

FREE GUIDE · INSTITUTIONAL INVESTORS SERIES

# The African Investor's Guide to Derivative Markets

JSE Futures · FX Forwards · NDFs · Commodity Hedging

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→ Interest Rate Derivatives — Swaps & Futures

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## CHAPTER 1 · INTRODUCTION

# Why Derivatives Matter for African Investors

Derivative instruments are among the most powerful tools available to institutional investors for managing risk. In African markets — where currency volatility, interest rate uncertainty, and commodity price swings can dramatically affect returns — derivatives are not optional sophistication. They are essential infrastructure.

This guide demystifies the African derivative landscape, providing a clear practical introduction to the instruments available across African markets and how institutional investors can use them effectively.

**KEY INSIGHT**

African derivative markets range from the sophisticated JSE platform in South Africa — one of the most developed in the emerging world — to markets where derivative instruments are effectively non-existent. Understanding this diversity is the essential first step.

## What This Guide Covers

- Structure and depth of derivative markets across major African economies
- FX derivatives — forwards, options, and Non-Deliverable Forwards (NDFs)
- Interest rate derivatives — swaps, bond futures, benchmark rate transitions
- Commodity derivatives — oil, gold, platinum, cocoa, coffee, and copper
- Country-specific derivative availability and key challenges
- A practical framework for building derivative risk management strategies

## Who Should Read This Guide

This guide is written for portfolio managers, risk officers, treasury professionals, and analysts who have a working knowledge of financial markets and are seeking to deepen their understanding of African derivative markets specifically.

## CHAPTER 2 · MARKET OVERVIEW

# The African Derivative Landscape

Africa's derivative markets exist at three levels — international, regional, and domestic — each with distinct characteristics and relevance to institutional investors.

## International Markets

Global exchanges — LME, ICE, CME, LBMA — provide liquid instruments for major African commodity exposures priced in USD, introducing basis risk for African exposures.

## Regional Markets

The JSE in South Africa is the only exchange in sub-Saharan Africa with genuinely liquid derivative markets — covering agricultural futures, equity derivatives, currency and interest rate instruments.

## Domestic Markets

Outside South Africa, domestic derivative markets are largely nascent. FMDQ in Nigeria provides an OTC framework; Kenya, Egypt and Ghana have limited OTC derivative activity through local banks.

## Derivative Market Depth by Country

Country	Derivative Availability
South Africa	JSE exchange-traded suite; ZARONIA swaps; LBMA; LME — full toolkit
Nigeria	NDFs offshore; limited OTC IRS; no bond futures; FMDQ framework
Egypt	EGP NDFs; CONIA swaps; USD T-bills for FX elimination
Kenya	KES NDFs; OTC FX forwards; limited IRS; no exchange instruments
Ghana	NDFs offshore only; very limited onshore instruments
CFA Zone	EUR derivative proxy via euro peg; BRVM equity limited
Zambia	LME copper hedging only; no domestic derivative instruments

## Why the Gap Exists

The underdevelopment of domestic African derivative markets reflects several structural factors. Shallow domestic institutional investor bases — pension funds and insurers constrained by conservative investment regulations — mean there is limited natural two-way flow to support market-making. Thin secondary markets in the underlying instruments

make derivative pricing and risk management difficult. Regulatory frameworks in many countries have not yet enacted the netting legislation and central clearing infrastructure that derivative markets require.

#### DIRECTION OF TRAVEL

Despite the current gaps, African derivative markets are gradually developing. The AfCFTA is creating new cross-border trade flows that generate hedging demand. Development finance institutions are supporting local currency instrument development. And the critical minerals boom is creating urgency around derivative market development for cobalt, lithium, and other energy transition commodities.

## CHAPTER 3 · FOREIGN EXCHANGE

# FX Derivatives — Forwards, Options, and NDFs

Foreign exchange risk is the single most important derivative challenge for institutional investors in African markets. African currencies are characterised by elevated volatility, periodic step devaluations, and in some cases outright inconvertibility — making FX derivatives essential for any cross-border investment.

