CUSTODIAN AND ALLIED INSURANCE LIMITED

FINANCIAL CONDITION REPORT FOR NON-LIFE BUSINESS AS AT 31ST DECEMBER 2022

EXECUTIVE SUMMARY

This report provides an overview of the Financial Condition of the Company. We also understand that this report will form part of the Company's submission to NAICOM. The report has been prepared in accordance with the General Insurance Business Actuarial Reports Guidance Notes (GN12v5.0) published by the Institute and Faculty of Actuaries.

The following are the key conclusions of the report.

- Overall, this report demonstrates that the Company remains adequately capitalized with a strong and conservative investment portfolio to support current and projected liabilities while maintaining compliance with regulatory requirements.
- As at 31st December 2022, the business had a Net Book Asset Value of N25.14 billion or 838% of the statutory minimum capital of N3billion. Hence the business is well capitalized from the current regulatory point of view.
- We estimate the economic/risk-based capital required to support the business at 31st December 2022 as N4.94 billion, a coverage of 509% of the shareholder's Funds of N25.14billion. The company thus holds a cushion above its economic capital which enhances its ability to meet its obligations to policyholders in adverse scenarios.
- We noted that the proportion of GWP brought in by the Broker channel is 83%. We advise that the company explores other distributions channels such as digitization and bancassurance to write its business to widen its reach and increase its penetration in the market.
- The highest contributor to total GWP remains Oil & Energy line of business which contributed approximately 48% to premiums. We recommend that the company continues to monitor the portfolio to avoid any event of concentration risk in Oil & Energy.
- We note that there is an increasing trend in the reinsurance value for money for Custodian being experienced in the years under review. We encourage the company to maintain a continuous reinsurance arrangement through a reinsurance optimisation exercise.
- The level of excess capital both on a statutory basis and economic capital basis shows that the company has capacity to write more business and take more risk in search for enhanced return. This can also be achieved by investing in higher-yielding assets to ensure a higher return for investors' capital.

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The Board of Directors
Custodian and Allied Insurance Ltd
16A, Commercial Avenue,
Sabo, Yaba,
Lagos.

April 2023

FINANCIAL CONDITION REPORT FOR NON-LIFE BUSINESS AS AT 31ST DECEMBER 2022

Dear Sir,

Introduction, Purpose and Limitations

1.1 We are pleased to present our Financial Condition Report ("FCR") for Custodian and Allied Insurance Limited ('the Company") as at 31st December 2022.

Purpose:

1.2 This report sets out the outcome of our assessment of the criteria stipulated in the Guidance note (GN12v5.0), issued by the Institute and Faculty of Actuaries, to the extent relevant to Custodian Insurance Company Limited for the year ended 31st December 2022.

1.3 This report is prepared solely for the purpose of providing an overview of the current financial condition of the Company. We understand that this report will form part of your submission to NAICOM. This report is not to be used for any other purpose other than that described above and should not be distributed to any other parties other than NAICOM.

Limitations:

1.4 Management is solely responsible for the contents and submission of the Financial Conditions Report in accordance with Guidance Note GN12V5.0

1.5 Because our assessment does not constitute either an audit or a review made in accordance with International Standards on Auditing or International Standards on Review Engagements (or relevant national standards or practices), we do not express any assurance on the financial statements, the financial conditions or the ability of the entity to continue as a going concern for the foreseeable future.

1.6 Had we performed additional procedures, or had we performed an audit or review of the financial statements in accordance with International Standards on Auditing or International Standards on Review Engagements (or relevant national standards or practices), other matters might have come to our attention that would have been reported to you.

1.7 Our report has been prepared based on certain assumptions and is subject to certain limitations. These have been described in Appendix 1 - Reliance and Limitations.

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2. Developments in the Business

2.1 We illustrate in the table below how Custodian's books have developed over the year 2021 to 2022.

	2021 N' 000	2022 N' 000	YoY Movement
Gross Written Premiums	34,437,524	37,982,979	10%
Gross Premium Income	33,755,181	36,529,918	8%
Reinsurance Expenses	23,328,861	25,499,140	9%
Net Premium Income	10,426,320	11,030,778	6%
Fees & Commission Income	1,610,328	1,681,774	4%
Net Underwriting Income	12,036,648	12,712,552	6%
Profit before Tax	5,022,684	6,121,164	22%
Income Tax	580,679	884,612	52%
Profit after Tax	4,442,005	5,236,552	18%

We note that Gross Written Premium increased by 10% from 2021 to 2022 with 8% percentage movement in the earned premiums.

Reinsurance Expenses have increased by 9% resulting in an increase in Net premium by 6% % as well.

There was an upward movement in fees and commission income by 4% and an increase in the Net underwriting income by 6%.

There was a significant increase in profit after tax by 18% because of an increase in profit before tax by 22% and a significant increase in income tax by 52%.

3. Business Overview

3.1 Premium History

Gross Written Premium (GWP) has increased with an average of 9.7% over the years under review.

Line of Business	2020		2021		2022	
	₦' 000	%	₦' 000	%	₦' 000	%
Motor	3,272,946	10.4%	3,538,297	10.3%	4,219,991	11.1%
Accident	2,120,555	6.7%	2,373,088	6.9%	3,971,721	10.5%
Bond	7,106	0.0%	20,019	0.1%	32,310	0.1%
Marine	1,188,049	3.8%	1,415,811	4.1%	1,265,018	3.3%
Aviation	154,643	0.5%	268,457	0.8%	186,086	0.5%
Fire	6,201,612	19.6%	8,150,471	23.7%	9,527,626	25.1%
Engineering	386,797	1.2%	563,994	1.6%	707,840	1.9%
Oil & Energy	18,256,221	57.8%	18,107,387	52.6%	18,072,387	47.6%
Total	31,587,929	100.0%	34,437,524	100.0%	37,982,979	100.0%
% Increase (YoY)			9.0%		10.3%	

Line of Business	2021 ₦' 000	2022 N' 000	YoY Movement
Motor	3,538,297	4,219,991	19%
Accident	2,373,088	3,971,721	67%
Bond	20,019	32,310	61%
Marine	1,415,811	1,265,018	-11%
Aviation	268,457	186,086	-31%
Fire	8,150,471	9,527,626	17%
Engineering	563,994	707,840	26%
Oil & Energy	18,107,387	18,072,387	0%
Total	34,437,524	37,982,979	10%

3.1.1 The GWP increased for all the lines of business from 2021 to 2022 except for Marine and Aviation leading to a total increase of 10% between the years.

The main drivers of growth are the Motor and Fire classes of business.

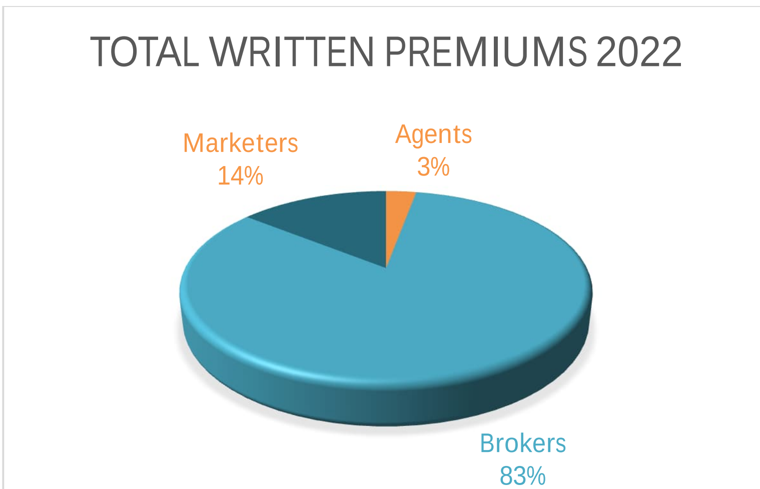
3.1.2 The Oil & Energy line of business has consistently contributed the highest to the GWP in the years under review.

3.1.3 We note that there is an impeding concentration risk in the Oil & Energy line of business. We recommend that Custodian writes more businesses in the other lines to help further diversify its portfolio to avoid an impending concentration risk in Motor line of business.

