Y=0.016 X + 0.135$	29%	0.032849767
16	Takaful Islam	$Y=0.0285 X + .11$	46%	0.003657516
17	United	$Y=0.075 X + .025$	50%	0.002186675
18	Average (Private)	$Y=0.0656 X + .23$	50%	0.002252708
19	SBC	$Y=0.89 X - 1.56$	37%	0.01288404
20	Industry Average	$Y=0.011 X + 0.135$	64%	0.000214039

3.3 Trend of Net Claims

An insurance claim is a formal request sent by a claimant to an insurance company asking for a payment based on the terms of the insurance policy. Insurance claims are reviewed by the company for their validity and then paid to the insured or requesting party (on behalf of the insured) once approved. The claims' payment can be regarded as the primary service of insurance to the companies. Net claims represent the value of claims settled during a particular year along with the outstanding claims of that year, which is settled in the following year. Therefore, net claims are an indicator of the number of claims logged in and the value of claims paid out in a particular year.

A significant increase of net claims of most of the private general insurance companies is observed during 2003-2018. The overall trend is a rise in net claim with some fluctuations. This trend can be observed from the average net claim of 17 private insurance companies which was \$0.20 million in 2003; the average then increased in 2004 and decreased in 2005. Through 2006-2010 the net claim of the private industry depicted regular increase; the average then fell in 2011. Since then, the private industry has observed a steady increase in net claim, reaching \$1.7 million in 2018.

When SBC is included in the calculation of the average, there was an increase in the average net claim in all years except 2011. SBC incurred the highest worth of net claims which was over \$ 31 million in 2018 and the lowest claims were \$ 5.7 million in the year 2003. SBC's comparison here is very meaningful as it has already been mentioned that it is a Government owned company and so has certain privileges as well as commitments that enables it to settle much higher net claim. Like that of private industry, the overall industry net claim fell in 2011. From 2012 onwards, the industry's average

net claim increased reaching a net worth of \$ 3.3 million in 2018.

The highest average growth rate of SBC was 107% in 2012. The average growth rate of the private insurance companies was, on average, higher till 2011. Changes in the average growth rates of the SBC were more significant. In 2005, there was a negative growth rate of the private insurance companies. In 2011, both the private and SBC faced negative average annual growth rate. Furthermore, SBC observed negative growth in 2013 (-29%) and 2016 (-33%), which was probably one of the prime reasons for the fluctuations in growth in following years (Figure 11).

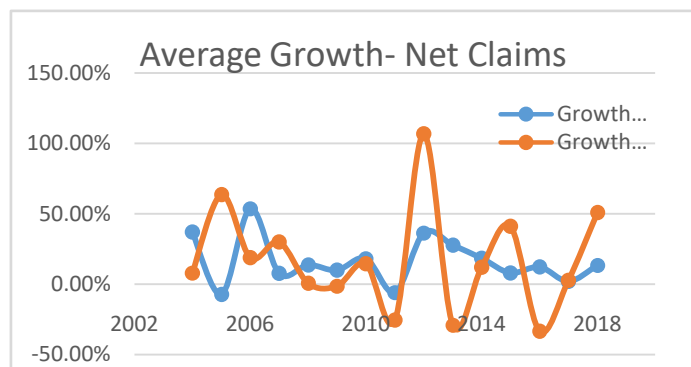


Figure 11: The Average Annual Growth of Investment (Private Insurance Companies and SBC)

The regression analysis (Table 4) shows the trend of the net claim worth. Overall, we find all models except that of Takaful Islami are found to be significant (Sig F<0.05). Overall, we find a significant relationship between time and the net claim worth for the private companies (Sig F< 0.05, R² = 94%), SBC (Sig F< 0.05, R² = 75%), and for the industry (Sig F< 0.05, R² = 93%).

