STANBIC IBTC INSURANCE LIMITED.

Financial Condition Report as at 31st December 2023.

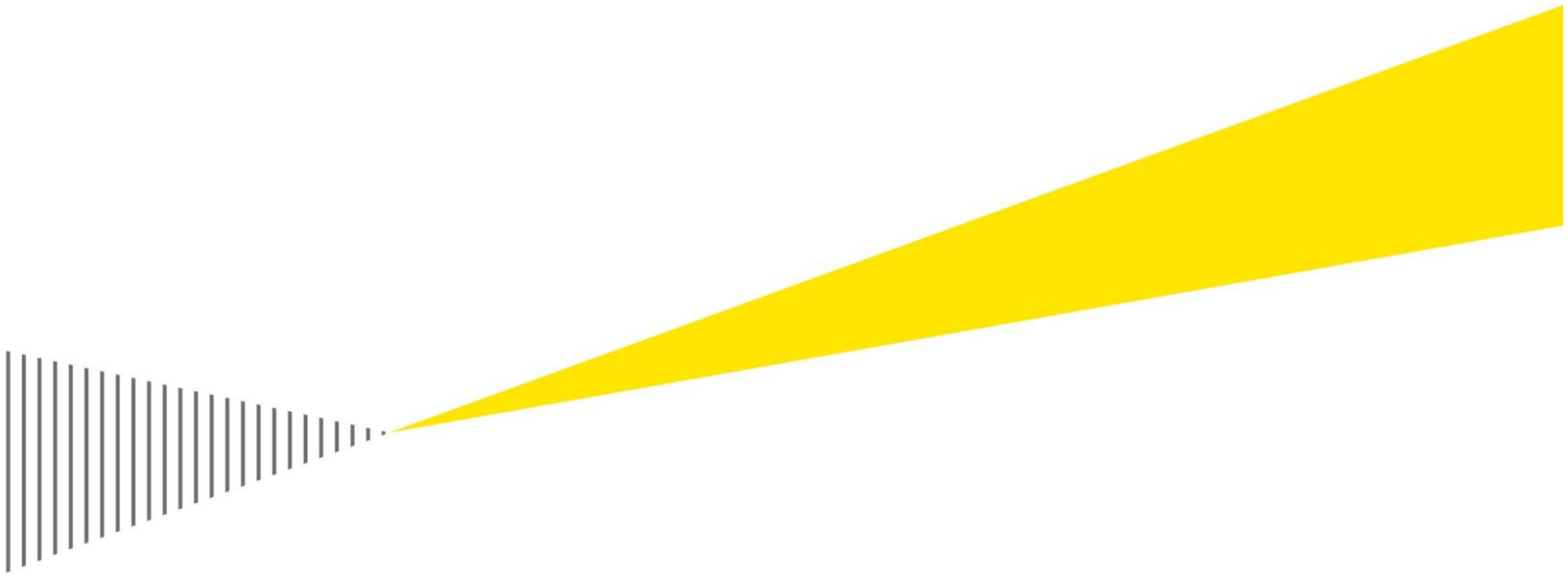

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Table of Content

STRICTLY PRIVATE AND CONFIDENTIAL

August 22, 2024

The Board of Directors
Stanbic IBTC Insurance
Plot 1678 Olakunle Bakare Close
Off Sanusi Fafunwa Street
Victoria Island

Dear Board of Directors,

Financial Condition Report as at 31st December 2023 – Stanbic IBTC Insurance.

Purpose

1.1 We are pleased to present our Financial Condition Report ("FCR") for Stanbic IBTC Insurance as at 31st December 2023.

1.2 This report sets out an assessment of the criteria stipulated in the Guidance Note, GN2v1.1: Financial Condition Report issued by the Institute and Faculty of Actuaries, to the extent relevant to Stanbic IBTC Insurance for the year ended 31st December 2023.

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 ultimately responsible for the preparation and submission of the Financial Condition Report in accordance with Guidance Note GN2v1.1: Financial Condition Report issued by the Institute and Faculty of Actuaries.

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 & Limitations.

1. Executive Summary

This report is prepared to assist Stanbic IBTC Insurance provide an overview of the financial condition of the Company for the Board of Directors. We also understand that this report will form part of the Company's submission to NAICOM.

The following are the key conclusions of the report;

- The valuation of the liabilities complies with the Insurance Act and the Regulations issued.
- 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.
- The Company is required by NAICOM to maintain a minimum regulatory capital of ₦2 billion. The Company has shareholders capital of ₦8.7bn as at 31 December 2023 which far exceeds the minimum capital requirements.
- We estimated the economic/risk-based capital required to support the business at 31st December 2023 as N2.87 billion, implying that Shareholder Funds covered Economic Capital Requirements by 305%. The company is therefore well capitalized on a risk-based capital basis.
- The gross written premium is largely driven by the annuity business. Considering this, we recommend that the company explores strategies other business lines, in order to reduce concentration risk.
- We reviewed the product pricing process of the Company, and it appears appropriate. However, we recommend that a comprehensive expense investigation is conducted to identify the key driver of the cost and to ensure an optimal allocation within various functional units. This exercise will also help to ascertain a realistic expense per policy and improve accountability of cost centers.
- The company currently provides quality data used in the valuation exercise. In the last 3years, data has been provided within 5 days of the year end with little or no error to be fixed.
- We performed a 3-year Asset/Liability Matching exercise on the portfolio and there were no liquidity issues arising from the exercise
- We recommend a more detailed Asset Liability Matching and Embedded Value analysis in the next FCR due at the end of the current year.

