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TESTING PURCHASING POWER PARITY IN CROSS-BORDER REAL ESTATE INVESTMENTS: IMPLICATIONS FOR INTERNATIONAL PORTFOLIO DIVERSIFICATION AND EXCHANGE RATE RISK MITIGATION IN NIGERIA

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Abstract

The study examines exchange rate risk on foreign investment in Nigerian real estate and, in particular, tests the validity of relative purchasing power parity (PPP) between Nigeria and five source market countries: the United States, the United Kingdom, the Eurozone, China, and South Africa. Using a survey design, primary data were obtained from a sample of 312 respondents, including investors, developers, and fund managers operating in Nigeria. A regression analysis was used to test the relationship between changes in the real exchange rate and the inflation differential, with a slope of one representing PPP. The results indicate that the mean naira rate of return on property was 16.6 percent, while the realized return after currency conversion was reduced to between −0.3 and 5.0 percent, implying that foreign investors experienced a loss of between 11.6 and 16.9 percentage points of annual return due to naira depreciation. The slope coefficient of 0.341, significantly different from unity at $t = -4.346$, $p < 0.001$, confirmed that relative PPP does not hold in this environment. Currency risk, rather than property fundamentals, therefore becomes the primary determinant of returns for foreign investors. The paper extends the literature on parity testing in high-volatility emerging markets and recommends that the Central Bank of Nigeria deepen the naira-settled FX futures market and sustain the unified exchange rate framework introduced in June 2023, while investors adopt minimum variance hedge ratios and cross-currency diversification strategies.

Keywords: Purchasing power parity, real estate, exchange rate, diversification, Nigeria

1. Introduction

The international real estate market has attracted significant cross-border capital flows as investors seek returns unavailable in their home economies and portfolio diversification beyond domestic asset classes (Paciorek, 2015). Unlike equities and bonds, real estate is geographically immobile, illiquid, and priced through direct negotiation, characteristics that determine how classical international finance theories apply to cross-border property investment (Taylor & Taylor, 2004). Nigeria's position as Africa's most populous economy and one of its largest real estate markets makes it a natural destination for foreign capital seeking emerging market exposure (Ndeche et al., 2024). At the same time, the naira's persistent depreciation and the foreign exchange market distortions that prevailed between 2015 and 2023 created conditions under which exchange rate risk consistently threatened to overwhelm property-level returns (IMF, 2024).

Cross-border real estate investment into Nigeria accelerated during the 2010s, driven by urbanization, a growing middle class, and rising property prices in major cities including Lagos, Abuja, and Port Harcourt (Alaka & Nnametu, 2014). However, the exchange rate trajectory of the naira over the same period introduced severe return uncertainty for foreign-currency investors. The naira depreciated by approximately 100 percent against the US dollar between May and December 2023 alone, following the CBN's unification of its multiple foreign exchange windows in June 2023 (IMF, 2024). By the close of 2024, the official rate had depreciated a further 40.9 percent year-on-year to N1,535 per dollar (Salami, 2024). These sequential dislocations produced conditions in which the theoretical parity equilibriums that international finance uses to model exchange rate behaviour were systematically violated.

Three parity conditions are central to the theoretical framework of cross-border investment analysis. Purchasing power parity (PPP) holds that exchange rates adjust to equalize the purchasing power of two currencies over time, so that inflation differentials predict exchange rate movements (Vo & Vo, 2022). Interest rate parity (IRP) holds that interest rate differentials between two countries predict the expected change in the spot exchange rate, eliminating arbitrage between comparable financial instruments across borders (Geyikci & Ozyildirim, 2023). The International Fisher Effect holds that nominal interest rates across open economies fully incorporate expected inflation, producing real interest rate convergence (Mishkin, 1991). In markets where these conditions hold, exchange rate movements self-correct and do not produce systematic real losses for international investors. In markets where they fail, as the Nigerian evidence suggests, currency risk becomes a structural feature of cross-border investment that property fundamentals alone cannot resolve.

The academic literature on parity testing is extensive for developed markets but sparse for sub-Saharan African real estate. Yilanci et al. (2024) applied nonlinear unit root testing to Emerging-7 economies and found that PPP validity is contingent on methodology and structural features of the market being tested. Nazlioglu et al. (2021) confirmed that linear parity tests routinely fail to detect regime-dependent adjustments that nonlinear methods recover. Both findings are directly relevant to Nigeria, where exchange rate policy produced dateable structural breaks in 2016 and 2023. Despite this methodological progress, no study had applied parity tests specifically to Nigerian real estate return data before the present investigation. Existing studies documented the effect of exchange rate movements on Nigerian property returns in general terms (Erdal, 2017; Oladipo, 2025) but did not conduct formal parity tests and did not examine the implications of parity failures for international portfolio diversification strategies. This study addresses both omissions.

The study pursues two objectives: to test the validity of relative purchasing power parity for cross-border real estate investment between Nigeria and five source countries; and to examine how deviations from this parity condition affect the international portfolio diversification strategies and exchange rate risk management of foreign investors. Interest rate parity and the International Fisher Effect are treated as theoretical context and identified as directions for future testing rather than tested here. By combining primary survey data from investors, developers, and fund managers with formal econometric parity testing, the study provides the first systematic empirical treatment of this question in the Nigerian real estate context.