3.2 Distribution Channel

The chart below indicates three channels through which gross written premiums are channeled in.

Experience data shows that a significant proportion of business written by Custodian came through Brokers which contributed 83% of the total Gross Written Premiums, Agents contributed 3% and Marketers brought in 14% of the total GWP.



3.3 Financial Performance

3.3.1 We illustrate below that the company's return on equity as published in the Annual Financial Statements has been consistently higher than the risk-free rate over the 3 years under review.

Year	Shareholders Fund ₦'000	Return on Equity (as published in the Accounts) %	Risk Free Rate %
2020	20,534,906	18%	13%
2021	22,431,921	20%	12%
2022	25,136,383	21%	14%

4. Pricing & Premium Adequacy

We illustrate in the table below how premium income has been utilised from 2020 to 2022.

	2020 N’000	2021 N’000	2022 N’000
Net Premium Income (NPI)	9,214,365	10,426,320	11,030,778
Net Written Premium	9,849,030	10,467,012	11,632,663
Net Claims Incurred	4,081,700	4,672,797	4,530,596
Management Expenses	3,025,780	4,011,947	4,123,207
Acquisition Expense	1,066,666	1,332,671	1,684,453
Investment Income	3,215,234	4,613,776	5,428,642
Claims Ratio	44%	45%	41%
Management Expense Ratio	31%	38%	35%
Acquisition Expense Ratio	11%	13%	14%
Combined Ratio	86%	96%	91%
Investment Income (% NPI)	33%	44%	47%

We illustrate in the table above that claims ratio decreased from 45% (2021) to 41% (2022). Management expense ratio on the other hand decreased from 38% (2021) to 35% (2022) while Acquisition expense slightly increased from 13% (2021) to 14% (2022).

The combined ratio decreased from 96% (2021) to 91% in 2022.

Based on the above analysis over a 3-year period, it is noted that Custodian has managed to achieve combined ratios below 100% in the last 3 years which demonstrates pricing adequacy.

The investment income as a percentage of Net Premium Income increased to 47% (2022) from 44% (2021).

Metric	Definition
Claims Ratio	Net Claims Expenses/ Net Premium Income
Management Expense Ratio	Management Expenses / Net Written Premium
Acquisition Expense Ratio	Acquisition Expenses / Net Written Premium
Combined Ratio	Sum of Claims and Expense Ratio
Investment Income (%NPI)	Investment Income / Net Written Premium

5. Assets, Liabilities Management

5.1 Insurance Liability

We illustrate in the tables below the Gross Reserves of N14.97 billion, Reinsurance Assets of N8.17 billion giving a Net Reserve of N6.81 billion.

Reserves	Gross Reserve (₦'000)	Reinsurance Assets (₦'000)	Net Reserve (₦'000)
Claims	5,846,825	(2,403,631)	3,443,194
UPR	9,132,047	(5,765,321)	3,366,725
Total	14,978,872	(8,168,953)	6,809,919

The net reserves increased from N5.51bn (2021) to 6.81bn (2022) mainly as a result of the 8% increase in gross earned premiums.

5.2 Insurance Assets

We illustrate below that the company holds short-term assets i.e. Cash and Cash equivalents with leading banks and financial institutions to back its insurance fund. Custodian also majorly has reinsurance assets from which are expected payments from leading reinsurers in respect of the technical reserves stated in section 3.1.

Assets	Insurance Funds			
	2021 (₦'000)	%	2022 (₦'000)	%
Cash and cash equivalents	627,851	4%	908,119	6%
Financial Assets	5,368,434	36%	5,314,460	33%
Investment Properties	1,513,600	10%	1,513,600	10%
Reinsurance Assets	7,350,889	49%	8,168,953	51%
Total	14,860,774	100%	15,905,132	100%

Whilst we have not carried out a risk analysis, this investment strategy ensures liquidity and meets the liability profile.

The liquid nature of the asset portfolio matches well to the short-term nature of the business' technical liabilities. We are thus of the view that this asset mix ensures that liabilities will be met as they arise.

6. Capital Management & Adequacy

6.1.1 Balance Sheet Solvency

We illustrate in the table below that from 2020 to 2022, the company has a more than sufficient balance sheet solvency ratio.

Year	2020 (N'000)	2021 (N'000)	2022 (N'000)
Technical Liabilities (Net of Reinsurance)	5,150,773	5,810,094	6,809,920
Shareholders Fund (Free Assets)	20,534,906	22,431,921	25,136,383
Balance Sheet Solvency Ratio	399%	386%	369%

The solvency ratios gives comfort that liability obligations will be met when they fall due. We highlight the regulatory solvency position below and discuss risk-based solvency in section 8.

6.1.2 Regulatory Solvency

We show in the table below that the company's admissible assets exceeded the regulatory capital requirement of N3bn throughout the 3 years under review.

Year	2020 (₦'000)	2021 (₦'000)	2022 (₦'000)
Technical Liabilities (Net of Reinsurance)	5,150,773	5,810,094	6,809,920
Free Assets (allowing for admissible rules)	18,946,264	20,251,636	22,895,078
Minimum Capital Requirement	3,000,000	3,000,000	3,000,000
Capital Adequacy Ratio (CAR)	632%	675%	763%
Regulatory Solvency Ratio	368%	349%	336%

The below table demonstrates how the Capital Adequacy Ratio and Regulatory Solvency ratio would be materially impacted should claim ratio increase by 20%.

Year	2022 - Stressed (₦'000)	2022 (₦'000)
Technical Liabilities (Net of Reinsurance)	7,979,285	6,809,920
Free Assets (allowing for admissible rules)	21,725,713	22,895,078
Minimum Capital Requirement	3,000,000	3,000,000
Capital Adequacy Ratio (CAR)	724%	763%
Regulatory Solvency Ratio	272%	336%

While the regulatory solvency ratio falls to 272%, the Company would still meet its minimum capital requirement in the event of this extreme scenario.

DEFINITIONS

Metric	Definition
Capital Adequacy Ratio (CAR)	Free Assets/Minimum Capital Requirement
Balance Sheet Solvency Ratio	Shareholders' Funds/Technical Reserves
*Regulatory Solvency Ratio	Free Assets/Technical Reserves

Free assets include allowance for admissibility rules

6.1 Stress Scenario for 2022 Results

6.1.1 The below table demonstrates that the solvency margin would be materially impacted should the net claim ratio increase by 5%, 10% and 20% respectively.

Year	2022 – Stressed (₦'000)	2022 (₦'000)
Technical Liabilities (Net of Reinsurance)	7,102,261	6,809,920
Shareholders Fund (Free Assets)	24,844,042	25,136,383
Balance Sheet Solvency Ratio	350%	369%

Year	2022 – Stressed (₦'000)	2022 (₦'000)
Technical Liabilities (Net of Reinsurance)	7,686,943	6,809,920
Shareholders Fund (Free Assets)	24,259,360	25,136,383
Balance Sheet Solvency Ratio	316%	369%

Year	2022 – Stressed (₦'000)	2022 (₦'000)
Technical Liabilities (Net of Reinsurance)	8,856,308	6,809,920
Shareholders Fund (Free Assets)	23,089,995	25,136,383
Balance Sheet Solvency Ratio	261%	369%

The above stress tests shows that the Company's Balance Sheet Solvency ratio would still be above 260% even at a 20% net increase in loss ratio across the whole account, which is considered an extreme scenario. This shows the resilience of the Company's Balance Sheet to short-term shocks, demonstrating a strong financial condition.

6.2 Economic Capital

6.2.1 The technical figures (technical liabilities, reinsurance assets, etc.) estimated for balance sheet purposes are our ‘best’ estimate and broadly reflect the ‘mean’ of possible outcomes. However, in the course of time these estimates may fluctuate adversely as a result of unexpected realities.

6.2.2 It is prudent and best practice to estimate the extent to which the best estimate can be exceeded due to possible adverse situations and establish the corresponding risk capital, called economic capital. This is the amount of capital that a financial company requires to stay solvent given the riskiness of its assets and operations.

