Macroeconomic Environment Deterioration and the Reinsurance Industry

Dissecting the Impact of Currency Depreciation and Inflation on the Performance of African Reinsurers

Dr. Corneille Karekezi

Group Managing Director / Chief Executive Officer

Presentation at the 27th AIO Reinsurance Forum | Tunis (Tunisia) | 02 October 2023

Outline: Key Sections

05
Recommendations

Summarise the key takeaways from the identified challenges and strategic intervention to reduce the impact.

04
Illustrative Case Study

Explore the challenges of African reinsurers across the dimension of reporting and impact on financial statements.

03
Inflationary Pressure

Describe the inflationary exposures of reinsurers. It also how inflation impacts each line of business and action plans.

02
Currency Risks

Take a look at the different currency regimes in Africa for a better understanding of performance and FX risk exposures.

01
Macroeconomic Environment and Reinsurance Industry

Highlight the recent happenings in the African macroeconomic environment and pulse of the reinsurance industry.

Macroeconomic Environment and Reinsurance Industry

Macroeconomic Environment: Pressures & General Economic Slowdown

Debt Sustainability

01

Subdued global growth could impact the **demand for African exports** coupled with the **tight global financial conditions**, this could exacerbate the **cost of debt service** and drive more countries into **debt distress** or a **high risk of debt distress**.

Inflationary Pressure

02

The **rising inflationary pressure** especially on **food and energy** compounded by **Russia-Ukraine** war has led **to tightening of monetary policy** by central banks. This is responsible for the **unprecedented hikes in interest rates** by central bankers.

Currency Depreciation

03

There is **significant devaluation of currencies**. Even previously **insulated markets now have a crisis**. **IMF** recommends the review of **pegged exchange rate regimes**. The actions in **Egypt, Nigeria** and others is being **monitored closely**.

Integration & Economic Blocs

04

The **AfCFTA continues to move at a much slower speed**, but the expansion of **the BRICS** economic bloc is **another change** in the global and regional economy that needs *to be closely monitored*.

Political Tensions

05

Continued **Russian invasion** of Ukraine and other **geo-political tensions** remains a major risk. Further **escalation** could affect **commodity prices** and dampen medium-term growth prospects and **endanger Africa's economic recovery**.

Extreme Weather

06

Loss and damage from extreme weather events could translate into **fiscal crisis** thereby expanding public spending to **rebuild damaged infrastructure** leading to **change in government priorities**. There is significant **insurance protection gap**.

Government Policies

07

The sunset date on fuel subsidy in some countries is a laudable but unfavourable intervention. The **increase in central bank borrowing** also continues to put pressure on nations. There seems to be **mismatch between fiscal and monetary policies**.

Internal Conflicts

08

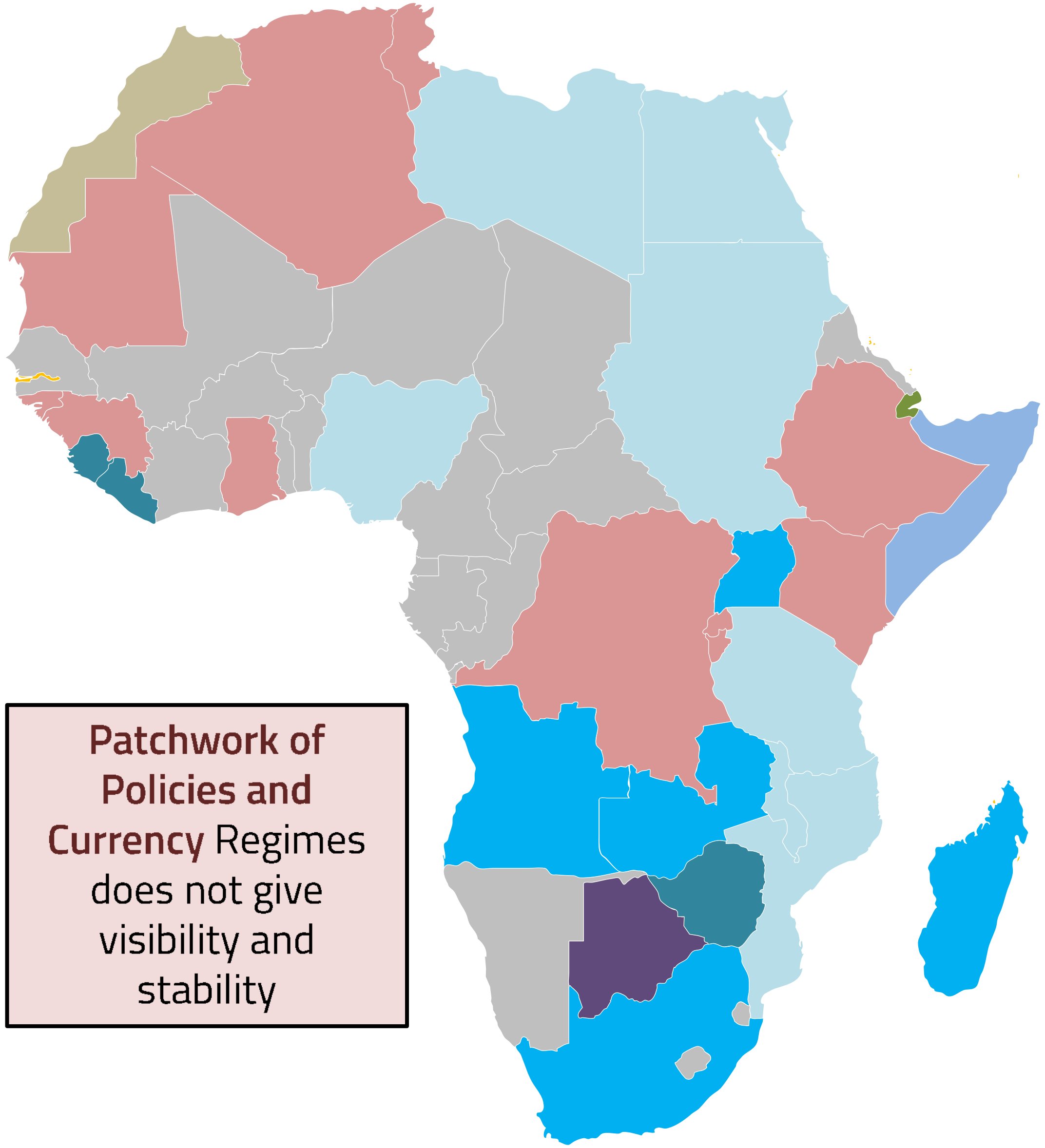
Unresolved internal conflicts in some countries are **diverting resources from growth-enhancing public investments** and activities toward **military ans security spending**. Evolving **Sudan** case and **military coups** in west Africa, plus **Jihadist wars**.