2. Developments since Previous Financial year

The Company has in the year under review experienced and demonstrated the following:

2.1 Premium History

The Company's written premium in 2023 (₦14.63billion) as illustrated below, has decreased significantly, by 15%, when compared to the figures as at FY2022.

The premium income is mainly driven by Life annuities, which forms 74% of the total gross written premium. This highlights the product concentration risk we alluded to in the executive summary. However, there is a year-over-year decrease of 28% in the annuity premiums and a substantial increase of 662% in individual business compared to the previous year which indicates the company's strategy to reduce its product concentration risk.

Table 1 - Written Premium (₦ '000) – Summary

Product Category	2022	2023	% Change
Individual Life Traditional	59,829	455,725	662%
Annuity	14,938,592	10,809,269	-28%
Group credit life	536,197	636,234	19%
Group Life	1,664,835	2,733,021	64%
Total	**17,199,453**	**14,634,248**	**-15%**

2.2 Technical Liabilities History

The technical liabilities for the individual and group businesses increased during the year.

Table 2 - Technical Liabilities (₦ '000) – Summary

Product Category	2022	2023	% Change
Individual Life Traditional	401,842	595,582	48%
Annuity	16,650,307	28,175,806	69%
Group credit life	505,624	952,129	88%
Group Life	160,305	1,176,689	634%
Total	**17,718,079**	**30,900,206**	**74%**

2.3 Economic Capital Analysis of Change

From the table below, all the risk stresses increased from the prior year except the Longevity risk, and Interest rate risk.

EC Results for Stanbic Ibtc Insurance Limited. as at 31.12.2023				
		2023	2022	% Difference
Life Underwriting Risk	Mortality Risk	565,462,469	457,889,897	23%
	Longevity Risk	140,290,304	166,739,345	-16%
	Disability Risk	-	-	0%
	Life Expense Risk	393,653,301	92,925,143	324%
	Revision Risk	-	-	0%
	Surrender and Lapse Risk	6,388,305	928,255	588%
	Catastrophe Risk	45,307,033	16,297,276	178%
	SCR_{life} Pre-Div	1,151,101,412	734,779,915	57%
	SCR_{life} Div Credit	129,696,382	211,552,962	-39%
	SCR_{life} Post Div	**1,021,405,030**	**523,226,953**	**95%**
Market Risk	Interest Rate Risk	2,236,511,495	4,586,199,317	-51%
	Equity Risk	-		0%
	Property Risk	-	-	0%
	Spread Risk	-	-	0%
	Currency Risk	-	-	0%
	Concentration Risk	-	-	0%
	SCR_{mkt} Pre-Div	2,236,511,495	4,586,199,317	-51%
	SCR_{mkt} Div Credit	-	-	0%
	SCR_{mkt} Post Div	**2,236,511,495**	**4,586,199,317**	**-51%**
Counterparty Default Risk	Reinsurance credit	7,092,799	6,681,769	6%
	Investment credit	344,133,730	161,823,775	113%
	SCR_{def} Pre-Div	351,226,529	168,505,544	108%
	SCR_{def} Div Credit	-	-	0%
	SCR_{def} Post Div	**351,226,529**	**168,505,544**	**108%**
Undiversified BSCR		3,609,143,055	5,277,931,815	-32%
Diversification Credit		801,486,135	485,679,775	65%
Basic SCR		2,807,656,920	4,792,252,040	-41%
Operational Risk		64,152,900	21,826,646	194%
less Reinsurance Asset		-	-	0%
Final SF SCR		**2,871,809,820**	**4,814,078,686**	**-40%**
Shareholders' Funds		**8,775,894,000**	**8,400,302,000**	**4%**
% of Economic Capital Coverage		**305.6%**	**174.5%**	

Although the overall EC estimated when compared to the prior year shows an overall decrease, however there are some increases in the individual risk. The increase in mortality risk is because of the large risk in the group life business. The increase in the Life Expense risk is due to the increase in the number of policies which had led to a corresponding increase in their liabilities thereby exposing the business to an Expense risk over time. Counterparty risk increased because of the change in the amount of premium ceded to reinsurers and the credit risk.

3. Business Overview and Financial Performance

3.1 Gross Written Premium

The Company's written premium is made up of annuity (74%), Group business (23%) and other individual products (3%). The annuity portfolio is the highest contributor to the total gross written premium as this is prone to concentration risk of the annuity business.

Table 3 - Written Premium (₦ '000) - Summary

Product Category	2023	%
Individual Life Traditional	455,725	3%
Annuity	10,809,269	74%
Group credit life	636,234	4%
Group Life	2,733,021	19%
Total	**14,634,248**	**100%**

3.2 Channel of Distribution for Existing and New Products

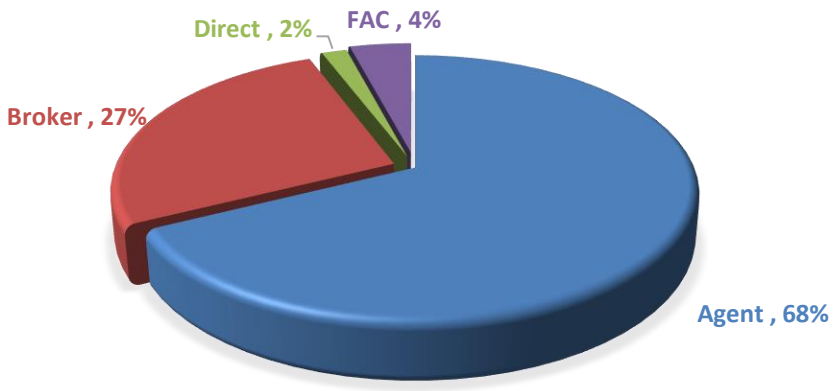
Stanbic IBTC Insurance products are mainly distributed by the following channels:

- Brokers
- Agents
- Direct
- FAC

Brokers: These distribution channels are mainly for the group line of business. These products include, Group Life Plans, Credit Life.