6.2.3 The key risks the company is exposed to are underwriting risk, market risk, counterparty risk and operational risk, they are described and discussed in appendix 6 of the report.

6.2.4 We have calculated for each of the risks, the amount of capital required as at year end 2022 at 95%, 99% and 99.5% level of confidence.

6.2.5 This report discusses in detail capital requirements at 99.5%, which is equivalent to a 1-in-200 event. Put differently, this is the capital required to sustain the company should extreme events that are expected to occur once every 200 years, occur in 2022. Such events would typically lead to large ‘unexpected’ losses that could significantly affect the fortunes of the company. The results at 95% (1 in a 20year event) and 99% (1 in a 100year event) are shown in appendix 5 and 6 of the report.

6.2.6 We have adopted the following methods in calculating the Economic capital:

- Value at Risk → this was applied to Market risk and Credit risk
- Stochastic approach using Bootstrapping → this was applied to non-Life reserving and premium risks.
- Solvency II standard formula approach was adopted for operational risk

Detailed explanation of each of the risks including derivation of the stresses applied are given in appendix 6 of the report.

6.2.7 In order to recognize that each individual risk event is unlikely to occur in the same year, aggregation of capital requirements was done. This has the effect of reducing the total required capital – technically called a diversification. The assumed correlation matrix is shown in appendix 7.

6.2.8 The calculations were based on same data used to prepare the IFRS valuation as at 31 December 2022 and asset information shown in section 2.3 of this report.

6.2.9 The following results at 99.5% confidence level were obtained.

Risk Type		Capital Requirement (N)
Non-Life Insurance Risk	Reserve Risk	1,960,454,469
	Premium Risk	2,734,557,186
	Catastrophe Risk	599,791,073
	Lapse Risk	-
	SCR_{nl} Pre-Div	5,294,802,728
	SCR_{nl} Div Credit	1,635,082,122
	SCR_{nl} Post Div	3,659,720,606
Market Risk	Interest Rate Risk	261,050,070
	Equity Risk	36,477,706
	Property Risk	338,743,680
	Spread Risk	-
	Currency Risk	-
	Concentration Risk	-
	SCR_{mkt} Pre-Div	636,271,456
	SCR_{mkt} Div Credit	99,284,577
	SCR_{mkt} Post Div	536,986,879
Counterparty Default Risk	Reinsurance credit	6,698,542
	Investment credit & Debtors	24,950,230
	SCR_{def} Pre-Div	31,648,772
	SCR_{def} Div Credit	-
	SCR_{def} Post Div	31,648,772
Undiversified BSCR		4,228,356,256
Diversification Credit		382,599,427
Basic SCR		3,845,756,829
Operational Risk		1,095,897,540
Final Economic capital		4,941,654,369
Shareholders' Funds		25,136,383,000
% of Economic Capital		509%

6.2.10 As shown in the table above, the total Economic Capital required in connection with the business profile at 31st December 2022 was N4.94billion which is less than the shareholders' funds of N25.14billion.

6.2.11 This implies Custodian has capital excess which provides the management with capital flexibility to conduct its business plan over the forward-looking period considering inherent material risks (such as catastrophes) and in anticipation of continued difficult operating conditions in insurance, credit and financial markets.

7. Reinsurance Management Strategy

7.1 The Company's reinsurance arrangements are summarized in section 7.2.

For each line of business, we illustrate the 'value for money' being the ratio of total reinsurance inflow (i.e., commission income, reinsurance recoveries) to total reinsurance outflow/cost.

2020 Accident Year

N'000

Class of Business	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total
Outflow									
Reinsurance Cost	146,931	732,737	1,073	323,277	49,235	4,170,326	285,688	15,509,494	**21,218,761**
Inflow									
Reinsurance Commission	18,438	109,332	419	61,748	9,855	402,813	86,019	961,581	**1,650,205**
Reinsurance Share of Claims Outstanding	29,315	43,129	-	130,484	-	130,484	71,392	211,622	**616,426**
Reinsurance IBNR	10,206	6,948	188	43,072	-	425,864	51,299	465,229	**1,002,806**
Reinsurance Recoveries Paid	59,706	34,705	239	121,064	-	667,476	129,489	772,578	**1,785,257**
Total Reinsurance Recoveries	**99,227**	**84,782**	**427**	**294,620**	**-**	**1,223,824**	**252,180**	**1,449,429**	**3,404,489**
Total Inflow	**117,665**	**194,114**	**846**	**356,368**	**9,855**	**1,626,637**	**338,199**	**2,411,010**	**5,054,694**
Value for Money Ratio	**80%**	**26%**	**79%**	**110%**	**20%**	**39%**	**118%**	**16%**	**24%**
Gross Claims Ratio	**42%**	**33%**	**13%**	**27%**	**1%**	**32%**	**11%**	**9%**	**19%**
Reinsurance Recovery Ratio	**44%**	**4%**	**17%**	**28%**	**0%**	**15%**	**57%**	**5%**	**8%**

2021 Accident Year

₦'000

Class of Business	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total
Outflow									
Reinsurance Cost	87,025	1,058,370	2,708	527,656	33,250	6,047,414	356,044	15,858,044	**23,970,512**
Inflow									
Reinsurance Commission	9,524	115,469	641	99,679	-	473,918	93,739	817,358	**1,610,328**
Reinsurance Share of Claims Outstanding	15,000	26,952	-	80,493	-	1,045,910	56,583	143,754	**1,368,692**
Reinsurance IBNR	38,676	12,501	191	75,484	-	509,524	85,680	345,999	**1,068,055**
Reinsurance Recoveries	97,701	27,303	38	155,910	-	1,129,840	63,775	117,040	**1,591,607**
Total Reinsurance Recoveries	**151,377**	**66,757**	**229**	**311,886**	**-**	**2,685,273**	**206,038**	**606,793**	**4,028,354**
Total Inflow	**160,901**	**182,226**	**870**	**411,565**	**-**	**3,159,191**	**299,777**	**1,424,151**	**5,638,682**
Value for Money Ratio	**185%**	**17%**	**32%**	**78%**	**0%**	**52%**	**84%**	**9%**	**24%**
Gross Claims Ratio	**48%**	**29%**	**3%**	**19%**	**-2%**	**41%**	**23%**	**3%**	**19%**
Reinsurance Recovery Ratio	**112%**	**3%**	**1%**	**30%**	**0%**	**19%**	**18%**	**1%**	**7%**

2022 Accident Year

₦' 000

Class of Business	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total
Outflow									
Reinsurance Cost	114,056	2,144,411	3,098	467,704	12,885	6,687,448	347,820	15,721,718	**25,499,140**
Inflow									
Reinsurance Commission	11,915	201,706	818	89,911	2,222	662,704	75,146	638,988	**1,683,410**
Reinsurance Share of Claims Outstanding	443,528	700,260	107	222,404	11,140	1,149,409	133,648	348,080	**3,008,576**
Reinsurance IBNR	21,530	21,001	194	81,472	-	531,216	82,537	452,973	**1,190,923**
Reinsurance Recoveries	106,460	152,517	179	88,098	-	1,321,311	267,199	15,051	**1,950,815**
Total Reinsurance Recoveries	**571,518**	**873,778**	**480**	**391,974**	**11,140**	**3,001,936**	**483,384**	**816,104**	**6,150,314**
Total Inflow	**583,433**	**1,075,484**	**1,298**	**481,885**	**13,362**	**3,664,640**	**558,530**	**1,455,092**	**7,833,724**
Value for Money Ratio	**512%**	**50%**	**42%**	**103%**	**104%**	**55%**	**161%**	**9%**	**31%**
Gross Claims Ratio	**57%**	**37%**	**4%**	**27%**	**26%**	**22%**	**54%**	**2%**	**18%**
Reinsurance Recovery Ratio	**62%**	**7%**	**2%**	**20%**	**0%**	**19%**	**60%**	**0%**	**7%**

There was an overall increase in the value for money ratio from 24% (2021) to 31% (2022).