Reinsurance Industry: Positive Industry Momentum Impacted by Macroeconomics

Moody's (September 2023)	Fitch (September 2023)	AM Best (September 2023)	S&P (September 2023)
(Remains Stable)	(Revised Neutral to Improving)	(Remains Stable)	(Revised Negative to Stable)
Headwinds High Exposure to **Natural Catstrophe**; High Social and Economic **Inflationary Pressure;**	**Headwinds** High **Claims Inflation**; Elevated **Natural Catastrohe Losses**; Volatile **Financial Markets**;	**Headwinds** Heightened Natural Catastrophes; Geopolitical and Economic Uncertainty: *Inflation Interest Rates and Recession Risks*; Volatile **Financial Markets**; More **Complex Risk Environment**; Widening **Protection Gap**;	**Headwinds** Persistent **Inflation Risks**; Elevated **Natural Catastrophe Disasters**; Volatile **Financial Markets**; Increasing **Cost of Capital**;
Tailwinds Positive **Pricing Environment**; Strong **Industry Capitalisation**; Higher **Demand for Reinsurance**; Better **Enterprise Risk Management**;	**Tailwinds** High Price Discipline; Rising **Reinvestment Yields**; Return on Capital to Exceed Cost of Capital; Strong **Reinsurance Demand**; Strong Capital Adequacy;	**Tailwinds** Sustained **Upward Pricing Trend and Improving Terms and Conditions**; Shift in **Business Mix** and Positive **Reserve Development**; Strong **Reinsurance Demand;** Continued **Underwriting Discipline**; Strong **Capitalisation**;	**Tailwinds** Favourable **Reinsurance Pricing**; Strong **Investment Income due to Higher Bond Yields**; Robust **Industry Capitalisation**; Tighter **Terms and Conditions**; Earning **Cost of Capital**;

Currency Risks
(Perspective of Reinsurers)

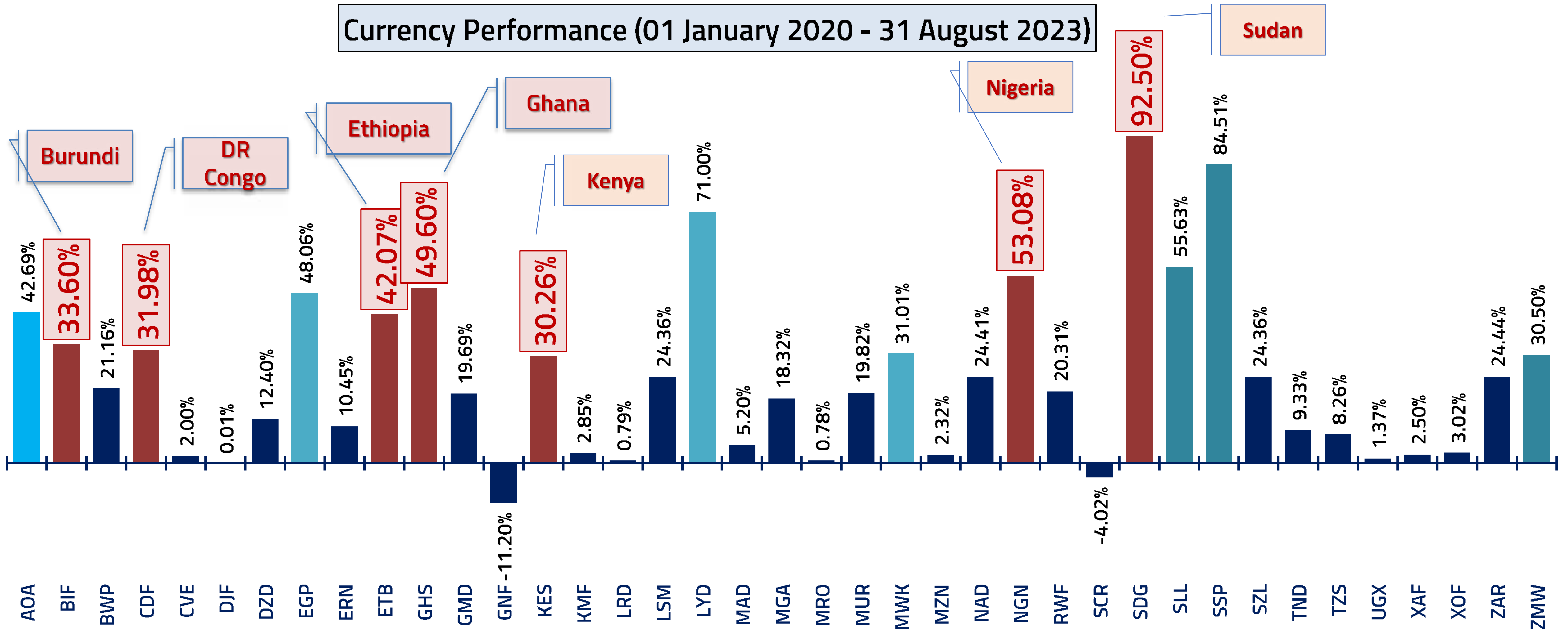
Currency Regime: Diversity of Exchange Rate Arrangements