Agents: The Agents as a distribution channel is mainly for Individual line of business. These products include; Annuity, Mortgage Protection Plan, Term Assurance, Endowment Plan and Funeral Plan.

DISTRIBUTION OF PREMIUMS BY CHANNELS



3.3 Adequacy of New Business Premiums

The table below shows the value of in-force metrics for the business in the reporting year, compared to the present value of premiums.

Table 4: Value of In-force

N'000	Value of New Business	PV of Premiums	VIF/ PV of Premiums
Individual Business	70,499	422,943	**17%**
Annuity Business	523,919	1,291,810	**41%**
Group Business	590,649	3,369,254	**18%**
Total	**1,185,066**	**5,084,008**	**23%**

In aggregate, the total value of in-force is N1.1bn or a return on premium of 23%. This shows a profitable underwriting, and that the product are priced adequately.

3.4 Premium Growth and Operational Business Projection Figures

Table 5 below, is the Budget forecasts, for the next 3 years from the Reporting period. Management provided a one-year projection and we have estimated into the future assuming the business ratios stay the same.

Business Projection	Amounts in N'000			
	2023	2024	2025	2026
Insurance Contract Revenue	6,415,290	9,863,178	12,092,256	14,317,231
Insurance Service Expense	(6,240,267)	(10,422,311)	(12,777,753)	(15,128,860)
Investment income	2,953,274	5,358,686	6,912,705	8,640,881
Insurance Finance expense	(2,284,103)	(2,007,151)	(2,460,767)	(2,913,548)
Other expenses	(384,028)	(1,935,810)	(2,373,303)	(2,809,991)
Profit on IFRS Basis	**460,165**	**856,593**	**1,393,139**	**2,105,715**

In the table below, we provide some actuarial forecasts of key accounting items, based on the numbers in Table 6

Table 6: Amounts in N'000				
Year	2023	2024	2025	2026
Reported Technical Reserves	30,900,206	37,883,653	46,445,358	56,942,009
Admissible Assets	32,132,828	39,394,848	48,298,083	59,213,450
Shareholder Funds	8,775,894	10,759,246	13,190,836	16,171,965
Balance Sheet Solvency Level	128%	128%	128%	128%
Minimum Required Solvency Capita	2,000,000	2,000,000	2,000,000	2,000,000
Capital Adequacy Ratio	438.79%	537.96%	659.54%	808.60%

**The Balance sheet solvency level calculated here is = (Shareholder's funds / Reported Technical reserves) + 1*

Value to Shareholders is expected to increase over the 3 years projection period, on the basis of the assumptions made.

4. Valuation of Assets and Liabilities

4.1 The tables below illustrate the makeup of the assets and policyholders' liabilities per product lines as at 31 December 2023.