## Core FX Derivative Instruments

Instrument	How It Works	African Availability
FX Forward	Lock in a future exchange rate for a set notional and settlement date. Most common FX derivative globally.	ZAR, EGP — liquid onshore. NGN, KES — limited onshore depth.
FX Option	Right but not obligation to exchange at a set rate. Buyer pays premium upfront for downside protection with upside retention.	ZAR — active market. Others — thin or unavailable onshore.
NDF (Non-Deliverable Forward)	Offshore cash-settled contract referencing onshore fixing rate. No physical currency delivery required.	NGN, EGP, KES, GHS — actively quoted offshore by international banks.
Cross-Currency Swap	Exchange of principal and interest payments in two different currencies over a defined term.	ZAR — available from SA banks. Others — bespoke OTC only.

## Understanding Non-Deliverable Forwards (NDFs)

The NDF is the most important FX derivative for African markets with capital controls. Because NDFs settle in USD based on the difference between the agreed forward rate and the published fixing rate, they circumvent most capital account restrictions — making them the primary hedging tool for Nigerian naira, Ghanaian cedi and other restricted currencies.

### NDF KEY RISK — BASIS RISK

NDF effectiveness depends on the hedge rate matching the actual market rate at settlement. In markets where official fixing rates diverge from real market rates — as in Nigeria before 2023 — NDF hedges can significantly underperform, leaving residual currency exposure that was expected to be hedged.

## FX Options Strategies for African Exposures

Where FX options are available — primarily in the South African rand market — institutional investors can deploy a range of strategies beyond simple put or call options to manage African currency risk more cost-effectively.

### **Protective Put**

Buy a put option on the African currency to set a floor on the exchange rate. Provides full downside protection while retaining upside if the currency appreciates. Most straightforward but most expensive.

### **Zero-Cost Collar**

Buy a put and sell a call simultaneously, with strike prices set so the premium income from the call offsets the put premium cost. Limits both downside loss and upside gain — commonly used by corporates.

### **Risk Reversal**

OTC structure combining a long put and short call at different strikes. Reflects the market's skew — ZAR risk reversals persistently price depreciation risk at a premium.

### **Ratio Spread**

Buy one put and sell two puts at a lower strike to reduce net premium cost. Suitable where an investor wants cheap protection against moderate depreciation but can absorb extreme moves.

## **Practical Hedging Cost Considerations**

The cost of FX hedging in African markets is a critical input into return projections. For the South African rand, rolling a three-month at-the-money put option hedge costs approximately 3–6% per annum in premium. For naira NDFs, the implied forward depreciation premium built into NDF rates reflects the market's assessment of devaluation risk and can make full hedging uneconomical for short-duration positions.

## CHAPTER 4 · INTEREST RATES

# Interest Rate Derivatives — Swaps and Bond Futures

Interest rate derivatives allow investors to manage duration risk and express views on monetary policy. In African bond markets — characterised by elevated yields, volatile monetary policy, and rapidly evolving benchmark rate frameworks — interest rate instruments are both more important and less available than in developed markets.

## Available Interest Rate Instruments

Instrument	How It Works	African Availability
Interest Rate Swap	Fixed-for-floating exchange of cash flows. Paying fixed and receiving floating reduces portfolio duration.	ZAR (ZARONIA) — liquid. NGN (NIBOR) — thin. EGP (CONIA) — developing.
Bond Futures	Exchange-traded futures contracts on benchmark government bonds. Most transparent hedging instrument.	ZAR — JSE bond futures actively traded. Other African markets — not available.
Forward Rate Agreement (FRA)	OTC contract locking in a future short-term interest rate for a defined notional and period.	ZAR — available from South African banks. Others — very limited availability.
Inflation-Linked Bonds	Government bonds with principal and coupon adjusted for CPI. Provide real yield certainty against inflation.	ZAR — active CPI-linked market. Other African markets — limited or unavailable.

## The JIBAR-to-ZARONIA Transition

South Africa is transitioning its benchmark from JIBAR to ZARONIA. Institutional investors with existing JIBAR-referenced derivatives must manage transition basis risk, update ISDA documentation, and ensure systems handle ZARONIA compounding conventions correctly.