Patchwork of Policies and Currency Regimes does not give visibility and stability

- **Currency Boards (1):** Board backs local currency with foreign currency and fixes rates. There is no monetary policy autonomy and exchange rate flexibility. Example: Djibouti.
- **Conventional Pegs (21):** Country pegs its currency at a rate to another or group of currencies. The currency cannot fluctuate more than 1% relative to the established target. Examples: Cote d'Ivoire, Cameroon, Senegal, Gabon, and Burkina Faso
- **Stabilized Arrangement (7):** Pegged exchange rates that can be adjusted for market conditions. It remains stable as a result of official action. Examples: Egypt, Nigeria, Tanzania, Sudan, Malawi, Mozambique and Libya
- **Crawling Peg (1):** Currency is adjusted in small amounts at a fixed rate in response to quantitative indicators such as inflation essentials. Example: Botswana
- **Crawl-Like Arrangement (12):** The exchange rate must remain within a narrow margin of 2% relative to statistically defined trend for 6 months or more. Examples: Algeria, Ethiopia, Kenya, Ghana, DR Congo, Tunisia and Guinea.
- **Pegged Exchange Rate with Horizontal Band (1):** Value of the currency is maintained within 1% of a fixed central rate or the margin between maximum or minimum value exceeds 2%. Example: Morocco.
- **Floating or Free Floating (7):** currency exchange rate is largely determined without an ascertainable or predictable path. The market intervention may be direct or indirect and serves to moderate the rate of this change. Examples: South Africa, Angola, Uganda, Zambia and Madagascar
- **Other Arrangements (4):** exchange rate regime does not fit into any category and is characterized by frequent shifts in policy. Examples: Zimbabwe, Liberia, South Sudan and Sierra Leone.

Currency Performance: Significant Devaluation Since Covid-19 Pandemic



The countries with the **most significant devaluation** (Above 30%) have a **soft peg under a stabilized or crawl-like arrangement.**

Is Collecting Reinsurance Premium in USD going to be the Norm for African Reinsurers?

Source: Thomson Reuters Exchange Rates (31 August 2023)

Reinsurance Industry: Foreign Exchange Risks Exposure

Accounting Exposure

Economic Exposure

<u>Translation Exposure</u>: the impact of exchange rate risk on accounting measures such as the firm's consolidated financial statements.

<u>Transaction Exposure</u>: The effect of exchange rate risk on individually contracted transactions

<u>Operating Exposure</u>: The sensitivity of firm value in national currency regarding unexpected foreign exchange rate changes

Exposed Items

Other Assets and Liabilities

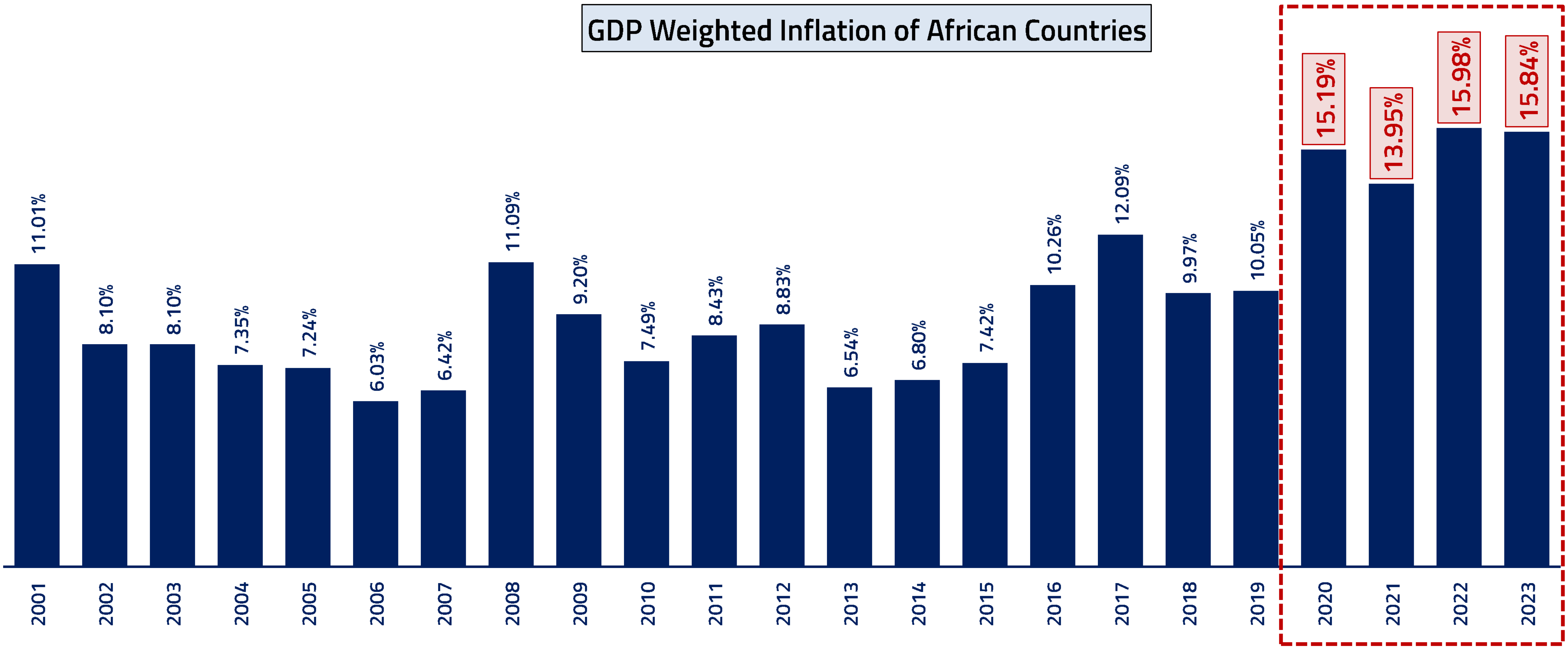
Receivables and Payables

Revenue and Expenses

These exposures manifest in the form of <u>Margin Risk or Earnings Risk</u> that significantly impact returns due to Availability, Convertibility and Transferability challenges. Possible Mitigations: Prompt Reinsurance Settlements & strict enforcement of No Premium, No Cover