7.1.1 There was a significant increase in the value for money ratio for all lines of business except Oil & Energy which was stable from 2021 and 2022.

7.1.2 The value for money ratios, however, does not take cognizance of other benefits reinsurance provides e.g. granting the company capacity to underwrite bigger risks than it would ordinarily have been able to take on due to its limited capital resources.

7.1.3 The above suggests that the treaty arrangement are optimal. Details of the current reinsurance arrangement are provided in Appendix 3.

7.2 Reinsurance Management

7.2.1 Basis and Methods of Retention Levels

The retention limit and the associated product lines were established in liaison with the reinsurers. In setting these limits, the following were taken into consideration:

- The nature and quality of the business
- Regulations imposed the regulatory body
- Risk appetite of Custodian

While Custodian reinsures five (5) reinsurers, majority of its businesses are with Continental Reinsurance and African Reinsurance which have stable ratings.

Illustrated in the table below is the list of Reinsurers and their ratings:

Reinsurer	Credit Rating
Munich Re	A+
Swiss Reinsurance	AA-
African Re	A
Continental Re	BBB-
FBS Re.	A-

8. Financial Condition as at 31st December 2022

- We have illustrated above that the company has enough funds to meet its insurance contract liabilities under stressed conditions.

- The investment portfolio is highly liquid and broadly matches the profile of the company's liabilities.

- The company has a beneficial reinsurance agreement in place, given the good value for money ratios.

- We are thus of the opinion that the company would be able to meet policyholder obligations if and when they fall due and is able to withstand stressed scenarios as evidenced by the stress tests.

8.1.1 We recommend that the company should:

- Explores other distributions channels such as digitization and bancassurance to write its business to widen its reach and increase its penetration in the market.

- Continue to monitor the portfolio to avoid any event of concentration risk in Oil & Energy line of business.

9. New Business Plans

9.1 Business Plan Production

The table below indicates the year-on-year growth for the various lines of businesses.

Custodian has plans to grow at about 9% and 10% in 2023 and 2024 respectively. We illustrate the forecast in the table below. This seems quite reasonable due to the current economic constraints.

Line of Business	2022	2023		2024	
	₦' 000	₦' 000	YoY Growth	₦' 000	YoY Growth
Motor	4,219,991	5,485,988	30.0%	6,034,587	10.0%
Accident	3,971,721	5,163,236	30.0%	5,679,560	10.0%
Bond	32,310	35,170	8.9%	38,687	10.0%
Marine	1,265,018	1,644,523	30.0%	1,808,975	10.0%
Aviation	186,086	227,661	22.3%	250,427	10.0%
Fire	9,527,626	9,660,625	1.4%	10,626,688	10.0%
Engineering	707,840	803,167	13.5%	883,484	10.0%
Oil & Energy	18,072,387	18,324,921	1.4%	20,157,413	10.0%
Total	37,982,979	41,345,291	8.9%	45,479,821	10.0%

10. Solvency Projections

10.1 The Projection Process

We have projected the income statements for each of the years 2023 and 2024 assuming claim and expense patterns to date continue into the future, and adopting the premiums projected for each of the years.

The exercise led to projected technical liabilities at the end of each year and a corresponding balance sheet. We have assumed that new money accruing into the fund will be invested in money market instruments.

We report our projected solvency ratios herein, we have also stressed these ratios in anticipation of adverse events and commented accordingly.

10.2 Data and Assumptions

10.2.0 The most recent portfolio status and the corresponding valuation dataset formed the base of the projection.

10.2.1 Projections of technical reserves i.e. outstanding claims and unexpired premium reserves are based on the projected sales volume and the historical information at our disposal. The target sales volume information (as detailed in Section 7.1) was provided by the Company.

10.2.2 The unexpired premium reserves were projected for each line of business assuming risk would occur uniformly throughout the year.

10.2.3 The outstanding claims reserves were projected using the projected earned premiums and the projected claims settlement patterns as determined in the most recent valuation exercise.

10.3 Projections results

The following results were obtained.

INCOME STATEMENT	2022 - Actual	2023	2024
Gross Written Premium	37,982,979	41,345,291	45,479,821
Gross Premium Income	36,529,918	39,876,785	44,419,766
Reinsurance Cost	(25,499,140)	(26,386,781)	(28,746,886)
Net Premium Income	11,030,778	13,490,004	15,672,879
Commission income	1,681,774	1,846,507	2,042,127
Net Underwriting income	12,712,552	15,336,511	17,715,006
Gross claims incurred	6,448,295	7,586,447	8,746,775
Claims recoveries	(1,917,699)	(2,371,129)	(2,633,953)
Net claims incurred	4,530,596	5,215,318	6,112,823
Underwriting expenses	3,366,227	4,726,278	5,209,865
Total Underwriting Expenses	7,896,823	9,941,596	11,322,687
Investment income	5,428,642	6,050,155	7,113,019
Management Expenses	(4,123,207)	(4,622,738)	(5,149,386)
Profit before income tax	6,121,164	6,822,333	8,355,952
Income tax expenses	(884,612)	(932,323)	(1,141,904)
Profit for the year	5,236,552	5,890,010	7,214,048

The revenue accounts showing the breakdown of underwriting results by line of business for each year is shown in appendix 3.

ASSETS & LIABILITIES	2022 - Actual	2023	2024
TOTAL ASSETS	53,899,913	62,576,155	71,706,119
Liabilities			
Technical Reserves	14,978,873	17,765,105	19,681,021
Trade payables	9,734,610	9,734,610	9,734,610
Other payables	1,576,551	1,576,551	1,576,551
Total Liabilities	26,729,204	29,515,436	31,431,352
Share capital	10,000,000	10,000,000	10,000,000
Contingency reserves	10,000,000	11,240,359	12,683,168
Other reserves	433,230	433,230	433,230
Retained earnings/accumulated losses	4,618,546	9,268,197	15,039,435
Shareholder's equity	25,136,383	31,026,393	38,240,441
Total liabilities and shareholder's equity	53,899,913	62,576,155	71,706,119

The projected solvency margins are as shown below.

Year	2022 - Actual	2023	2024
Technical Liabilities	12,050,166	14,669,473	16,255,014
Shareholders Fund (Free Assets)	25,136,383	31,026,393	38,240,441
Solvency Margin	209%	212%	235%

11. Conclusion and Recommendations

11.1 Overall, this report demonstrates that the Company remains adequately capitalized with a strong and conservative investment portfolio to support current and projected liabilities while maintaining compliance with regulatory requirements.

11.2 As at 31st December 2022, the business had a Net Book Asset Value of N25.14 billion or 838% of the statutory minimum capital of N3billion. Hence the business is well capitalized from the current regulatory point of view.

11.3 We estimate the economic/risk-based capital required to support the business at 31st December 2022 as N4.94 billion, a coverage of 509% of the shareholder's Funds of N25.14 billion. The company thus holds a cushion above its economic capital which enhances its ability to meet its obligations to policyholders in adverse scenarios.

11.4 We noted that the proportion of GWP brought in by the Broker channel is 83%. We advise that the company explores other distributions channels such as digitization and bancassurance to write its business to widen its reach and increase its penetration in the market.

11.5 The highest contributor to total GWP remains Oil & Energy line of business which contributed approximately 48% to premiums. We recommend that the company continues to monitor the portfolio to avoid any event of concentration risk in Oil and Energy.

11.6 We note that there is an increasing trend in the reinsurance value for money for Custodian being experienced in the years under review. We encourage the company to maintain a continuous reinsurance arrangement through a reinsurance optimisation exercise.

11.7 The level of excess capital both on a statutory basis and economic capital basis shows that the company has capacity to write more business and take more risk in search for enhanced return. This can also be achieved by investing in higher-yielding assets to ensure a higher return for investors' capital.

11.8 We are delighted to have conducted this Financial Conditioning Report for Custodian Insurance. We hope you find this helpful for preparing and submitting a report to NAICOM.

11.9 We will naturally be delighted to discuss it with you and make necessary presentations.

Yours sincerely,

....