Table 4: Regression of Net Claims

Serial No.	Company Name	Regression Equation	R ²	Sig F
1	AGRANI	Y= .03012X+ 0.0427	76%	0.0000122
2	BGIC	Y= .094X-0.075	87%	0.000000131
3	BANGLADESH NATIONAL	Y= 0.121X-0.347	76%	0.0000108
4	CONTINENTAL	Y= 0.025X+0.55	64%	0.000193
5	GREEN DELTA	Y= 0.322X-0.354	87%	0.00000018
6	NITOL	Y= 0.199 X-0.692	76%	0.0000122
7	MERCANTILE	Y= 0.1045X- 0.173	65%	0.000171
8	PEOPLES	Y= .060X-0.1445	26%	0.041381
9	PHOENIX	Y= .0275X- 0.0667	58%	0.000579
10	PIONEER	Y= 0.419X-1.116	96%	2.5E-11
11	PRAGATI	Y= .0492X-0.62	48%	0.003115
12	PRIME	Y= -0.0338X+ 0.548	47%	0.003578
13	RELIANCE	Y= 0.1238 X+	91%	1.32E-08

		0.496		
14	REPUBLIC	Y= .06692X- 0.124	71%	0.0000382
15	SONAR BANGLA	Y= .0902X- 0.19485	82%	0.00000133
16	TAKAFUL ISLAMI	Y= .00935X+0.091	15%	0.135589
17	UNITED	Y= .0198X+0.098	41%	0.007187
18	AVG PRIVATE	Y= .1016X-0.062	94%	4.42E-10
19	SBC	Y= 1.397 X + 5.89	75%	0.000015
20	INDUSTRY AVG	Y= 0.1735X+0.268	93%	2.7E-09

Based on the decade of establishment (1980s, 1990s and 2000s) the study has tracked their performance from the period between 2003 and 2018 (Figure 12 and Figure 13). The older companies established in 1980s are found to have higher net claims till 2013. Since then, the companies of the 1990s took over in terms of net claim settlement. There is a significant increase in the average net claims of all the decades.

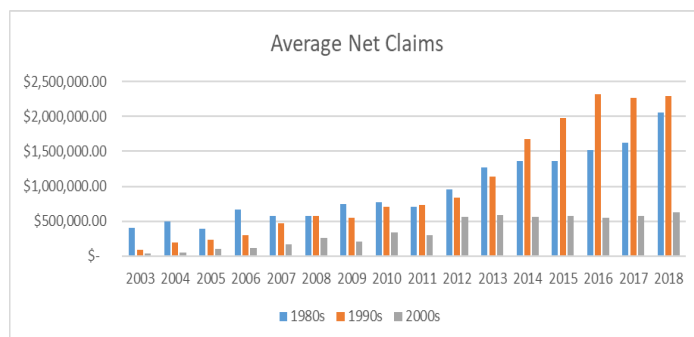


Figure 12: Net Claims of Companies Categorized into Decades

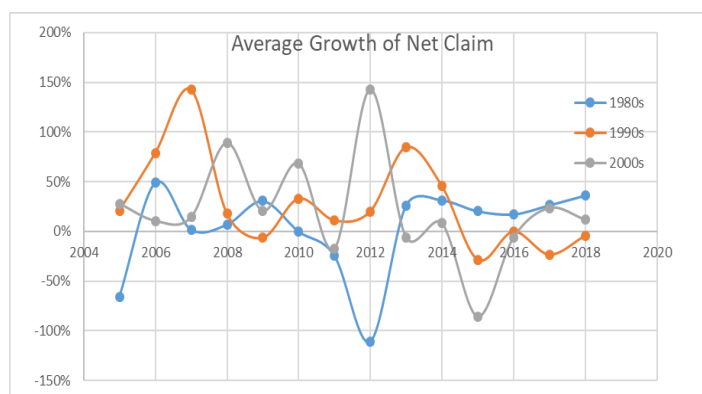


Figure 13: Growth Rate of Net Claims of Companies Categorized into Decades

3.4 Trend of Profits & Profitability

3.4.1 Profits: Annual Profit before Taxes

Annual profit before tax (APBT) is a profitability measure that looks at a company's profits before the company pays the corporate income tax. This measure deducts all expenses from revenue including interest expenses and operating

expenses, but it leaves out the payment of tax. Profitability is the primary goal of all business ventures. Without profitability the business will not sustain in the long run.