Inflationary Pressures
(Perspective of Reinsurers)

Inflationary Trends: Driven by Covid-19 Pandemic and Russia-Ukraine War



There is an unprecedented spike in the GDP-weighted inflation of the 54 African countries. However, Africa is not a country!

The drop in Inflation shown for 2021 could be attributed to the expectation of recovery before the Russia-Ukraine war created new volatilities.

Africa Re

Source: IMF World Economic Outlook Database – April 2023

Inflation: Considerations in the Claims Process

Claims Inflation refers to changes in the **expected claims cost** level of a **like for like policy** over time, where like for like means having **consistent policy terms, coverage and exposure**. This also includes impact from both **severity and frequency effects**.

Economic Inflation	Excess Inflation	
Pure Inflation	**Other Inflation**	**Social Inflation**
Changes in **average prices of goods and services** related to a basket of representative claims **due to changes in price level and/or utilization relevant to the business mix**. This includes for example **labour, energy, construction and care costs**. The pure inflation in claims cost is equivalent to the general economic inflation.	Covers ways in which claims costs rise **above general economic inflation**. It is associated with resources specific to the nature of the claims costs and captures for example **growth in costs associated with emerging risks from new materials, medicine, technologies, changes in legal environment, political development and social attitude**.	Changes in claims costs over and above pure inflation resulting from **increasing litigation, broader definition of liability (excluding those caused by changes in policy terms and conditions), more plaintiff friendly legal decisions and larger compensation jury and social movements**. This is a subset of **excess inflation**.
Current Inflationary Pressures	Electrical Cars Repair Cost	Covid-19 Claims Related

The spread between Economic Inflation and the full extent of Claims Inflation from the additional drivers is Excess Inflation.

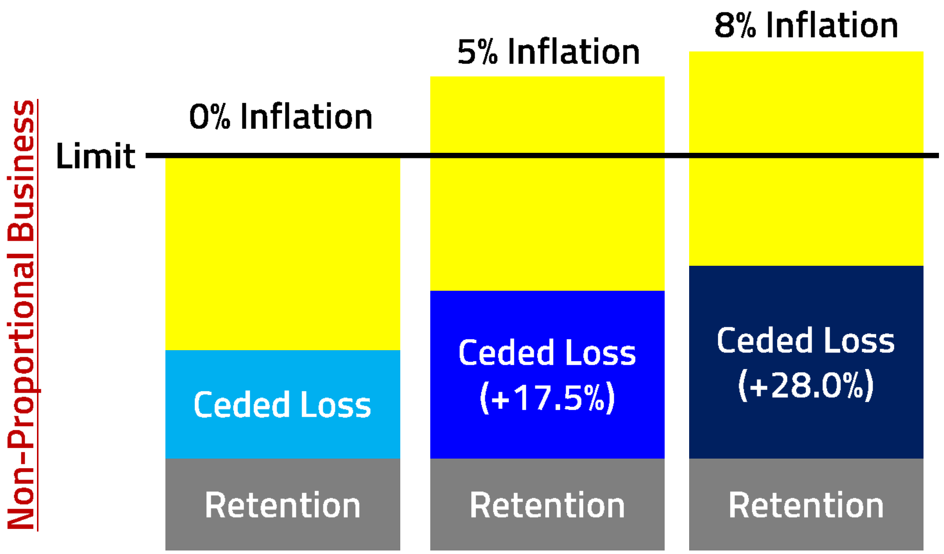
Source: Lloyd's Definition of Claims Inflation

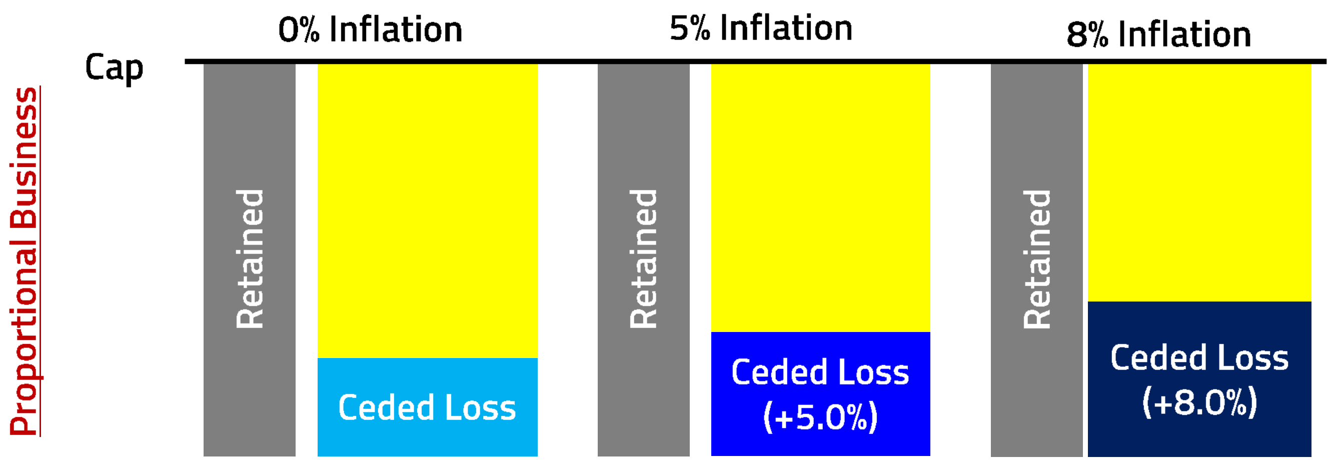
Reinsurance Industry: Impact by Lines of Business