Wise Chigudu
Partner
Fellow, Institute of Actuaries, England.
FRC/2022/PRO/NAS/00000024119

APPENDIX 1- RELIANCE & LIMITATIONS

Reliance

In carrying out this work we have relied upon the financial statements, business plans and other information (including discussions with the Management) provided by Custodian and Allied Insurance Limited. The liability information used was the same as that used in the IFRS actuarial valuations. Where stated in this report we have reviewed this data for reasonableness, but we have not verified the accuracy of the information provided to us.

This report takes into account data made available as at 31 December 2022.

In some instances, we were unable to obtain granular information so had to make approximations in certain instances about the composition given knowledge of certain details during the normal end of year valuation process.

Limitations

Our understanding is that this is a Board report that could be used to demonstrate regulatory compliance with NAICOM, when requested.

This report must be contained in its entirety, as individual sections, if considered in isolation, may be misleading.

Except with the consent of EY, the report and any written or oral information or advice provided by EY must not be reproduced, distributed or communicated in whole or in part to any other person or relied upon by any other person other than NAICOM.

The report may be distributed to the Senior Management of Custodian and Allied Insurance Limited for the purpose of discussing its contents.

Actuarial estimates are subject to uncertainty from various sources, including changes in claim reporting patterns, claim settlement patterns, judicial decisions, legislation, and economic conditions. It should therefore be expected that the actual emergence of profits will vary, perhaps materially, from any estimates.

The report is subject to the terms and limitations, including limitation of liability, agreed when commencing this exercise.

APPENDIX 2 – REVENUE ACCOUNTS - BASE SCENARIO

2023 PROJECTIONS ASSUMING FULL BUSINESS PLAN										
	2023									
REVENUE & EXPENSES	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total	2022
INCOME										
Gross Written Premium	5,485,988	5,163,236	35,170	1,644,523	227,661	9,660,625	803,167	18,324,921	41,345,291	37,982,979
Gross Earned Premium	4,990,201	4,850,449	31,858	1,508,455	221,788	9,602,535	709,979	17,961,522	39,876,785	36,529,918
Reinsurance Cost	(264,803)	(2,520,790)	(1,970)	(535,714)	(13,541)	(6,718,748)	(433,251)	(15,897,964)	(26,386,781)	(25,499,140)
Net Premium Income	4,725,398	2,329,659	29,888	972,741	208,247	2,883,786	276,727	2,063,558	13,490,004	11,030,778
Commission income	28,157	264,879	8	100,977	2,335	614,973	95,661	739,518	1,846,507	1,681,774
Net Underwriting income	4,753,555	2,594,538	29,896	1,073,718	210,582	3,498,759	372,389	2,803,075	15,336,511	12,712,552
EXPENSES										
Gross claims incurred	2,486,842	1,170,262	40	235,297	53,386	2,263,369	419,252	957,999	7,586,447	6,448,295
Claims recoveries	(147,907)	(171,452)	(17)	(154,667)	0	(1,283,877)	(265,231)	(347,978)	(2,371,129)	(1,917,699)
Net claims incurred	2,338,935	998,809	23	80,630	53,386	979,491	154,021	610,021	5,215,318	4,530,596
Underwriting expenses										
Commision paid	(579,358)	(872,437)	(5,943)	(277,877)	(38,468)	(1,632,365)	(135,712)	(761,240)	(4,303,399)	(2,947,344)
Maintenance expense	(107,293)	(35,802)	(187)	(39,849)	(523)	(96,410)	(9,983)	(132,832)	(422,879)	(418,883)
Total Underwriting Expenses	(686,650)	(908,239)	(6,130)	(317,726)	(38,991)	(1,728,775)	(145,695)	(894,073)	(4,726,278)	(3,366,227)
Total Expenses	(3,025,586)	(1,907,048)	(6,153)	(398,356)	(92,377)	(2,708,266)	(299,716)	(1,504,094)	(9,941,596)	(7,896,823)
Underwriting profit	1,727,969	687,490	23,743	675,362	118,205	790,493	72,673	1,298,981	5,394,916	4,815,729

2024 PROJECTIONS ASSUMING FULL BUSINESS PLAN										
	2024									
REVENUE & EXPENSES	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total	2023
INCOME										
Gross Written Premium	6,034,587	5,679,560	38,687	1,808,975	250,427	10,626,688	883,484	20,157,413	45,479,821	41,345,291
Gross Earned Premium	5,819,746	5,579,132	37,185	1,783,922	247,211	10,342,978	844,605	19,764,987	44,419,766	39,876,785
Reinsurance Cost	(244,992)	(3,004,569)	(3,864)	(608,858)	(41,626)	(7,123,143)	(586,137)	(17,133,697)	(28,746,886)	(26,386,781)
Net Premium Income	5,574,753	2,574,564	33,321	1,175,064	205,585	3,219,834	258,468	2,631,290	15,672,879	13,490,004
Commission income	26,051	315,714	16	114,764	7,178	651,987	129,418	796,999	2,042,127	1,846,507
Net Underwriting income	5,600,804	2,890,278	33,337	1,289,828	212,763	3,871,822	387,886	3,428,290	17,715,006	15,336,511
EXPENSES										
Gross claims incurred	2,731,398	1,616,500	525	355,824	62,207	2,398,278	555,260	1,026,784	8,746,775	7,586,447
Claims recoveries	(172,494)	(197,210)	(20)	(182,912)	0	(1,382,876)	(315,524)	(382,917)	(2,633,953)	(2,371,129)
Net claims incurred	2,558,904	1,419,291	505	172,912	62,207	1,015,402	239,735	643,867	6,112,823	5,215,318
Underwriting expenses										
Commision paid	(637,294)	(959,680)	(6,537)	(305,664)	(42,315)	(1,795,601)	(149,283)	(837,364)	(4,733,739)	(4,303,399)
Maintenance expense	(125,128)	(41,181)	(218)	(47,126)	(583)	(103,844)	(11,876)	(146,170)	(476,126)	(422,879)
Total Underwriting Expenses	(762,422)	(1,000,861)	(6,755)	(352,790)	(42,898)	(1,899,445)	(161,159)	(983,534)	(5,209,865)	(4,726,278)
Total Expenses	(3,321,326)	(2,420,152)	(7,260)	(525,702)	(105,104)	(2,914,847)	(400,894)	(1,627,401)	(11,322,687)	(9,941,596)
Underwriting profit	2,279,478	470,126	26,077	764,126	107,659	956,974	(13,008)	1,800,889	6,392,319	5,394,916