The APBT of the private general insurance companies in the studied period showed an average of \$1.1 million (deviation 45%) with a growth rate of 14%. SBC had a much higher APBT figures than any of the private companies throughout the period of analysis reaching a record high of \$ 27.5 million in 2018. Its average APBT was \$ 13.4 million (deviation 58%) with a growth rate of 13%. The industry has seen a positive trend when it comes to APBT. The yearly growth rates of private company average and SBC were quite varied within themselves and showed no common trend (Figure14). SBC experienced the highest growth rate of 39.5 % in 2011 and its lowest - 20.45% in 2012. In 2007 the private sector saw a boom of 147.71% in their APBT. The private sector has seen fluctuating growth rates of their APBT and has had negative growth rates in the following years.

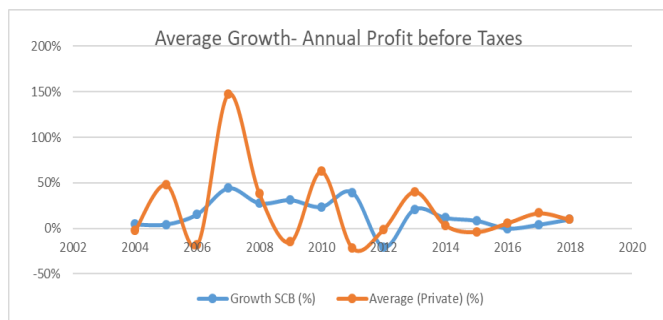


Figure 14: The Average Annual Growth of Annual Profit before Tax (Private Insurance Companies and SBC)

The decade wise profit analysis of the companies tracked their performance from the period between 2003 and 2018 is shown in Figure15 and Figure16. The older companies established in 1980s have significantly higher APBT. This group is followed by the 1990s group and lastly the newer 2000s group. One possible reason is that older companies had more time to make a name and concentration. Also, when they started, they had to face less competition.

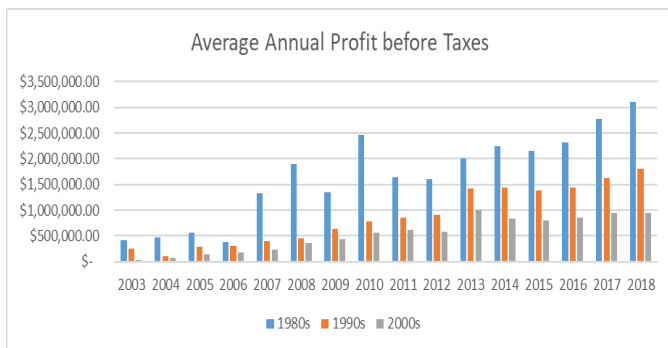


Figure 15: Annual Profit before Taxes of Companies Categorized into Decades

It is to be noted that in 2005 the growth for APBT for the companies formed in 2000s have been considerably higher than the growth rate for the companies formed in the 1980s and 1990s. However, in 2007 the growth rate for the companies formed in the 1980s was higher compared to the growth rates of the companies formed in the 1990s and 2000s. The deviation, however, is reducing. As we can see that in recent years the growth rates of APBT for the companies formed in the 80s, 90s and 2000s have been almost similar.

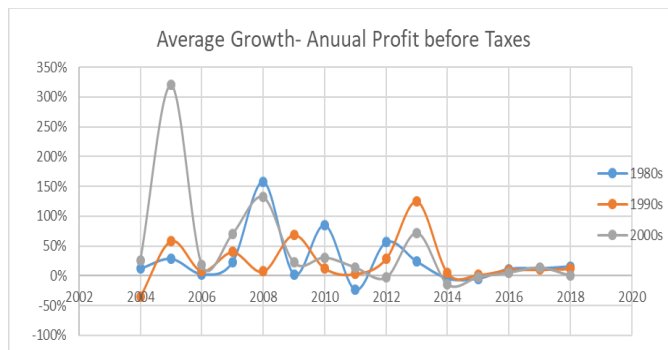


Figure 16: Growth Rate of Annual Profit before Taxes of Companies Categorized into Decades

The regression analysis shows the trend of the APBT of the studied companies (Table 5). As noted, all the regression models are found to be significant (Sig F<0.05). For private insurance companies studied, all except People’s have high R². Overall, we find a significant relationship between time and the APBT worth for the private companies (Sig F<0.05, R² = 93%), and for the industry (Sig F<0.05, R² = 84%).