## CHAPTER 5 · COMMODITIES

# Commodity Derivatives — Oil, Gold, and Agricultural Markets

Africa produces a disproportionate share of the world's most strategically important commodities — oil, gold, platinum, cocoa, coffee, copper, and cobalt. Managing commodity price risk is a central challenge for institutional investors in African assets.

## Key African Commodity Derivative Venues

Commodity	Primary Derivative Venue	Key African Producers
Crude Oil	ICE Brent Futures; OTC Brent Crude Swaps	Nigeria, Angola, Libya, Algeria
Gold	LBMA Gold Price; CME COMEX Gold Futures	South Africa, Ghana, Tanzania, Mali
Platinum/PGMs	LBMA Platinum; CME NYMEX Platinum Futures	South Africa (~70% of global production)
Copper	LME Copper Futures; OTC Copper Swaps	Zambia, DRC — LME is global benchmark
Cocoa	ICE Cocoa Futures (New York & London)	Ivory Coast & Ghana (~60% global output)
White Maize	JSE White Maize Futures (ZAR-denominated)	South Africa — only African agri exchange
Coffee	ICE Coffee C Futures (Arabica benchmark)	Ethiopia, Kenya, Uganda, Tanzania

### THE BASIS RISK CHALLENGE

Most African commodity exposures are hedged on international exchanges using global benchmark contracts. The difference between the international benchmark price and the actual African price — the "basis" — can be significant and volatile. Nigerian Bonny Light crude trades at a differential to Brent; West African farm-gate cocoa prices diverge from ICE futures. Managing basis risk is as important as selecting the right derivative instrument.

## CHAPTER 6 · COUNTRY GUIDE

# Country Snapshot — Key African Markets

## South Africa (ZAR)

<b>FX Regime</b>	Free float; SARB inflation targeting (3–6% band); FSCA and Prudential Authority regulated
<b>Key Instruments</b>	JSE equity, bond, agricultural and currency futures; ZARONIA swaps; LBMA gold; LME base metals
<b>Primary Challenge</b>	ZAR high volatility; JIBAR-to-ZARONIA transition basis risk; dual regulatory compliance burden

## Nigeria (NGN)

<b>FX Regime</b>	Managed float via NAFEM window; CBN monetary policy dominant; FMDQ OTC framework
<b>Key Instruments</b>	USD/NGN NDFs offshore; limited OTC interest rate swaps; FGN Eurobonds; ICE Brent for oil
<b>Primary Challenge</b>	FX fragmentation; repatriation risk; regulatory discontinuity; thin onshore OTC derivative market

## Egypt (EGP)

<b>FX Regime</b>	Managed float; CBE implements periodic step devaluations; IMF programme conditionality a key driver
<b>Key Instruments</b>	EGP NDFs offshore; CONIA-referenced interest rate swaps; USD-denominated T-bills for FX elimination
<b>Primary Challenge</b>	Step devaluation risk; IMF programme uncertainty; extreme yield volatility during adjustment episodes

## Kenya (KES)

<b>FX Regime</b>	Managed float; CBK Central Bank Rate is primary monetary policy instrument; relatively open capital account
<b>Key Instruments</b>	KES NDFs offshore; OTC FX forwards through Kenyan commercial banks; limited interest rate swaps
<b>Primary Challenge</b>	Very limited hedging instrument depth; fiscal deficit pressure on yields; thin OTC derivative market

## CHAPTER 7 · PRACTICAL GUIDE

# Building Your Derivative Risk Management Framework

Effective derivative risk management in African markets requires a structured framework that addresses the unique characteristics of each market — including limited instrument availability, basis risk, regulatory uncertainty, and the interaction between FX, interest rate, and commodity risks.

## Step 1 — Map Your Exposures

Identify every source of derivative risk in your African portfolio — FX, interest rate, and commodity. For each exposure, document the currency, tenor, magnitude, and the reference rate or benchmark that determines its value.

## Step 2 — Assess Instrument Availability

For each exposure, identify which derivative instruments are available — exchange-traded, OTC onshore, or OTC offshore. In many African markets, the answer will be limited or none — which is itself critical information for portfolio sizing decisions.