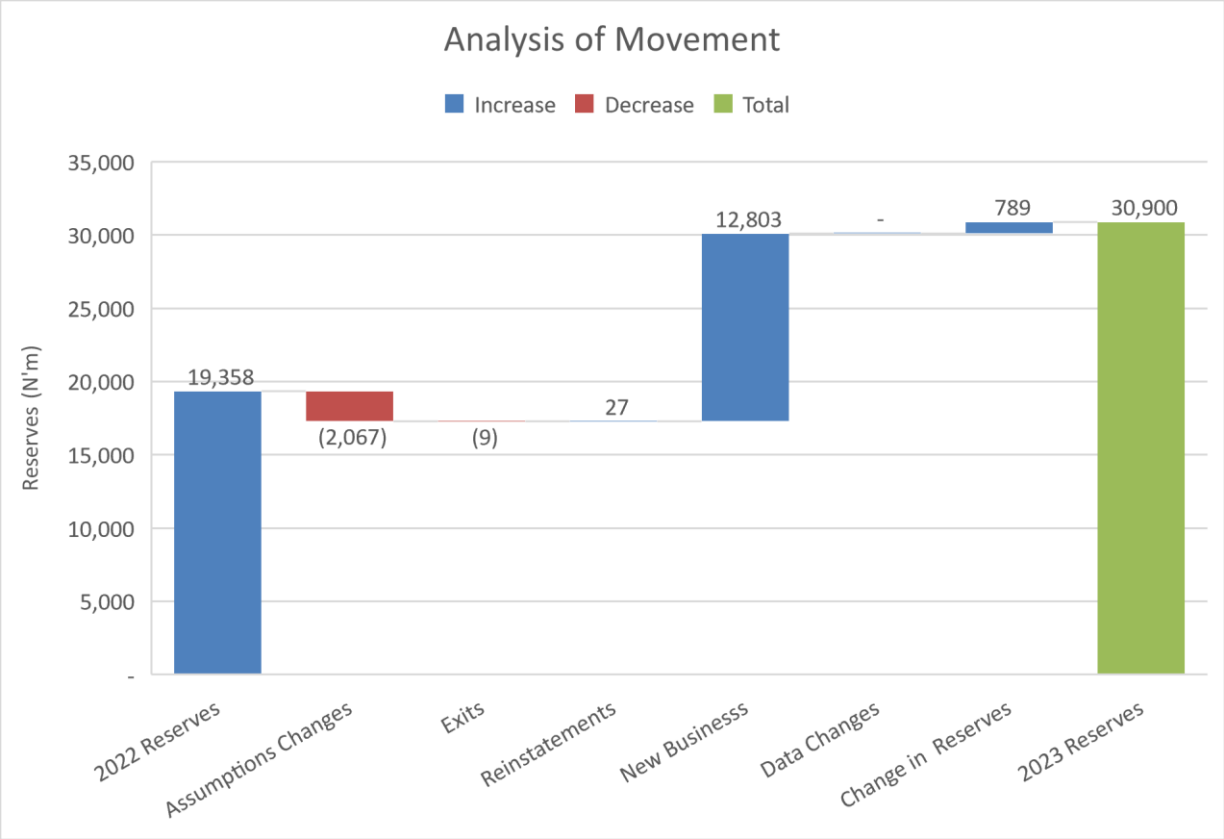
Table 7 – Asset and Liability Breakdown

Product	Assets	Liabilities	Asset Margin
Insurance Contract Liability	32,132,828	30,900,206	4%
Total	**32,132,828**	**30,900,206**	4%

Analysis of Change in Technical Provisions

The technical provisions for policyholder obligations, on the review date, was estimated as 30.90bn. This compares with the figure of 19.35bn as at 31st December 2022.

We illustrate below causes for the movement in liabilities within the year to 31 December 2023:



5. Pricing and Premium Adequacy

5.1 The table below shows the value of in-force metrics for the business in the reporting year, compared to the present value of premiums.

Table 8: Value of In-force

N'000	Value of In-force	PV of Premiums	VIF/ PV of Premiums
Individual Business	133,419	455,725	**29%**
Annuity Business	1,486,840	10,809,269	**14%**
Group Business	590,649	3,369,254	**18%**
Total	**2,210,908**	**14,634,248**	**15%**

In aggregate, the total value of in-force is N2.2bn or a return on premium of 15%. This shows a profitable underwriting, and that the product are priced adequately.

6. Asset Liability Management

6.1 The tables below illustrate the makeup of the assets backing policyholders' liabilities of Stanbic IBTC after the consolidation in 2022 and 2023.

Table 9: Asset Mix

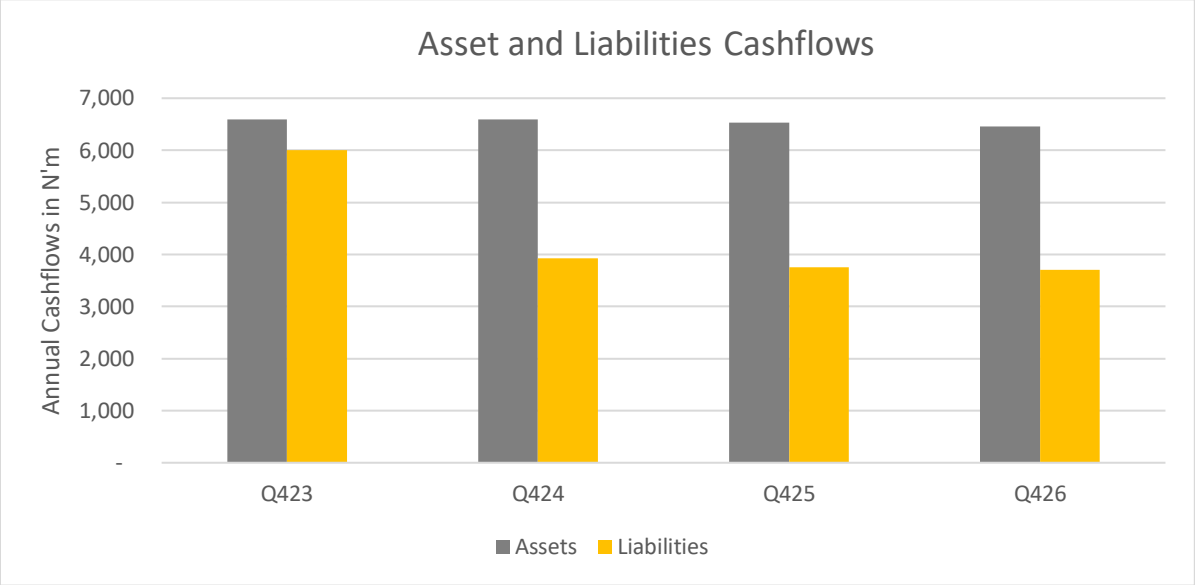
Asset Class (Amount in N'000)	2022	%	2023	%	% Change
Cash and Cash Equivalent	955,702	4.12%	1,786,783	5.56%	86.96%
Mutual Fund	1,584,640	6.82%	708,680	2.21%	-55.28%
Treasury Bills	1,663,142	7.16%	1,785,493	5.56%	7.36%
Reinsurance Assets	320,944	1.38%	172,560	0.54%	-46.23%
Bonds	18,695,369	80.51%	27,679,313	86.14%	48.05%
Total	**23,219,797**	**100%**	**32,132,828**	**100%**	**41%**

6.2 Stanbic holds a very conservative investment portfolio, comprised mostly of government bonds and money market instruments held to maturity.