Table 5: Regression of Annual Profit before Taxes

Serial No	Company Name	Regression Equation	R ²	Sig F
1	AGRANI	Y=0.0589X + 0.0412	78%	6.59337E-06
2	BGIC	Y=0.061X + 0.372	45%	0.004671888
3	BANGLADESH NATIONAL	Y=0.077X - 0.263	78%	6.18737E-06
4	CONTINENTAL	Y=0.074288X - 0.059	92%	4.82526E-09
5	GREEN DELTA	Y= .219X + 0.926	41%	0.007220019
6	NITOL	Y=0.099 X - 0.1069	74%	1.99537E-05
7	MERCANTILE	Y=0.0626X + 0.065	76%	1.12571E-05
8	PEOPLES	Y=0.1039X - 0.0073	26%	0.045212505
9	PHOENIX	Y=0.113X + 0.1476	82%	1.55572E-06
10	PIONEER	Y=0.262 X - 0.2266	93%	1.41941E-09
11	PRAGATI	Y=0.083X + 1.002	43%	0.005870311
12	PRIME	Y=0.075X + 0.0473	73%	2.64696E-05
13	RELIANCE	Y=0.456X - 1.03	85%	4.72171E-07
14	REPUBLIC	Y=0.0705X - 0.114	86%	2.70106E-07

15	SONAR BANGLA	$Y=0.0705X - 0.0605$	94%	5.50017E-10
16	TAKAFUL ISLAMI	$Y=0.0666X - 0.022078$	81%	1.73667E-06
17	UNITED	$Y=0.122X + 0.430$	27%	0.040610663
18	AVG PRIVATE	$Y=0.122044X + 0.067$	93%	1.55529E-09
19	SBC	$Y=1.27X + 2.58$	47%	0.003369359
20	INDUSTRY AVG	$Y=0.186X + 0.207066$	84%	7.32618E-07

3.4.2 Profitability: Return on Total Assets

Return on Total Assets (ROTA) is a ratio that measures a company’s earnings against its total net assets. ROTA is considered an indicator of how effectively a company is using its assets to generate earnings before contractual obligations are met. The greater a company’s earnings in proportion to its assets, the more effectively that company is said to be using its assets. For the studied 18 insurance companies ROTA has been calculated using Annual Profits before Taxes (APBT) and the Total Assets (Appendix 8). ROTA for almost all the companies was consistent throughout the years. The industry average showed that the private companies had an average ROTA of 7.7% (deviation 19%), whereas the SBC’s ROTA is 8.1% (deviation 20%). The CAGR of private insurance companies is comparatively lower (0.4%) than the SBC (1.4%). The highest period is 2003-2018 with a highest value of 10.75% in 2010. The industry average was lowest in 2004 with a ROTA of 4.9%.

When the average of the private industries and SBC is compared (Figure 17), the average of the private industries showed much more fluctuation than SBC. In 2007, the average of private industries has a huge growth of 63%, which was largely due to the unnatural increase in ROTA of Peoples due to huge increase in APBT. But SBC has similar growth to other years. In 2006-2007, although SBC earned a consistent ROTA, the private industries went through a huge increase. From 2012 those two again started to show similar trends. While in 2011, the private companies on average experienced the highest negative growth (-25%), SBC had the lowest growth rate (-32%) in 2012.

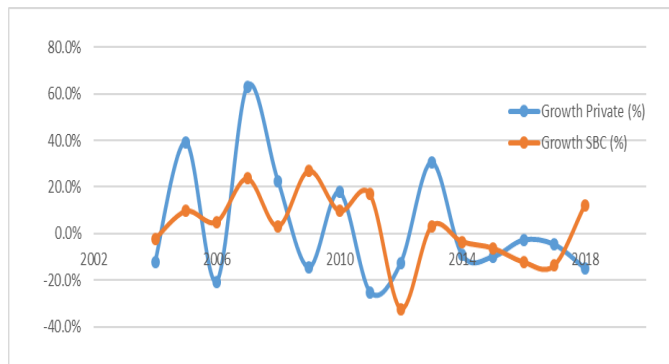


Figure 17: The Average Annual Growth of Return on Assets (Private Insurance Companies and SBC)