Appendix 3 - Reinsurance Arrangement

S/N		CLASS OF INSURANCE		TREATY TYPE		RETENTION	LINES	TREATY LIMIT	GROSS CAPACITY
1A		FIRE & ALLIED PERILS		PROPORTIONAL (SURPLUS)		N700,000,000	16	N11,200,000,000.00	N11,900,000,000.00
	1B	FIRE WORKING XLS		NON-PROPORTIONAL		N400,000,000 XLS N300,000,000			N700,000,000.00
	1C	FIRE CAT. EXCESS OF LOSS		NON-PROPORTIONAL		N2,100,000,000 XLS N700,000,000			N2,800,000,000.00
2A		MARINE CARGO		PROPORTIONAL (SURPLUS)		N150,000,000	20	N3,000,000,000	N3,150,000,000.00
2B1		MARINE CARGO CAT. E	XCESS OF LOSS	NON-PROPORTIONAL		N1,000,000,000 xls N150,000,000			N1,150,000,000
3		ENGINEERING - CAR/EAR/PAR/MBD/BOILER/EEI		PROPORTIONAL		N100,000,000	40	N4,000,000,000.00	N4,100,000,000.00
4		MARINE HULL		PROPORTIONAL (SURPLUS)		N50,000,000	30	N1,500,000,000.00	N1,550,000,000.00
5		BOND				N40,000,000		N60,000,000 .00	N100,000,000.00
	A	BID/TENDER/ADVICE PAYMENT/PERFORMAN	CE/		PROPORTIONAL	,,	,,	,,	,,
	B	MAINTENANCE/CUSTO COURT/SUPPLY	M/EXCISE/	(40/60 QUOTA SHARE)		,,	,,	,,	,,
6		GENERAL ACCIDENT		NON-PROPORTIONAL		1ST LAYER	2ND LAYER	3RD LAYER	
	A	BURGLARY (BUSINESS PREMISES)				N60m xls N60m	N190m xls N120m	N190m xls N310m	N500,000,000.00
	B	BURGLARY (PRIVATE PREMISES)			,,	,,	,,	,,	,,
	C	CASH-IN-TRANSIT			,,	,,	,,	,,	,,
	D	CASH-IN- SAFE			,,	,,	,,	,,	,,
	E	GOODS-IN-TRANSIT (OWN GOODS)			,,	,,	,,	,,	,,
	F	GOODS-IN-TRANSIT (GENERAL GOODS)			,,	,,	,,	,,	,,
	G	ALL RISKS			,,	,,	,,	,,	,,
	H	FIDELITY GUARANTEE (PER PERSON)			,,	,,	,,	,,	,,
	I	FIDELITY GUARANTEE (PER FIRM)			,,	,,	,,	,,	,,
	J	PERSONAL ACCIDENT (PER PERSON)			,,	,,	,,	,,	,,
	K	PERSONAL ACCIDENT (KNOWN ACCU.)			,,	,,	,,	,,	,,
	L	PROFESSIONAL INDEMNITY (PER PERSON)			,,	,,	,,	,,	,,
	M	PROFESSIONAL INDEMNITY (PER FIRM)			,,	,,	,,	,,	,,
	N	PUBLIC/PRODUCT LIABILITY			,,	,,	,,	,,	,,
	O	DIRECTORS AND OFFICERS LIABILITY			,,	,,	,,	,,	,,
7		MOTOR/GTPL/EL		NON-PROPORTIONAL		N25Million (DEDUCTIBLE)		N25m xls N25m	N50,000,000.00
		MOTOR, TPBI &/OR DEATH PLUS EL			,,	N25Million (DEDUCTIBLE)		N75m xls N25m	N100,000,000 .00

APPENDIX 4 – PROJECTION ASSUMPTIONS

1. Commission Rates

a.

Class	AGENTS	BROKERS	MARKETERS
Motor	6.25%	12.50%	0.00%
Accident	10.00%	20.00%	0.00%
Bond	10.00%	20.00%	0.00%
Marine	10.00%	20.00%	0.00%
Aviation	10.00%	20.00%	0.00%
Fire	10.00%	20.00%	0.00%
Engineering	10.00%	20.00%	0.00%
Oil & Energy	10.00%	20.00%	0.00%

b. Reinsurance Commission

Year	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Gas
Commission Income	11%	11%	0%	19%	17%	9%	22%	5%

c. Other Assumptions

Year	2023	2024
Investment Income*	4%	4%
Tax	1%	1%
Management Expenses	13%	13%

**Derived from the historical weighted average returns*

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APPENDIX 5 – COMBINED RATIO TABLE

	Year	Motor	Accident	Bond	Marine	Aviation	Fire	Engineering	Oil & Energy	Total
Gross Written Premiums	2018	2,470,217	1,412,467	5,436	825,343	368,885	4,789,145	343,830	13,596,662	23,811,985
	2019	2,823,566	1,833,072	5,709	1,017,324	217,785	5,240,930	452,515	14,060,119	25,651,020
	2020	3,272,946	2,120,555	7,106	1,188,049	154,643	6,201,612	386,797	18,256,221	31,587,929
	2021	3,538,297	2,373,088	20,019	1,415,811	268,457	8,150,471	563,994	18,107,387	34,437,524
	2022	4,219,991	3,971,721	32,310	1,265,018	186,086	9,527,626	707,840	18,072,387	37,982,979
Reinsurance Cost	2018	(137,092)	(248,365)	(2,028)	(315,871)	(281,474)	(3,426,951)	(293,908)	(10,470,134)	(15,175,823)
	2019	(189,385)	(627,465)	(1,198)	(318,754)	(28,594)	(3,917,343)	(380,654)	(12,342,476)	(17,805,869)
	2020	(146,931)	(732,737)	(1,073)	(323,277)	(49,235)	(4,170,326)	(285,688)	(15,509,494)	(21,218,761)
	2021	(88,024)	(994,612)	(2,356)	(539,561)	(42,860)	(5,644,231)	(415,606)	(15,601,611)	(23,328,861)
	2022	(114,056)	(2,144,411)	(3,098)	(467,704)	(12,885)	(6,687,448)	(347,820)	(15,721,718)	(25,499,140)
Gross Earned Premium	2018	2,453,988	1,362,041	6,016	793,735	349,344	4,713,643	520,181	12,547,899	22,746,847
	2019	2,733,523	1,837,363	5,835	982,526	172,952	4,989,617	568,333	13,893,338	25,183,487
	2020	3,182,841	2,051,688	5,321	1,103,865	193,934	6,092,960	626,574	18,826,148	32,083,331
	2021	3,428,551	2,264,054	13,038	1,400,937	280,519	7,526,883	653,647	18,187,552	33,755,181
	2022	3,479,003	3,803,268	31,163	1,398,986	189,079	9,158,499	596,440	17,873,480	36,529,918
Net Earned Premium	2018	2,316,896	1,113,676	3,988	477,864	67,870	1,286,692	226,273	2,077,765	7,571,024
	2019	2,544,138	1,209,898	4,637	663,772	144,358	1,072,274	187,679	1,550,862	7,377,618
	2020	3,035,910	1,318,951	4,248	780,588	144,699	1,922,634	340,886	3,316,654	10,864,570
	2021	3,340,527	1,269,442	10,682	861,376	237,659	1,882,652	238,041	2,585,941	10,426,320
	2022	3,364,947	1,658,857	28,065	931,282	176,194	2,471,051	248,620	2,151,762	11,030,778
Incurred Claims (Gross)	2018	(909,886)	(255,603)	(238)	(147,586)	(70,865)	(992,863)	(332,255)	(3,425,146)	(6,134,442)
	2019	(1,235,661)	(527,877)	(846)	(223,528)	(12,483)	(2,781,785)	(197,513)	661,688	(4,318,005)
	2020	(1,321,183)	(673,738)	(695)	(295,362)	(2,421)	(1,955,071)	(67,088)	(1,687,287)	(6,002,845)
	2021	(1,644,484)	(654,529)	(370)	(269,828)	5,316	(3,119,089)	(148,876)	(478,078)	(6,309,938)
	2022	(1,988,863)	(1,403,910)	(1,278)	(381,233)	(49,566)	(2,026,824)	(321,288)	(275,333)	(6,448,295)
Incurred Claims (Net)	2018	(889,780)	(309,691)	40	(24,577)	(58,212)	(252,240)	(133,466)	(1,072,027)	(2,739,953)
	2019	(1,175,158)	(538,367)	(805)	(26,286)	(23,441)	(1,099,471)	(128,461)	721,974	(2,270,015)
	2020	(1,229,226)	(596,530)	(268)	(87,995)	(4,116)	(792,707)	34,197	(1,405,055)	(4,081,700)
	2021	(1,532,628)	(637,849)	(329)	(131,498)	5,316	(1,762,145)	(65,529)	(548,135)	(4,672,797)
	2022	(1,914,049)	(1,146,122)	(1,096)	(238,724)	(49,566)	(1,021,450)	(42,796)	(116,793)	(4,530,596)
Commission Received	2018	15,493	22,516	596	61,303	2,099	372,568	70,821	532,311	1,077,707
	2019	21,237	89,765	338	59,840	2,871	377,257	88,667	729,465	1,369,440
	2020	18,438	109,332	419	61,748	9,855	402,813	86,019	961,581	1,650,205
	2021	9,524	115,469	641	99,679	0	473,918	93,739	817,358	1,610,328
	2022	11,915	201,706	(818)	89,911	2,222	662,704	75,146	638,988	1,681,774
Underwriting expenses	2018	(291,376)	(228,581)	(650)	(153,775)	(9,907)	(471,379)	(103,199)	(769,772)	(2,028,639)
	2019	(342,713)	(316,512)	(838)	(200,724)	(21,622)	(608,989)	(113,404)	(672,095)	(2,276,897)
	2020	(411,040)	(353,764)	(673)	(225,876)	(29,960)	(657,654)	(124,904)	(913,000)	(2,716,871)
	2021	(434,051)	(390,660)	(494)	(323,811)	(45,217)	(822,402)	(129,589)	(796,775)	(2,942,999)
	2022	(431,070)	(605,773)	(2,729)	(295,318)	(25,626)	(1,122,826)	(123,359)	(759,526)	(3,366,227)
Management expenses	2018									(2,917,445)
	2019									(3,156,354)
	2020									(3,025,780)
	2021									(4,011,947)
	2022									(4,123,207)
Claims Ratio (Net)	2018	38%	28%	1%	5%	86%	20%	59%	52%	36%
	2019	46%	44%	17%	4%	16%	103%	68%	47%	31%
	2020	40%	45%	6%	11%	3%	41%	10%	42%	38%
	2021	46%	50%	3%	15%	2%	94%	28%	21%	45%
	2022	57%	69%	4%	26%	28%	41%	17%	5%	41%
Expense Ratio	2018	13%	22%	37%	42%	14%	62%	349%	42%	36%
	2019	14%	34%	26%	37%	13%	75%	281%	82%	46%
	2020	14%	38%	19%	38%	29%	62%	132%	69%	44%
	2021	13%	38%	7%	48%	19%	62%	107%	72%	44%
	2022	11%	47%	8%	46%	17%	73%	76%	65%	43%
Combined Ratio	2018	52%	49%	36%	47%	100%	82%	408%	93%	72%
	2019	60%	78%	43%	41%	29%	177%	213%	35%	77%
	2020	54%	84%	25%	49%	32%	103%	122%	111%	82%
	2021	59%	89%	10%	63%	17%	155%	135%	93%	88%
	2022	68%	116%	12%	72%	45%	115%	93%	71%	84%