Line of Business	Producer Price Index	Consumer Price Index	Social Inflation	Wage Inflation	Medical Inflation	Construction Index	2022 E	2023 F	Reason
Property							High	Above Average	Price of materials peaked in 2022 but higher wages expected in 2023.
Liability							Average	Above Average	Expected wage, medical and social inflation.
Motor							High	Above Average	Higher car (parts) prices related to supply chain imbalances, wage growth inflation and medical cost inflation.
Health							Below Average	Above Average	Potential medical cost inflation.
Life							None	None	Benefits are set at policy issue.
Workers Compensation							Average	Above Average	Expected wage, medical and social inflation.
Engineering							High	Above Average	Expected economic inflation, among others.
Marine							High	Above Average	Expected economic inflation.
Credit & Surety							Below Average	Above Average	Expected economic inflation.

Reinsurance Industry: Effects of Inflation

Inflationary Trend: High uncertainty in forecasts increases result volatility	Action Plan: Primary market responses influence Reinsurance considerations	Portfolio Structure: Reinsurance claims inflation dependent on treaty type
• **Inflationary peak continues longer than anticipated by many experts**. • **Trickle-down effects** (e.g., wage-price spiral) still unfolding and partly unforeseeable. • Future inflation assumptions contain **large margin of error** due to economic and political uncertainty. • **Higher deviations** between the developments of different indices than previously observed.	• **Rate changes** can counteract future inflationary pressure. • **Adjustments of policy conditions** can reflect changed market environment(e.g., **deductibles, sums insured and limits**). • Increase of open claims reserves. • **Application of average clause** in Property claims.	• **Proportional business** directly **dependent on primary market result** as illustrated below. • **Non-proportional business**: generally **higher impact of inflationary effects** as illustrated below. • **Facultative business increases to alleviate undervaluation issues** from inflation.





Inflation: Demand and Supply Concerns Leading to Underinsurance

Impact of Higher Inflation on Insurance Demand		Impact of Higher Inflation on Insurance Supply	
Positive	**Negative**	**Positive**	**Negative**
Sums Insureds: Due to high replacement costs and costs of living, there is a **need for higher policy limits for P&C** and life protection products.	**Purchasing Power**: Inflation **erodes the purchasing power of consumers** leading to lower demand for non-essential insurance products.	**Product Innovation**: There is an expanded range of viable products due to **better risk appetite for savings life products due to higher yields.**	**Underwriting Capacity**: Due to mark-to-market losses on fixed-income securities and **impact on equities**, this could lower risk capital capacity.
Risk Perception: Due to inflation shock, there will be **heightened risk perception and awareness**.	**Premium Rates:** The increase in premium rates due to rising costs and losses leads to **lower demand for non-essential insurance**.		**Regulatory Constraints**: In some cases, there **is regulatory constraint on premium adjustments** due to the high inflationary environment.
Higher Yields: Under high inflationary environment, interest rate hikes are inevitable making **inflation protected products such as savings-type life policies more attractive**.	**Economic Decline**: In some cases, inflation leads to **slower economic growth or recession** leading to lower demand.		**Risk Appetite**: In high inflationary cases, insurers prefer **to shorten the tail leading to reduced risk appetite for casualty lines** and other longer-tail businesses.
Portfolio Shifts: Households **shift from financial to real assets**. This is **positive for non-life insurance but negative for life insurance**.	**Product Attractiveness**: Inflation **reduces the value of future nominal payouts** for fixed benefits life products.		

Overall, the impact of inflation of life insurance is neutral but negative for non-life insurance segment. Non-Life Reinsurers Adjusted Sharply their Prices due to Prior Market Losses over Many Years of Inadequate Pricing

Source: Geneva Association and Munich Re Economic Research

Illustrative Case Study

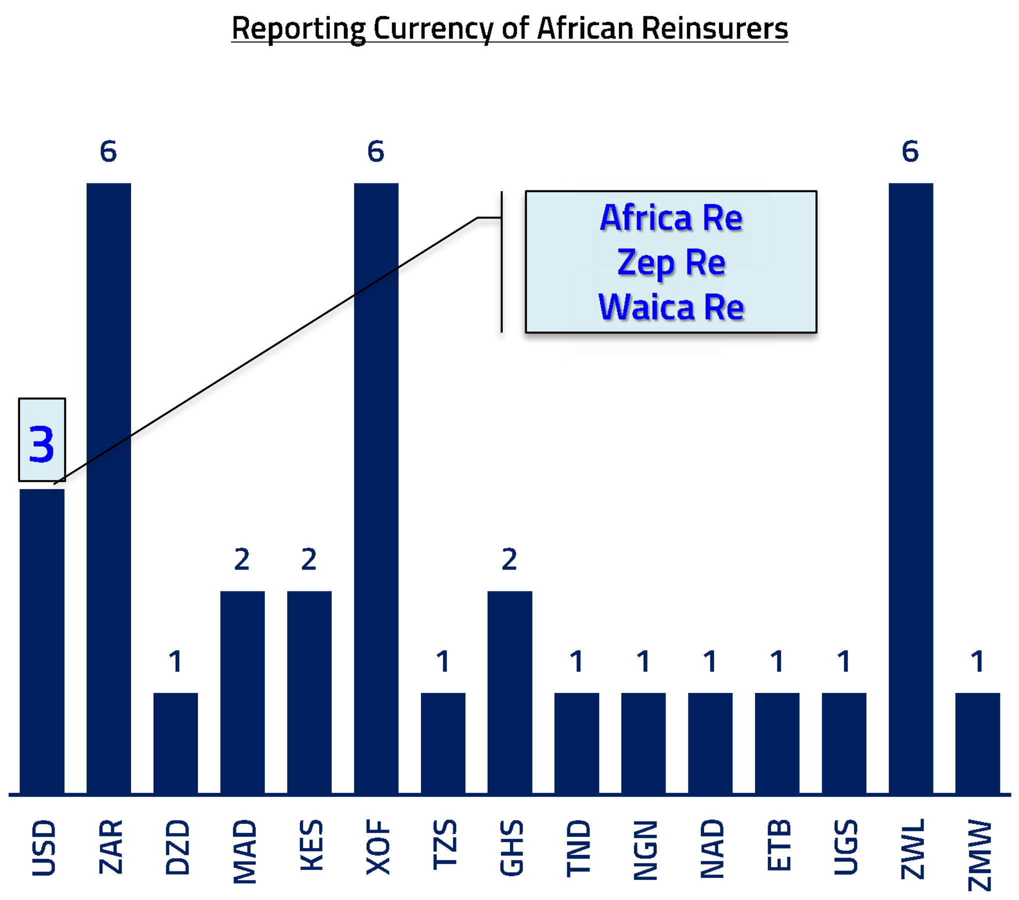
(African Reinsurers on Inflation and Currency Risks)