6.3 Stanbic remains adequately capitalized with a strong and conservative investment portfolio to support current and projected liabilities whilst mostly maintaining compliance with regulatory requirements.

Asset Class (Amount in N'000)	2023	%	Regulatory Maximum	Requirement Met
Cash and Cash Equivalent	1,786,783	5.56%	No Limit	Yes
Mutual Fund	708,680	2.21%	No Limit	Yes
Treasury Bills	1,785,493	5.56%	No Limit	Yes
Reinsurance Assets	172,560	0.54%	No Limit	Yes
Bonds	27,679,313	86.14%	Min of 35%	Yes

The chart below, is a projection of the asset and liability cashflows for the next 3 years. The asset cashflows appear more than sufficient to meet the liability cashflows in the projection period, implying the liquidity risks within the projection period are well managed.



In Tables 10 and 11, we present the expected behavior of the asset and liability valuations under 2 stress conditions, as at the valuation date and over the next 3 years.

Table 10: Present Value of Assets and Liabilities with Interest rate stressed up (100bp)

N'000	Base	2024	2025	2026
Assets	26,214,227	26,388,912	25,980,396	25,515,117
Liabilities	19,093,213	18,209,959	18,021,690	17,434,201
Impact (Asset – Liabilities)	7,121,014	8,178,953	7,958,705	8,080,917

Table 11: Present Value of Assets and Liabilities with interest rate stressed down (-100bp)

N'000	Base	2024	2025	2026
Assets	49,525,705	48,816,339	47,484,627	46,080,904
Liabilities	38,291,822	36,899,103	36,101,825	34,946,147
Impact (Assets – Liabilities)	11,233,883	11,917,236	11,382,802	11,134,757

The assets appear resilient enough, in their current composition, to ensure positive net cashflow under the stressed scenario stressed.

7. Capital Management and Capital Adequacy

7.1 Table 12 below, shows the Company's balance sheet regulatory capital adequacy and solvency margins for the year under review, compared to the prior year.

Table 12 (Amount N'000)	2022	2023
Reported Technical Reserves	17,718,079	30,900,206
Admissible Assets	23,219,797	32,132,828
Shareholder Funds	8,300,451	8,775,894
***Balance Sheet Solvency Level**	147%	128%
Minimum Required Solvency Capital (MSC)	2,000,000	2,000,000
Regulatory Capital Adequacy Ratio	415.0%	438.79%

*The Balance sheet solvency level calculated here is = (Shareholder's funds / Reported Technical reserves) + 1

7.2 The company is well capitalized based on current regulatory capital regulations. Recent communication from the regulator indicates there are likely to be significant changes to the regulatory capital requirements. It is therefore recommended that future decisions on how excess capital is deployed should anticipate these changes.

Economic Capital

7.3 Economic Capital is essentially the market value of assets minus fair value of liabilities. Used in practice as a risk-adjusted capital measure; specifically, the amount of capital required to meet an explicit solvency constraint (e.g., a certain probability of ruin). It is prudent and best practice for management to estimate the extent to which the best estimate of the needed Insurance Funds can increase.

7.4 The risks the Company is exposed to are underwriting risk, market risk, reinsurance and investment counterparty risk and operational risk. The risk and methodology used in estimating the EC are described in the Appendix 2 of this report.

7.5 For each of the major risks to which the Company is exposed, the amount of capital required as at year end 2023 was calculated at 99.5% level of confidence. A 99.5% level of confidence is equivalent to a 1-in-200-year event.

7.6 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 through the recognition of diversification effects represented by a correlation matrix. The assumed correlation matrix is shown in Appendix 3.

7.7 The calculations were based on the same data used to prepare the IFRS valuation as at 31 December 2023 and asset information shown in Section 6.1 of this report.

7.8 The following results at 99.5% confidence level were obtained:

EC Results for Stanbic Ibtc Insurance Limited. as at 31.12.2023		
		2023
Life Underwriting Risk	Mortality Risk	565,462,469
	Longevity Risk	140,290,304
	Disability Risk	-
	Life Expense Risk	393,653,301
	Revision Risk	-
	Surrender and Lapse Risk	6,388,305
	Catastrophe Risk	45,307,033
	SCR_{life} Pre-Div	1,151,101,412
	SCR_{life} Div Credit	129,696,382
	SCR_{life} Post Div	**1,021,405,030**
Market Risk	Interest Rate Risk	2,236,511,495
	Equity Risk	-
	Property Risk	-
	Spread Risk	-
	Currency Risk	-
	Concentration Risk	-
	SCR_{mkt} Pre-Div	2,236,511,495
	SCR_{mkt} Div Credit	-
	SCR_{mkt} Post Div	**2,236,511,495**
Counterparty Default Risk	Reinsurance credit	7,092,799
	Investment credit	344,133,730
	SCR_{def} Pre-Div	351,226,529
	SCR_{def} Div Credit	-
	SCR_{def} Post Div	**351,226,529**
Undiversified BSCR		3,609,143,055
Diversification Credit		801,486,135
Basic SCR		2,807,656,920
Operational Risk		64,152,900
less Reinsurance Asset		-
Final SF SCR		**2,871,809,820**
Shareholders' Funds		**8,775,894,000**
% of Economic Capital Coverage		**305.6%**

SCR: Solvency Capital Requirement

7.9 We estimate above that the Economic Capital needed to back the risks of the company as at the reporting date was not more than 2.87bn. This implies the business has an economic capital coverage ratio of 305%.