The decadal analysis of ROTA of the insurance companies are shown in Figure 18 and Figure 19. Year of establishment of the companies do not show a clear trend for ROTA. In different years different decadal companies have different ROTA. In 2005 and 2010, the averages of ROTA for all the companies are almost same. In recent years (2011 onward) the newly established companies (2000s) showed better ROTA followed by 1990s and 1980s companies. Growth wise all the companies showed major fluctuations in early years (2004-2010), but then onward the rate of fluctuation was quite low.

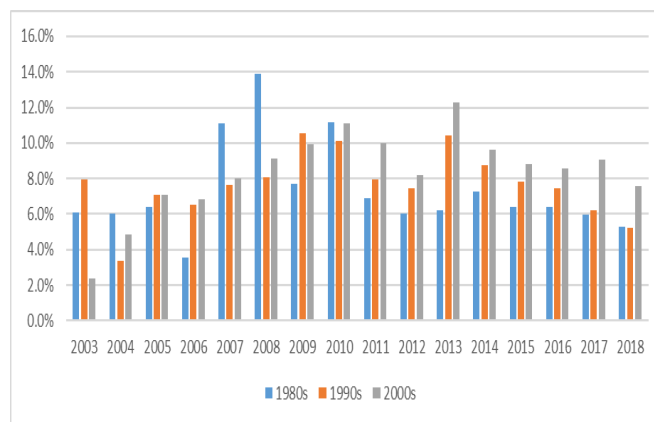


Figure 18: Return on Total Assets of Companies Categorized into Decades

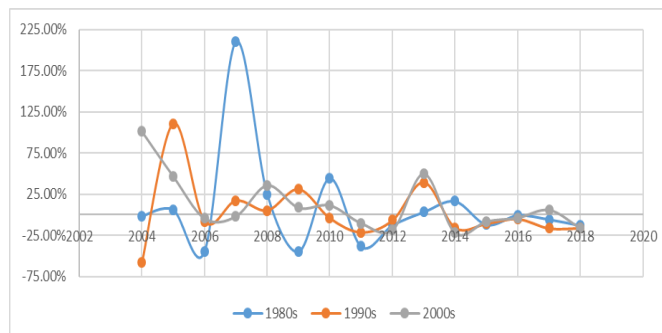


Figure 19: Growth Rate of Return on Total Assets of Companies Categorized into Decades

The regression analysis (Table 6) shows the trend of the ROTA of different companies and the industry. Overall, we find that models predicting ROTA for the companies are not found to be significant except few (Sig F>0.05). The same is true for private insurance industry and SBC. Overall, we find there is no significant relationship between time and the ROTA for the insurance industry (Sig F>0.05).

Table 6: Regression of Return on Total Assets

Serial Number	Company Name	Regression Equation	R ²	Sig F
1	Agrani	$Y=-.002X-0.068$	12%	0.163633
2	BGIC	$Y=-0.000078X+0.07$	96%	0.000245
3	Bangladesh National	$Y=0.0037X+0.0246$	1%	0.45301
4	Continental	$Y=0.0038X+0.0439$	10%	0.212469

5	Green Delta	$Y=-0.0021X+0.076$	34%	0.076608
6	Nitol	$Y=-0.0011X+0.0107$	54%	0.032291
7	Mercantile	$Y=0.0013X+0.056$	14%	0.183837
8	Peoples	$Y=0.00287X+0.032$	51%	0.031012
9	Phoenix	$Y=0.0002X+0.086$	89%	0.00187
10	Pioneer	$Y=0.0016X+0.097$	24%	0.112255
11	Pragati	$Y = 0.079 + 0.0033 X$	0%	0.549538
12	Prime	$Y=0.0061X+.0061$	5%	0.316685
13	Reliance	$Y=-0.0005X+0.066$	50%	0.033219
14	Republic	$Y=0.003X+0.048$	6%	0.282252
15	Sonar Bangla	$Y=-.001X+0.077$	32%	0.083677
16	Takaful	$Y=0.0066X+0.031$	6%	0.262895
17	United	$Y=-.0001X+.139$	99%	1.95E-05
18	Average (Private)	$Y=.0017X+0.066$	17%	0.151996
19	SBC	$Y=0.0025X+0.063$	7%	0.247654
20	Industry Average	$Y=0.0018X+0.065$	15%	0.164298