Inflation: Considerations for Reinsurer

- **Investments Risks**: There are some asset classes that are positively correlated to inflation such as investment property and cash instruments. However, long-term bonds and equity generally fare less favourably in times of high inflation.
- **Reserving**: Rising inflation implies higher cost of future claims, which could increase the risk of insufficient reserve (adverse loss development) for business from earlier underwriting years.
- **Expenses**: High inflation translates into higher wages and other operational expenses leading to high expense ratios, particularly when **premiums are not indexed to inflation or adjusted frequently**.
- **Capital / Solvency**: Due to a duration mismatch between assets and liabilities, there could be realized and unrealized losses that impact the capital and solvency of a reinsurer. There is also constrained capacity in the retrocession market leading to higher prices where available.
- **Foreign Exchange Risks**: The different monetary policies in different countries can result in an unfavorable change in exchange rates for the currencies of the insurer's portfolio.
- **Business Strategy**: There is an increase in premiums and a drop in margins based on the time-lag between inflation and increase in premiums. Due to competition and international nature of reinsurance, the increase in premium is not at the same pace as the rise in claims.

AfricaRe

African Reinsurers: Blend of Transaction and Reporting Currencies



African reinsurers report using 15 currencies with **only 8.57% of them reporting in US Dollars**. The remaining **91.43%** report in original currency including subsidiaries of international reinsurers based in South Africa.

Each of these currencies are under different control and management regimes

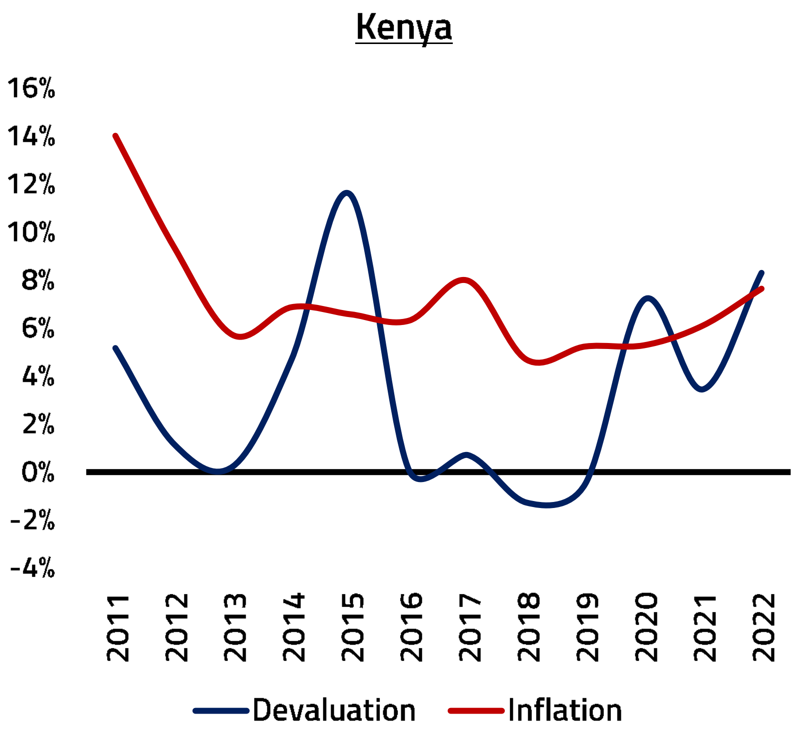
The performance of these currencies respond to the different macroeconomic policies of their respective governments.