APPENDIX 6: ECONOMIC CAPITAL RESULTS AT 99% CONFIDENCE LEVEL

Should the confidence level be lowered our confidence level to 99%, the total economic capital requirement reduces to N4.63 billion which represents about 543% of the shareholder funds as at December 31, 2022.

Risk Type		Capital Requirement (N)
Non-Life Insurance Risk	Reserve Risk	1,711,116,973
	Premium Risk	2,540,087,679
	Catastrophe Risk	599,791,073
	Lapse Risk	-
	SCR_{nl} Pre-Div	4,850,995,726
	SCR_{nl} Div Credit	1,506,657,378
	SCR_{nl} Post Div	3,344,338,348
Market Risk	Interest Rate Risk	274,947,067
	Equity Risk	35,034,158
	Property Risk	327,543,040
	Spread Risk	-
	Currency Risk	-
	Concentration Risk	-
	SCR_{mkt} Pre-Div	637,524,266
	SCR_{mkt} Div Credit	99,439,830
	SCR_{mkt} Post Div	538,084,436
Counterparty Default Risk	Reinsurance credit	6,698,542
	Investment credit & Debtors	24,950,230
	SCR_{def} Pre-Div	31,648,772
	SCR_{def} Div Credit	-
	SCR_{def} Post Div	31,648,772
Undiversified BSCR		3,914,071,556
Diversification Credit		380,056,452
Basic SCR		3,534,015,104
Operational Risk		1,095,897,540
Final Economic capital		4,629,912,644
Shareholders' Funds		25,136,383,000
% of Economic Capital		543%

APPENDIX 7: ECONOMIC CAPITAL RESULTS AT 95% CONFIDENCE LEVEL

Should the confidence level be lowered our confidence level to 95%, the total economic capital requirement reduces to N3.81billion which represents about 660% of the shareholder funds as at December 31, 2022.

Risk Type		Capital Requirement (N)
Non-Life Underwriting Risk	Reserve Risk	1,096,127,251
	Premium Risk	2,086,254,236
	Catastrophe Risk	599,791,073
	Lapse Risk	-
	SCR_{nl} Pre-Div	3,782,172,560
	SCR_{nl} Div Credit	1,193,001,023
	SCR_{nl} Post Div	2,589,171,537
Market Risk	Interest Rate Risk	252,825,096
	Equity Risk	23,485,777
	Property Risk	237,937,920
	Spread Risk	-
	Currency Risk	-
	Concentration Risk	-
	SCR_{mkt} Pre-Div	514,248,794
	SCR_{mkt} Div Credit	162,281,972
	SCR_{mkt} Post Div	351,966,821
Counterparty Default Risk	Reinsurance credit	6,698,542
	Investment credit & Debtors	24,950,230
	SCR_{def} Pre-Div	31,648,772
	SCR_{def} Div Credit	-
	SCR_{def} Post Div	31,648,772
Undiversified BSCR		2,972,787,130
Diversification Credit		257,670,828
Basic Economic Capital		2,715,116,302
Operational Risk		1,095,897,540
Final Economic Capital		3,811,013,842
Shareholders'Funds		25,136,383,000
Economic Capital as a % of SF		660%

Appendix 8: Economic Capital Methodology & Stress Level Derivation.

We present below, detailed explanation on how each of the risk were modelled including stress levels derivation.

A. MARKET RISKS

1.1 Market risk is defined as the potential for adverse change in the net assets (Market Value of assets less Market Value of liabilities) due to movements in market factors such as equity prices, interest rates, property prices and foreign exchange.

1.2 The company's insurance funds are mainly invested in money market instrument and hence have a very low exposure to market risks.

1.3 The market risk capital requirement $\boldsymbol{C_{Mkt}}$ for each risk was calculated using the following formula:

$$C_{Mkt} = (A_{Mkt} - A_0)$$

Where C_{Mkt} – capital calculation for market risk

A_{Mkt} – stressed assets value

A_0 – base market value of assets

1.4 The stresses applied for the market risk module were as follows:

Asset class	Stress level @ 95%	Stress level @ 99%	Stress level @ 99.5%
Equity	24.06%	35.90%	37.38%
Property	15.72%	21.64%	22.38%
Interest rate	29.1%	40.12%	41.5%

1.5 The above stresses were obtained by using a combination of fitting historical data of various market indices (were available) to find the appropriate stress level and benchmarking against the Solvency II widely used stress levels.

1.6 The details of the derivation and computation are contained below for each sub-risk module.

1.7 Equity risk

I. This is the sensitivity of assets, liabilities and financial investments to fluctuations in the level or volatility of the market prices for equities.

II. The company is invested in both quoted and unquoted equities. Both types of equities were stress tested.

III. The level of stress was derived by considering the historical distribution of the total return Nigerian Stock Exchange (''NSE'') index and fitting a distribution to determine the stress level at the various confidence levels.

IV. We fitted the NSE historical index values from January 1985 to December 2020. The normal distribution was a good fit for the data. Using the normal distribution, we determined stress levels of 24%, 35% and 37% for confidence levels of 95%,99% and 99.5% respectively.

V. We also checked how frequently historical annual returns have fallen or been close to the 24.06%, 35.90% and 37.38% levels. In 2008, the stock index fell by about 46% and in 2011 also fell by about 23%.

VI. Both the quoted and unquoted equities were assumed to be similarly affected by any declines in stock market. This assumption would need to be revisited in the next assessment.

1.8 Interest Rate risk

I. Interest rate risk is caused by the sensitivity of the value of any assets, liabilities and financial investments to fluctuations in the term structure of interest rates or interest rate volatility, whether valued by mark-to-model or mark-to-market techniques.

II. Stresses were determined by constructing the term structure of interest rates by referencing the 12-month, 3-year, 5 year, 7 year, 10 year and 20 year yields from the Federal Government Bonds.

III. The historical returns were fitted to distributions to determine the best fit distribution. The normal distribution was a good fit. The normal distribution was used instead in order to apply some consistency with the other market risk stresses.

IV. As the local term structure of interest rates show a flat yield curve; a flat stress level was applied to bonds of varying durations.