15) Sonar Bangla	0.971
16) Takaful Islami	0.139
17) United	0.254
Average of the Private	0.967
18) SBC	0.901
Average of the Industry	0.963

3.5 Relationship between Net Premium and Net Claims

Correlation analysis is conducted to find out if there are in relation between the net premium and net claim. The analysis was conducted for the private insurance companies, SBC and also for the average of the private insurance companies and the average of the industry. If the correlation is from ± 0.8 to ± 1 , it is considered very strong; if it is from ± 0.6 to ± 0.8 , it is considered strong; if it is from ± 0.4 to ± 0.6 , it is considered moderate; if it is from ± 0.2 to ± 0.4 it is considered low and if it is from 0 to ± 0.2 , there is no correlation. If there is a strong correlation between net claim and net premium, it can be said that the company has a good risk management and they give more claims as they earn more premium.

Table 7: Pearson Correlation between Net Premium & Net Claims

1) Agrani	0.837
2) BGIC	0.713
3) Bangladesh National	0.921
4) Continental	0.798
5) Green Delta	0.889
6) Nitol	0.926
7) Mercantile	0.880
8) Peoples	-0.394
9) Phoenix	0.626
10) Pioneer	0.982
11) Pragati	0.634
12) Prime	-0.443
13) Reliance	0.984
14) Republic	0.930

The data in table 7 shows that more than majority of the sample companies has significant strong positive correlation between net claim and net premium. This means most companies choose to give more claims as they earn more premium. Only two companies have weak positive correlation. So, they have no correlation between their net premium and net claims. Two companies have moderate negative correlation between net premium and net claims. It means that their net premium decreases as their net claims increases. The average of the private insurance has a very strong correlation (0.967). So, on average private insurance companies choose to give more claims as their net premium increases or they incur more premium income as they give more claims. SBC also has a very strong correlation of 0.901. Also, the whole industry also a very strong correlation (0.963).

Previous studies, conducted for the years 1991-2008, claimed that the private insurance companies have low correlation between their net premium and net claims, with the exception of SBC (which has shown a strong correlation) (Mamun 2011). For this study conducted for the years 2003-2020, it can be inferred that the correlation between net premium and net claim for the private insurance companies increased as years passed by, but SBC’s relation between net claim and net premium did not change. So recently the insurance companies have better risk management and they tend to give more claims as their net premium increases.

3.6 Relationship between Annual Profit before Taxes (APBT) and Share Price

Correlation analysis was conducted to find the relation between the studied companies share price and its annual profit before tax. The following table (Table 8) shows the correlation between annual profit before taxes of the private insurance companies and share prices. As noted, no significant relationship is observed in this regard. Only three companies (18.75%) out of 16 companies depicted a moderate correlation (+0.45 to -0.51). Also 46% of the companies depict a positive correlation between profit and share price; whereas, 56% of the companies depict a negative correlation between profit and share price. This indicates that share market reacts erratically with their profit earned before taxes.

Table 8: Pearson Correlation (R) between APBT & Share Price

Company Name	R	Company Name	R
1) Agrani	-0.091	2) Pioneer	-0.198
3) BGIC	0.167	4) Pragati	0.052
5) Continental	-0.261	6) Prime	0.455
7) Green Delta	-0.011	8) Reliance	-0.019
9) Nitol	-0.010	10) Republic	-0.511
11) Mercantile	-0.169	12) Sonar Bangla	0.073
13) Peoples	-0.054	14) Takaful Islami	0.282
15) Phoenix	0.020	16) United	0.466
Industry average (Private)		0.012	

3.7 Financial Performance at a Glance

The analysis of the six parameters considered determines among the 18 companies which one is performing better than the others. The following table 9 summarizes the performance analysis over the period of 2006-2020. SBC has shown a better and bigger performance in all the parameters in comparison to private insurance company average. They have the much higher value in net premium, investment, investment income, net claims and annual profit before tax. These phenomena occurred due to its large volume and regulatory advantages. But growth wise private sector has a little upper hand when compared with SBC. Deviation in each of the parameters of both the private sector and SBC is very high. This indicates that the whole industry has erratic trend and performance and could not stabilize yet.