## Step 3 — Quantify Basis Risk

Where you use international instruments to hedge African exposures, analyse the historical relationship between the hedge instrument price and the actual African exposure price. Model expected basis risk and incorporate it into hedge effectiveness calculations.

## Step 4 — Design Integrated Hedges

African FX, interest rate, and commodity risks are often correlated — oil prices drive the naira, copper prices drive the kwacha, rand volatility is correlated with platinum prices. Design hedging strategies that address multiple risk factors simultaneously.

## Step 5 — Establish Banking and Legal Infrastructure

Establish ISDA Master Agreements with multiple banks — South African banks for ZAR markets and international banks for NDFs and cross-border transactions. Obtain legal opinions on netting enforceability in each African jurisdiction.

## Step 6 — Stress Test and Monitor Continuously

Run quarterly stress scenarios based on historical African market shock episodes — Nigeria 2016, Ghana 2022, Egypt 2023. Assess portfolio resilience both hedged and unhedged. Monitor leading risk indicators continuously.

## Governance and Reporting

A world-class derivative risk management framework requires robust governance. Investment committees should approve a formal derivative risk policy specifying approved instruments, maximum hedge ratios, approved counterparties,

and reporting frequency. Risk limits should be defined in DV01 terms for interest rate risk, delta-equivalent notional for FX options, and gross notional for commodity derivatives. Mark-to-market reporting on all derivative positions should be produced at least weekly.

## CHAPTER 8 · REFERENCE

# Glossary of Key Derivative Terms

The following terms appear throughout this guide and in African derivative market practice. Definitions reflect the specific context of African markets where relevant.

## Basis Risk

The risk that the price of a hedge instrument does not move perfectly in line with the underlying exposure being hedged, leaving a residual unhedged risk. Particularly significant in African markets where international benchmarks may diverge substantially from local prices.

## CCP

Central Counterparty — an institution that interposes itself between buyer and seller in a derivative transaction, guaranteeing performance and eliminating bilateral counterparty credit risk. JSE Clear is South Africa's primary CCP.

## Contango

A market condition where forward prices are higher than spot prices, typically reflecting storage costs, financing costs, and convenience yield. The opposite of backwardation, where spot prices exceed forward prices.

## DV01

Dollar Value of a Basis Point — the change in value of a bond or derivative portfolio for a 1 basis point (0.01%) parallel shift in the yield curve. The primary unit of interest rate risk measurement for bond and swap portfolios.

## Duration

A measure of a bond's price sensitivity to interest rate changes — specifically the percentage change in price for a 1% change in yield. African bonds with high yields have lower duration than comparable tenor bonds in low-yield markets.

## ISDA

International Swaps and Derivatives Association — the body that publishes standard Master Agreement documentation for OTC derivative transactions globally. ISDA netting enforceability varies across African jurisdictions.

## JIBAR

Johannesburg Interbank Average Rate — South Africa's legacy term floating rate benchmark, being replaced by the overnight ZARONIA rate.

## NDF

Non-Deliverable Forward — an offshore, cash-settled FX derivative contract used in markets where the local currency is restricted or inconvertible. Settlement in USD is calculated as the difference between the agreed forward rate and the published fixing rate at maturity.

**NIBOR**

Nigeria Interbank Offered Rate — the primary floating rate benchmark for Nigerian naira interest rate derivatives. Subject to ongoing reform discussions as part of global IBOR transition efforts.

**Open Interest**

The total number of outstanding derivative contracts that have not been closed, delivered, or settled. A key measure of market activity and liquidity depth.

**RFR**

Risk-Free Rate — a transaction-based overnight benchmark interest rate replacing IBORs globally. ZARONIA is South Africa's RFR; CONIA serves a similar function in Egypt.

**Roll Cost**

The cost incurred when closing an expiring futures contract and simultaneously opening a new contract at the next expiry date to maintain a continuous hedge.

**ZARONIA**

South African Rand Overnight Index Average — a transaction-based, near risk-free overnight rate administered by the SARB, replacing JIBAR as South Africa's primary interest rate benchmark.

**Zero-Cost Collar**

An FX options strategy combining a purchased put option and a sold call option with strikes set so the premium income from the call fully offsets the put premium cost.

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