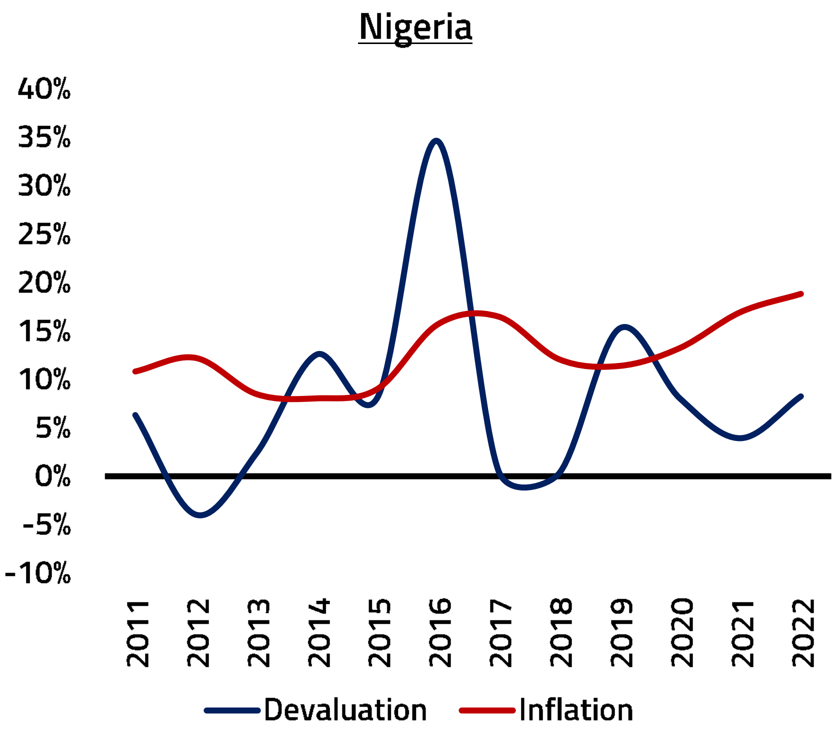
Code	Description	Depreciation *Since Jan 2020*
USD	US Dollar	NA
ZAR	South African Rand	24.44%
DZD	Algerian Dinar	12.40%
MAD	Moroccan Dirham	5.20%
KES	Kenyan Shilling	30.26%
XOF	West Africa CFA Franc	3.02%
TZS	Tanzanian Shilling	8.26%
GHS	Ghanaian Cedi	49.60%
TND	Tunisian Dinar	9.33%
NGN	Nigerian Naira	53.08%
NAD	Namibia Dollar	24.41%
ETB	Ethiopian Birr	42.07%
UGS	Uganda Shillings	1.37%
ZWL	Zimbabwean Dollar	NA
ZMW	Zambian Kwacha	30.50%

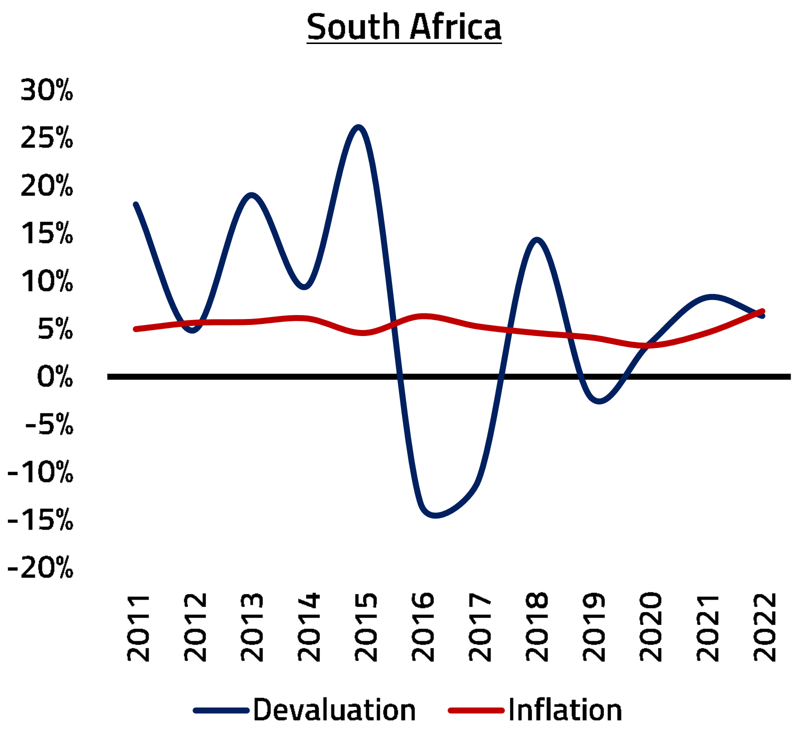
While reinsurers transact business in original currency **except for some special risks, the currency in which premiums are paid depends on local presence**. For example, a reinsurer based in Nigeria is paid in Nigerian Naira while a reinsurer based outside Nigeria is paid in US Dollars as they do not have local bank accounts. There has been an increasing challenge to **pay premiums or repatriate earnings** for most reinsurers **due to availability, convertibility and transferability issues**. This is now worsened by the **challenging macroeconomic environment leading to significant transaction and translation exposures**.

Source: Thomson Reuters Exchange Rates *(31 August 2023)* and Atlas Magazine *(January 2023)*

Africa: Double Impact from Inflation and Currency Devaluation







The economy runs a **crawl-like arrangement** and the relationship between inflation and devaluation is moderate and aligns except for years of abrupt depreciation this means that there is more significant pass through of exchange rate devaluation into inflation.

The economy runs a **stabilized arrangement** and the relationship between inflation and devaluation is not significant showing that the issues of weakening currency, poor reserves and wider trade deficit need to be addressed as it shows the misalignment between fiscal and monetary policy actions. The country has a thriving parallel market putting pressure on the currency at the moment.

The economy runs a **floating arrangement** and the relationship between inflation and devaluation is stable or moves in the same direction. There is no evidence of exchange rate pass through of devaluation into inflation.