8. Reinsurance Management Strategy

8.1 We illustrate in the table below, the Company's reassurance arrangements in the current year;

Amounts in N'Millions				
Class of Business	2022		2023	
	Individual Life	Group Life	Individual Life	Group Life
Stanbic IBTC Retention	15	15	15	15
Treaty cover	700	700	700	700
Underwriting capacity	**715**	**715**	**715**	**715**

8.2 In 2023, Stanbic IBTC maintained its retention and treaty cover for the Group Life business at N15m and N700m respectively from the previous year. This is in line with the combined portfolio which allows for a higher risk retention.

8.3 The following table illustrates the effectiveness of the current reinsurance arrangement of Stanbic IBTC.

Description	2022	2023	Total
Reinsurance Cost	(568,854)	(955,285)	(1,524,139)
Inward Commission & Fees	307,129	669,614	976,743
Reinsurance recoveries	105,624	156,872	262,496
Value for Money Ratio	**-73%**	**-87%**	**-81%**

*The Value for Money Ratio = (Reinsurance recoveries + Inward Commission & Fee) / Reinsurance Cost)

The company appears to have achieved value for its reinsurance cover to the tune of 87% of the ceded premium. A minimum recovery ratio of 50% is adequate and in our opinion, the company's reinsurance arrangement is efficient.

The company has its reinsurance cover with counterparties that have a strong credit rating thus minimizing counterparty risks.

9. Risk Management

We reviewed the ERM Framework which the management provided and opine that it adequately reflects a transparent governance structure with a clear allocation and segregation of responsibilities, and an effective system for ensuring the transmission of information.

The Board is ultimately responsible for risk management within the Stanbic IBTC and delegates its oversight and management responsibilities in terms of the three lines of defense governance model.

The Three Lines Defense Model

Stanbic IBTC recognize that clear accountability is fundamental in the management of enterprise risk. The "three lines of defense" governance model therefore distinguishes between:

- Functions owning and managing risks as part of their day-to-day activities (first line of defense)
- Functions overseeing risks and providing robust challenge to the management teams (second line of defense)
- Functions providing independent assurance (third line of defense)

9.1 **The first line of defense** is responsible for day-to-day decision making in respect of the origination and management of risk exposure within the business. This consists of business units and line functions with primary responsibility for risk management. The first line of defense involves the actual business operations where the transactions are entered, executed, valued, and recorded. Most preventive controls are implemented at this level and detective controls help to manage control breaks at the transaction level. The primary responsibilities and objectives of the first line of defense are listed below

- Managing risks/implementing actions to manage and treat risks at a transaction level
- Implementing risk management processes on an ongoing basis as changes occur with business mix, systems, or regulatory and other requirements
- Executing risk assessments and identifying emerging risks at the transaction/business case level.
- Ensure day-to-day operations are carried out in compliance with approved Risk Appetite Limits
- Report and escalate material risk issues to the ERM Team
- Support the ERM function by carrying out periodic risk assessment within their functional areas.

9.2 **The second line of defense** is responsible for the oversight and challenge of the first line in its day-to-day management, control, monitoring and reporting of risks. Second line activities take place with the objective of ensuring the long-term sustainability of the organization and must be independent of management responsible for originating and managing the risk exposure. The second line of defense consists of Risk Management, Internal Control and Compliance department responsible for providing independent risk oversight, monitoring, and challenging the effectiveness of risk management processes. The main objective of the second line of defense is to provide oversight of the execution of the first line controls. The second line of defense is responsible for monitoring the internal controls that

have been designed with the following main responsibilities:

- Establishing risk management policies and processes.
- Strategically linking the control of risks enterprise wide.
- Providing guidance and coordination among all monitoring participants (risk management, Internal Control, compliance, and legal divisions).
- Identifying enterprise trends, synergies, and opportunities for change.
- Initiating change, integrating, and making new monitoring processes operational
- Constructively challenges the actions and decisions of the first line and assists the first line in considering risks when making decisions.
- Identity and assess emerging risks which pose a threat to long-term sustainability and ensure these are adequately addressed.
- Monitor ongoing application, suitability and operation of policies, frameworks and methodologies relating to risk management.
- Identity and assess relevant regulatory changes relating to the ERM process.
- Accountable for the measurement, monitoring and reporting of risk types and aggregated risk relative to risk appetite tolerance and limits. - Establish standards of performance and independent validation of risk models.
- Ensure standardized reporting by Business Units.
- Provide independent insight and support to the line of defense in the formulation of risk appetite and tolerance.