Table 9: Financial Performance at a Glance

Parameters	Company	Net Premium	Investment	Investment Income	Net Claims	APBT	ROTA
Industry average	Private	3,536,799	3,884,971	792,020	801,749	1,104,463	7.7%
	SBC	44,874,143	28,514,968	6,000,130	17,766,094	13,415,778	8.1%
Deviation	Private	46%	60%	44%	53%	45%	19%
	SBC	41%	50%	88%	34%	58%	20%
CAGR	Private	12%	18%	10%	14%	14%	0.4%
	SBC	11%	11%	12%	11%	13%	1.4%
Company	Correlation between Net Premium & Net Claims			Correlation between APBT & Share Price			
Private (Average)	0.967			0.012			
SBC	0.900			-			
Industry	0.963			0.012			

IV. SUMMARY, CONCLUSION, & RECOMMENDATION

Bangladesh economy is growing steadily. It holds huge risk in every sector due to the country's proneness to natural disasters like flood, cyclone, draught, and riverbank erosion, etc. There are also other factors like political disturbances, inflation, interest rate, tax policy, deregulation, etc., that deepen the risks for the economy. However, the overall size and growth in the general insurance sector is handling the risks of the companies. This study tried to evaluate the financial performance of the general insurance industry over the period 2003-2020. A sample of 18 insurance companies (17 private and only one public – Sadharan Bima Corporation, SBC) out of 46 companies is evaluated based on net premium, net claim, investment, investment income, annual profit before tax, and return on total assets.

Net premium is the main source of cash inflow for insurance companies. Net premium of all the private insurance companies have increased from 2003 to 2020. SBC is way ahead in this regard compared to private companies, because of its certain privileges being the public company; but growth wise their performance is almost same (11% versus 12%). Also, the deviation of both the sector is very high (41% versus 46%) indicating their premium earnings are erratic. Net claim is the main cash outflow for insurance companies. The net claims of most private insurance companies have increased significantly. The increase of course had some fluctuations but the overall trend was a rise in net claim. The regression analysis of the private sector ($R^2_{\text{adjusted}} 0.94$, F-significance < 5%), as well as, SBC ($R^2_{\text{adjusted}} 0.75$, F-significance < 5%) shows a valid model and steady growth of the insurance companies. For the whole industry, the R^2 is 0.93 with an F-significance value of less than 5%.

Insurance companies are also involved in investments to increase their earnings. The CAGR of the private companies is found to be 18%. This is higher than the SBC's CAGR of 11%, meaning that the private company investment grew more than SBC. The income from investment for the private insurance companies is not very steady. It has fluctuated considerably in the observed period with occasional ups and downs. SBC's CGAR is at 12% which is better compared to many private companies' average. Annual Profit before tax (APBT), a profitability measure that looks at a company's profits before the company has to pay corporate income tax, of the industry has seen a positive trend. The CAGR of the average of the private companies as a whole performed slightly better (14%) compared to that of SBC (13%). On a whole, the CAGR of ROTA of the private company is lower (0.4%) than that of SBC (1.4%). Private companies' growth rate of ROTA has extreme values compared to SBC.

In conclusion we can see some positive trend in the insurance industry of Bangladesh with overall growth in all the financial parameters (i.e., net premium, net claim, investment and investment income, ROTA and APBT). Although there is a

positive industry growth trend, a lot of fluctuations in the parameters can be seen in different years for individual companies. It has been observed that the older companies are doing better on an average than the recently established ones. Although, SBC is doing better due to its certain advantages over the private companies; it is however, facing increasing competition from private companies. The insurance companies still have a lot of opportunities. The very high deviation in all the parameters studied indicates that the industry, as a whole, is still in a premature state and there are still a lot of room for improvement.

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