Reinsurance Industry: Impact of Inflation and Currency Depreciation

Item	Local Currency	US Dollar	Justification
Gross Written Premium	Positive	Moderate	There is growth due to inflationary pressure. However, the pace of growth does not align with the rate of inflation due to time lag of premium adjustments, **portfolio structure (geography and lines of business), reporting currency and competitive pressures. Reinsurers reporting in local currency record stronger growth.**
Net Written Premium	Positive	Moderate	
Net Earned Premium	Positive	Moderate	
Net Incurred Claims	Negative	Negative	There is a spike in **claims due to reserving for past claims and replacement costs**. For reinsurers reporting in US Dollar, the increase due to inflation is moderated by the currency depreciation on local currency denominated contracts.
Net Acquisition Cost	Negative	Moderate	This is in line with the growth recorded on the revenue items. However, the impact is lower for reinsurers that report in US Dollar due to exchange rate impact.
Management Expenses	Negative	Moderate	There is a spike in operating expenses especially due to wage inflation.
Underwriting Income	Negative	Moderate	This in line with the spike in claims costs and impact higher for reinsurers in local currency.
Investment Income and Other Income	Positive	Negative	Due to the portfolio structure (strategic assets allocation), most reinsurers in local currency invest more in real estate and cash instruments. However, reporting in US Dollar posts capital losses from the equity and bond portfolio especially based on maturity profile.
Foreign Exchange Movements	Positive	Negative	This is driven by translation losses from the Asset-Liability Matching policy for surplus assets.
Profit Before Tax	Moderate	Negative	This is in line with the underwriting income, investment income and FX movements.
Tax	Neutral	Neutral	There is no impact
Net Profit	Positive	Negative	This is in line with the underwriting income, Investment income and FX movements. It also depends on the portfolio evolution due to the adverse development in claims.
Total Assets	Positive	Moderate	The revaluation of assets is expected is expected to increase at a slower pace.
Total Liabilities	Negative	Negative	The revaluation of liabilities especially technical provisions is expected to be high.
Shareholders' Fund	Positive	Moderate	The impact from the net income and fair valuations from investment assets.

Recommendations

Reinsurance Industry: Understanding Inflation and Strategic Response

	Challenges	Description	Response
1.	Margin Pressure	Losses precede premium adjustments.	**Adjust premiums early** through active portfolio monitoring.
2.	Supply Chain Disruption	Leads to claims inflation and prolonged payout patterns.	Review premium rates and **adjust reserves regularly**.
3.	Static Policy Conditions	Adjust lag for fixed deductibles and business interruption waiting time deductibles.	**Review / Index deductibles and business interruption waiting times** (shorten duration in longtail businesses). This can be achieved through the introduction of **claims-made policies or sunset clauses**.
4.	Valuation Mismatch	Irregular valuation intervals and unreported increases in the sums insured.	**Review / Index sums insured by introducing specific clauses and limits to address undervaluation**. The index clauses are contract clauses linking premiums, limits, and deductibles or retention to an inflation-related index. The most used index clauses are full index, franchise index or severe inflation clauses.
5.	Growing Protection Gap	Potential insufficient coverage.	**Review reinsurance / retrocession coverage and programme structure for optimization.**
6.	Rising Interest Rates	Potential increase in (un)realized losses, lower equity market performance and widening credit spreads.	**Review strategic assets allocation** (portfolio rating, maturity profile and geographical spread for equity and bonds) **in favour of cash instruments and short-term securities** as well as regular reconciliation of accounts for **technical deposits and reinsurance receivables to improve liquidity and take advantage of rate environment on cash instruments**

NB: It is necessary for reinsurers to conduct a sensitivity analysis of inflation to the performance under these macroeconomic conditions.

Reinsurance Industry: Understanding Currency Risks and Strategic Response

01	02	03	04	05
Risk Identification	**Risk Assessment**	**Risk Evaluation**	**Risk Response**	**Risk Monitoring**
Transaction Exposures: This covers exposures from generating revenues and expenses in several currencies. **Translation Exposures**: This covers exposures from the revaluation of foreign assets and liabilities. **Economic Exposures**: This covers exposures from change in value or competitive position due to varying exchange rates.	This covers devising appropriate risk management strategies after the exposure can be identified and measured to a degree of confidence. It attempts to **quantify the probability and extent of potential loss and severity to the various currency exposures**. This can be achieved using **sensitivity and scenario analysis, Value at Risk (VaR) model or stress testing**.	This attempts to compare the **estimated risks during the risk assessment and organisation's risk appetite and tolerance levels**. It assists in **risks prioritization** helping to identify which exposures to focus on and manage. This can be achieved using a **probability and impact heatmap** for all currencies in the portfolio.	Develop strategic interventions that reduce risks that threaten Corporate objectives. **Internal**: This includes **Credit Control** (*Asset Liability Matching, Netting and Setting and Pre-payments*), **FX Risks Premium Loading**, **Payments in Foreign Currency** and **Portfolio Diversification**. **External**: The use of Hedging Instruments (Forwards, Futures, Options and Swaps). They are unavailable and expensive where possible.	This ensures that risks are being managed and adjustments made based on market conditions. **The absence of FX Management Policy leaves a company unprepared to control the potential adverse effect of currency movements, potentially leading to increased cost, reduced market share and lower profit margins.**

The foreign exchange risks is critical for reinsurers that play on the international stage.
Robust Strategy and Risk Management Departments are necessary to navigate the current.

Closing: Key Takeaways

Macroeconomic Environment

Despite a positive momentum in the industry, African reinsurers are operating in a **challenging macroeconomic environment that has significantly limited the gains of the hard market cycle.**

Inflationary Pressure

The effect of the escalating inflationary environment has impacted the financial performance with **claims inflation and volatile financial markets reducing investment income and underwriting performance depending on portfolio mix.**

Exchange Rates

The different currency regimes and devaluation of African currencies is a source of risks. **Those reinsurers that report in US Dollars are significantly exposed to this risk from transactional and translation exposures.**

Market Protectionism

The macroeocnomic pressures leading to currency risk, inflation risk and interest rate risks is promoting the **unsustainable practice of new and weaker reinsurers with small capitalisation and weak financial rating.**

Regional Integration

The long-term objective of AfCFTA and Pan-African Payment and Settlement System (PAPSS) may **reduce the pressure on convertibility and transferability of funds within Africa.**

Reinsurance Industry

There are positive signs based on the views of Rating Agencies. With the macroeocnomic pressures, **will African reinsurers be able to achieve their cost of capital. What are the strategic options available to market players?**

Thank You