9.3 **The third line of defense** consist of Audit (Internal or external) with primary responsibilities for assessing and providing independent assurance on the adequacy, appropriateness, and effectiveness of Stanbic 's overall risk management framework as well as the effective implementation of risk policies and plan of action. It provides independent perspectives on the overall control framework and tests the adequacy and effectiveness of the designed controls. The main duties of this line of defense include:

- Providing oversight on the risk management process
- Reporting to the executive management committee and the board of directors on the state of the control environment and gaps in the controls or monitoring environment.
- Provide assurance over effective functioning of the 1st and 2nd lines of defense functions including independent assessment of the adequacy and effectiveness of the ERM Framework.
- Establish, implement, and maintain a risk-based audit plan.
- Review and evaluate adequacy and effectiveness of Stanbic IBTC policies and processes, documentation of controls in respect of these.
- Review levels of compliance by 1st and 2nd lines of defense with established processes, policies, and controls.
- Coordinate with external auditors to the extent requested by the Board and consistent with applicable law

10. Conclusions and Recommendations

10.1 We estimate the Risk Based Capital (at a 99.5% confidence level) needed to support the Company's business profile at the review date as ₦2.87bn, 143% of the existing minimum statutory capital of ₦2 billion

10.2 The economic capital coverage ratio is 305% and, on this basis, the Company is in a good financial condition.

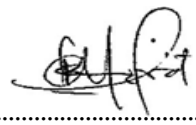
10.3 The company appears to have achieved value for money on its reinsurance arrangement with a ceded ratio of 87% and this in our opinion, is adequate.

10.4 Major risks impacting the business are Market risks, Underwriting risks, Investment and Reinsurance counterparty risks and operational risks.

10.5 We recommend a more detailed Asset Liability Matching and Embedded Value Analysis, in the next FCR due at the end of the current year.

10.6 We are very grateful for the opportunity to conduct a Financial Condition assessment on the business.

Yours sincerely,



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Miller Kingsley, FNAS, FSA
Fellow, Nigerian Actuarial Society
Fellow, Society of Actuaries, USA
FRC/2012/NAS/00000002392

Appendix 1 – Reliance & Limitation

Reliance

In carrying out this work we have relied upon the financial statements, business plans and other information (including discussions with the Management and Actuarial Services department) provided by Stanbic IBTC Insurance. 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.

This report takes into account data made available as at 31 December 2023.

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.

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The report may be distributed to the Senior Management of Stanbic IBTC Insurance 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 – Economic Capital Methodology & Stress Level Derivation

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

Market Risks

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.

Credit spread and liquidity risks have not been explicitly calculated for the following reasons:

- Liquidity risk – this is a difficult risk to quantify within the economic calculations. The Company is recommended to ensure that a robust Liquidity management policy is in place in order to be able to monitor this risk.

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

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

Asset class	Stress level @ 95%	Stress level @ 99.5%
Equity	29.08%	41.54%
Property	30.63%	39.47%
Interest rate	32.20%	45.00%

The above stresses were obtained by using a combination of fitting historical data of various market

indices (where available) to find the appropriate stress level and also benchmarking against the Solvency II widely used stress levels.

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

Equity Risk

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

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

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.

We fitted the NSE historical index values from January 1985 to December 2023. The normal distribution was a good fit for the data. Using the normal distribution, we determined stress levels of 29% and 41% for confidence levels of 95% and 99.5% respectively.

We also checked how frequently historical annual returns have fallen or been close to the 29.1% and 41.5% levels. In 2008, the stock index fell by about 46% and in 2011 also fell by about 23%.

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.

Property Risk

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

The main downside risk is the fall in property values.

The local market level of stress for this risk was difficult to obtain given the non-existence of property indices or well defined historical property values in the local market

In order to derive an appropriate stress, we assumed the property returns would follow closely equity returns but slightly better and less risky. This is a unique feature of the local market.

The recent past has shown positive performance of property investments whilst equity returns have been negative in some instances.

We then assumed annual property returns of 15% with standard deviation of 9.5%. Assuming a normal distribution of returns, we then calculated the relevant stress levels at 95% and 99.5% confidence levels.

To support the notion of better property returns is the fact that the company is invested in properties mainly in Lagos State. Property values have been on an increase over the last 20 years, so it is hoped that the trend will continue in the near to medium term. However, this assumption will continue to be monitored in the future computation of economic capital.

Interest Rate Risk

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.

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.

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

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

The stresses we have adopted, however, are much higher than the result obtained as in the past 5 years, we have witnessed a variance in interest rate of about 4% between successive financial years.

The stressed yields were applied using the formula: $\boldsymbol{current\ yield} * (\mathbf{1} + \boldsymbol{upward\ stress})$ or $\boldsymbol{current\ yield} * (\mathbf{1} + \boldsymbol{downward\ stress})$

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}

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)

Credit Risk

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

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.

The following exposures to counterparties were used:

Banks à cash and cash equivalent holdings
Reinsurers à estimated reinsurance recoveries over the next 12 months
Debtorà amounts owed.

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 ratings agencies' and the

S&P default rates were used for the bank holdings as per the following table:

Rating Scale	Default Probability
AAA	0.01%
AA+	0.01%
AA	0.02%
AA-	0.03%
A+	0.06%
A	0.09%
A-	0.11%
BBB+	0.16%
BBB	0.22%
BBB-	0.39%
BB+	0.54%
BB	0.81%
BB-	1.39%
B+	2.54%
B	5.37%
B-	8.72%
Unrated	26.53%

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

The formula used was: Loss given default x Probability of Default.

Operational Risk

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

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

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.

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.

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

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

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

CR_{op} - 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:

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

Where,

$$Op_{premiums} = 0.04 \times Earn_{nl} + Max\{0, 0.04 \times [Earn_{nl} - 1.1 \times pEarn_{nl}]\}$$

&

$$Op_{provisions} = 0.0045 \times Max\{0, Tp_{nl}\}$$

$Earn_{nl}$ - 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

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.