V. The stresses used are shown in table 3 above at various confidence levels to all bond yields of varying duration according to the Company bond holdings.

VI. The stressed yields were applied using the formula: current yield x (1+Upward stress) OR current yield x (1+Downward stress).

VII. The capital requirement was then determined by adopting the stress level (between the upward and the downward stress) that resulted in a higher capital requirement i.e. Interest

Rate capital requirement = Max {0; Upward stress capital; Downward stress capital}

1.9 The overall market risk capital was then derived by combining the equity, property and interest rate risk capital using the suggested correlation matrix below.

$$C_{Mkt} = \sqrt{\sum CorrMkt_{ij} * C_{Mkt_i} * C_{Mkt_j}}$$

Where C_{Mkt} – overall market risk capital calculation including equity, property and interest rate

C_{Mkt_i} – capital for i-th risk (i could be any of the three risks)
C_{Mkt_j}– capital for j-th risk (j could be any of the three risks)

1.10 The correlation matrix used is shown in Appendix 7

1.11 Non-Life Insurance risks

The non-life insurance risks modelled were:

- Reserving risk
- Premium risk
- Catastrophe risk

I. Reserving risk

This is one of the sources of underwriting risk for general insurance.

Reserve risk results from fluctuations in the timing and amount of claim settlements.

The reserve risk methodology was as follows:

- We used the bootstrap approach to calculate the mean and standard deviation of losses.
- We then used the mean and standard deviation to derive the parameters of the lognormal distribution which was used to estimate the 95th, 99th and 99.5th percentiles of the reserve distribution.
- Reserve capital is the difference between each of the following percentiles; 95th-percentile, 99th-percentile or 99.5th-percentile of the distribution and the 50th -percentile (Best estimate).

II. Premium risk

This is another source of underwriting risk for general insurance.

Premium risk results from fluctuations in the timing, frequency and severity of insured events. It relates to the unexpired risks on existing contracts. Premium risk includes the risk that premium provisions turn out to be insufficient to compensate claims or need to be increased.

The premium risk methodology was as follows:

- Average loss ratios were derived from the expected loss ratio in the business plan (pricing)
- Historical loss ratios were investigated and deviations from the mean studied.
- The lognormal distribution was fit (which was the best fit) to the deviations

III. Catastrophe risk

This is Catastrophe for the general insurance business.

It covers mainly high severity and low frequency catastrophic events e.g. floods, hurricanes, large accidents impacting on all general insurance lines of business insured by the Company.

There have been no major catastrophic events in Nigeria recently hence the data to use in determining the risk capital was scarce.

The catastrophe risk methodology was therefore as follows:

- The 2021 loss ratios were increased by 1000% for all lines of business to resemble a catastrophic-like event
- A 1% probability of occurrence was applied to determine the final capital requirement.

B. CREDIT RISK

I. Credit risk arises as a result of the unexpected default, or deterioration in credit standing, of an insurer's counterparties or debtors.

II. The scope of the calculation under this risk module covered possible defaults by banks; where cash and cash equivalents are held by the Company, defaults by reinsurers compromising reinsurance recoveries and the inability by debtors to pay their dues.

III. The following exposures to counterparties were used:

- Banks → cash and cash equivalent holdings
- Reinsurers → estimated reinsurance recoveries over the next 12 months
- Debtor → amounts owed.

IV. The expected losses given default were calculated using the latest credit ratings and associated probabilities of default for the different counterparties. A combination of local agencies and the S&P default rates were used for the bank holdings as per the following table:

Table 5

Rating Scale	Default Probability
AAA	0.00%
AA+	0.00%
AA	0.02%
AA-	0.03%
A+	0.05%
A	0.05%
A-	0.06%
BBB+	0.09%
BBB	0.15%
BBB-	0.24%
BB+	0.32%
BB	0.48%
BB-	0.96%
B+	1.98%
B	3.13%
B-	6.52%
Unrated	26.53%

V. The above default rates were applied to both the banks and reinsurers' counterparties to the Company.

VI. The formula used was: Estimated exposure x Probability of Default x Loss Given Default.

VII. We assumed a 100% loss given default, which is a conservative assumption.

C. OPERATIONAL RISK

I. This is the risk of loss arising from inadequate or failed internal processes, or from personnel and systems, or from external events.

II. Operational risk is generally a material risk and one of the major causes of organizational failure.

III. There are several approaches used to assess Operational risk namely;

- Basic indicators or some Standard Formula – this is a simpler approach and largely defined by regulatory bodies. It is transparent and a well-known approach.
- Scenario approach – qualitative scenario assessments of the operational risks as defined by management through the risk heat map are transformed into quantitative assessments to determine the overall operational risk capital
- Statistical or Loss Distribution Approach – this uses a lot of statistics. The amount of possible losses and frequency of losses are modelled separately and then combined to determine the overall capital requirement. This approach relies on the availability of credible historical and forward-looking data.
- The Structural or Causal approach – this is the most complex and recently researched approach. It also relies on understanding the interdependencies across risks in addition to the data availability.

IV. We adopted the standard formula approach due to limited quantity of data available. The approach took into account the earned premium, technical provisions and Base capital calculated before operational risk.

V. The formula used to compute the capital requirement was as follows:

$$C_{op} = \text{Min}\{0.3 * BSCR,\ BOp\} + 0.25 \times Exp_{nl}$$

Exp_{nl} is the amount of annual expenses incurred during the previous 12 months in respect of non-linked business

$BSCR$ is the preliminary capital required before allowing operational risk and, for the risk requirements it is defined as:

$$\text{CR Op} = \sum(C_{ins} + C_{Mkt} + C_{Credit})$$

BOp is the basic operational risk requirement for all business and is determined as follows:

$$BOp = Max\left\{Op_{premiums};\ Op_{provisions}\right\}$$

Where

$$Op_{premiums} = 0.03 \times Earn_{nl} + Max\{0, 0.03 \times [Earn_{nl} - 1.1 \times pEarn_{nl}]\}$$

and $Op_{provisions} = 0.03 \times Max\{0, Tp_{nl}\}$

$Earn_{nl}$ are the gross premiums earned during the previous 12 months.

$pEarn_{nl}$ are the gross premiums earned during the 12 months prior to the previous 12 months.

TP_{nl} are the technical provisions

VI. In the future, we recommend the following be recorded at granular level:

- Frequency of occurrence of all risk scenarios captured in the Risk Heat Map
- Identification of new exposures and new likelihood percentages after mitigation efforts have been applied.

This would improve how operational risk is quantified.

APPENDIX 8 – CORRELATION MATRICES

Correlations for Market risks have been derived using actuarial judgement and referencing correlations being used in other jurisdictions for new solvency regimes.

Local market relevance was taken into account before applying these correlations.

As a rule of thumb, the following thought process was applied:

Correlation coefficient	Interpretation
0%	Independent
25%	Weakly correlated
50%	Moderately correlated
75%	Strongly correlated
100%	Dependent

The correlation matrices used for diversification are shown below.

Market risk correlations

	Parameters					
$Corr_{ij}$	Mkt_{int}	Mkt_{eq}	Mkt_{prop}	Mkt_{sp}	Mkt_{conc}	Mkt_{fx}
Mkt_{int}	100%	0%	0%	0%	0%	25%
Mkt_{eq}	0%	100%	25%	75%	0%	25%
Mkt_{prop}	0%	25%	100%	50%	0%	25%
Mkt_{sp}	0%	75%	50%	100%	0%	25%
Mkt_{conc}	0%	0%	0%	0%	100%	0%
Mkt_{fx}	25%	25%	25%	25%	0%	100%

Comments:

- Equity vs Property – the local stock and property markets have seen low correlations.
- The drop in equity values seem not to affect the property values, hence a weak correlation assumption.
- Interest rate vs Equity/Property – no correlation was assumed if under the interest rate stress an increase in interest rates triggered a capital requirement (as opposed to a decrease in interest rates). 50% correlation was assumed if the decrease in interest rates would trigger a capital requirement under the interest rate stress.
- Spread, concentration and foreign exchange risks were not modelled.

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