Insurance Risks

Life Insurance risks

The life insurance risks modelled were:

- Mortality risk
- Longevity risk
- Lapse
- Expenses
- Catastrophe

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

Risk type	Stress level @ 95%	Stress level @ 99.5%
Mortality	+10.00%	+15.00%
Longevity	+6.0% immediate stress with +0.25% pa improvement	+10.0% immediate stress with +0.50% pa improvement
Lapse	33.90%	42.10%
Maintenance Expense	+7%	+10%

Mortality risk

This is the risk of loss, or of adverse in the value of the insurance liabilities resulting from the change in the level, or trend, or volatility of mortality rates

The impact of worsening mortality on the Risk business (mainly protection business) was checked in order to determine the capital requirement.

Historical mortality investigations were performed for the last 3 years using the Life insurance actual claims data in order to determine an appropriate stress level for each confidence interval.

We observed that the risk business has consistently recorded low deaths compared to the assumed A6770 mortality table used in the normal IFRS valuations. In order to determine the best estimate, we applied 50% of the A6770.

The Solvency II mortality stress of a permanent increase of 15% in mortality rates was used for the 99.5% confidence level. Equivalent stress levels for other confidence levels were calculated and used in determining capital at different confidence levels.

The manner in which the stress was applied to the mortality tables was to multiply the relevant age mortality rates by (1 + stress level %) to obtain new mortality rates that would be used in the projections.

Projections were performed using the stressed mortality rates and the difference between the stressed liabilities against the un-stressed liabilities gave the additional capital requirement for mortality.

Longevity risk

This is the risk of loss, or of adverse in the value of the insurance liabilities resulting from the change in the level, or trend, or volatility of mortality rates where a decrease in mortality rates leads to an increase in the value of the insurance liabilities.

This risk is inherent in the annuity business where it has a significant impact due to the Company having to pay longer than expected annuity payments as a result of pensioners living longer.

Similar to mortality risk, there was not enough historical data to determine an appropriate stress level. A similar approach to mortality risk was applied in determining the stress.

We used the Solvency II parameters as a benchmark and determined the various stresses for each of the confidence levels. The stresses used are shown in table 4 above.

To illustrate the differences in stresses, the standard table used in IFRS valuations for annuitant mortality assumes a 65 year-old will on average, live for 14 years. However, the revised mortality tables at the different confidence levels assume the following additional years to a 65 year-old:

Confidence level	Additional years lived by a 65 year-old annuitant
95.00%	15 years
99.50%	16 years

The above stress levels need to be monitored as more experience develops on the annuity book.

The capital requirement was the difference in reserves between improved mortality rates and the standard A6770 mortality table.

Lapse risk

This is the risk of loss or change in liabilities due to a change in the expected exercise of policyholder options. The lapse risk covers all policyholder options e.g. lapses, surrenders.

Investigations into historical data for lapses and surrenders from 2010 to 2014 were performed to fit a distribution. The data was not sufficient to fit a distribution. This data is specific to the Nigerian

market and no further studies have been carried out since 2014. We intend to do so soon, to refresh our future analysis.

Based on the assumption that actual lapses fall in the range of the historical data, we simulated the available data to get extra lines of experience using random number generation and fitted a normal distribution.

Stresses were determined from the resulting normal distribution using the fitted parameters. The derived stresses are contained in table 4 above.

Capital calculations for both lapse up and lapse down scenarios were performed. The scenario giving the higher capital requirement was used.

It is also recommended to test the Mass Lapse events – where a large number of lapses are assumed to occur and the resulting capital determined. The mass lapse event was not tested and will be considered in the next Economic Capital calculation. However, the stresses used were still considered to give an adequate adverse view of capital requirements for the relevant confidence intervals under consideration.

Expense risk

This risk arises from the variation in the expenses incurred in servicing insurance contracts. This includes the risk arising from the variation in the growth of expenses over and above that of inflation.

The expense stresses were derived as follows:

- (1 + stress level % as per table 4 above) was applied to the best estimate
- In addition, an increase of the greater of an absolute addition of 2% to the best estimate level of expense inflation (8% per annum) and a 20% increase in the best estimate level of expense inflation was applied to determine the overall stress level to use for future expenses.

We understand management are committed to maintaining a low level of expenses through efficiency and innovation. This outcome of prudent expense management will be checked at the next economic capital exercise.

Catastrophe Risk

This was assumed to apply to Group Life business only. A loss ratio approach was adopted.

For this risk, pandemics or other high severity events were considered. The best example given current climate would be the COVID-19 pandemic. The current crisis has been labelled the one of the worst in history.

Therefore, death statistics and exposures for this pandemic should have produced a basis on which to estimate the impact for capital purposes. However, COVID, which has caused deaths of 15,000 under an exposure of over a million, has not provided enough ''catastrophic-like'' figures to give an adverse impact on capital.

In particular, the Nigerian Ebola crisis only led to 8 deaths out of the entire 170 million (est) population – where the Company's business provides insurance. No detailed Covid mortality investigation has been executed yet, but as soon as reliable statistics are available, we will use the results of said investigation use as benchmark for catastrophe risk.

On the other hand, historical claims experience showed loss ratios in excess of 100% in some years mainly due to government/parastatal schemes on Group Life schemes. However, the private sector schemes have lower loss ratios. Therefore, 150% loss ratio was assumed to represent an adverse scenario. A probability of 5% being 1-in-20 was then applied in order to determine the catastrophe risk capital for this business.

Appendix 3 Correlation Matrices

Correlations for Market Risks have been derived using actuarial judgment 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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