2. Theoretical Framework

The theoretical basis of this study is the Law of One Price and PPP, and their application to an illiquid, location-fixed asset class. The Law of One Price holds that identical goods should trade at equivalent prices across countries once expressed in a common currency, with arbitrage enforcing convergence (Taylor & Taylor, 2004). PPP extends this principle from individual goods to baskets of goods and, by implication, to the general price level. Absolute PPP holds that the exchange rate should equal the ratio of price levels across two countries. Relative PPP holds that the rate of change in the exchange rate equals the inflation differential, meaning that a country with higher inflation will see its currency depreciate proportionally against a lower-inflation partner.

The purchasing power parity debate, extensively reviewed by Vo and Vo (2022) across fifty years of evidence, shows that PPP holds more reliably over long horizons and in economies with flexible exchange rates but fails systematically over the medium-term investment horizons of three to seven years most relevant for real estate. More recent panel studies with structural break allowances and nonlinear estimation provide stronger support for PPP's long-run validity, but short- and medium-run failures are the norm in high-volatility emerging market environments
(Nazlioglu et al., 2021; Yilanci et al., 2024).

The Balassa-Samuelson effect, originally identified by Balassa (1964) and Samuelson (1964), is particularly relevant to real estate. It holds that productivity differentials between tradable and non-tradable sectors produce persistent real exchange rate deviations from PPP, with countries at lower stages of development maintaining undervalued real exchange rates in tradable goods but exhibiting different dynamics in non-tradable sectors, including property. Real estate is the archetypal non-tradable asset: a Lagos office building cannot be relocated to London to benefit from pricing differentials. This immobility removes the arbitrage mechanism that enforces the Law of One Price for tradable goods and means that property-level PPP deviations may be more persistent and larger in magnitude than those observed for tradable commodities (Addae-Dapaah & Loh, 2005).

Nigeria's foreign exchange market structure compounds these theoretical failures. Between 2015 and June 2023, the CBN operated a managed-float regime with multiple simultaneously active exchange rate windows, creating persistent deviations from the Law of One Price across the official and parallel markets (Ozili, 2024). The parallel market premium reached over 60 percent at points in 2022, violating the Law of One Price even within the domestic market before any international comparison is attempted. The June 2023 unification of exchange rate windows removed this source of segmentation but introduced a sharp correction that imposed 100 percent depreciation within seven months (IMF, 2024). Odionye et al. (2023) examined the effects of interest rate differentials and exchange rate changes on foreign capital inflows in Nigeria and confirmed that capital flow

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responses to parity-relevant signals are non-linear and subject to threshold effects, consistent with the managed-float distortions of the pre-unification period.

For cross-border real estate investors in Nigeria, deviations from parity conditions translate directly into uncompensated currency losses. A foreign investor converting naira rental income to US dollars in 2022 at the parallel market rate received approximately 40 percent less than implied by the official rate. A dollar-based investor converting gains to naira at the official rate to acquire a property received approximately 40 percent more purchasing power than the parallel rate implied. This asymmetry structured systematic redistribution between market participants depending on which window they accessed, a distortion incompatible with the theoretical conditions under which PPP and IRP are meant to hold (Geyikci & Ozyildirim, 2023).

Covered interest rate parity (CIRP) deviations in emerging markets have been documented at levels substantially larger than those observed in advanced economies. Cerutti and Zhou (2023) found that emerging market currency instruments exhibit persistent CIRP deviations driven by market segmentation, counterparty risk, and FX market illiquidity, all of which are characteristic of the Nigerian naira market. These deviations make the theoretically predicted relationship between interest rate differentials and forward exchange rate premiums unreliable as a hedging guide for naira-exposed real estate investors. In practical terms, the shallow depth of Nigeria's naira forward and futures markets prevents the arbitrage trades that would enforce CIRP, leaving investors exposed to unhedged currency risk at maturities beyond 90 days.

3. Materials and Method

The study examines international property investment across five Nigerian cities: Lagos, Abuja, Port Harcourt, Warri, and Uyo. These locations were selected to capture Nigeria's dominant commercial and residential property markets, with Lagos and Abuja representing the two largest urban investment markets and Port Harcourt, Warri, and Uyo representing the oil-producing South-South region where foreign investment is concentrated in both commercial and expatriate residential property (Nworah et al., 2023). The five source countries studied are the United States, the United Kingdom, the Eurozone, China, and South Africa, which collectively represent the dominant origins of cross-border real estate investment capital into Nigeria (Ndeche et al., 2024).

A survey research design was adopted, supported by field measurement of property returns during the 2025 survey period. The identifiable population comprised foreign real estate investors, developers, estate companies registered with the Nigerian Institution of Estate Surveyors and Valuers, and investment fund managers, estimated at 340 across the study cities. Because this population was finite and of modest size, the study conducted a complete enumeration (census) rather than drawing a sample, distributing the questionnaire to every member of the population. Formal sample-size determination, such as the Krejcie and Morgan (1970) procedure, was therefore not required, and the census design removes sampling error from the respondent data. The questionnaire instrument covered six constructs: investor profile; currency risk perception; use of currency risk hedging instruments; experience of profit repatriation; parity awareness; and diversification motive. Construct validity was reviewed by estate management specialists, and a pilot study confirmed the instrument's reliability. Cronbach's coefficient alpha exceeded 0.70 for every Likert-scale construct, consistent with the reliability threshold established by Cronbach (1951): currency risk perception 0.86, repatriation difficulty 0.79, diversification motive 0.81, hedging usage

0.77, and parity awareness 0.74. A total of 312 completed responses were returned from 340 distributed instruments, yielding a response rate of 91.8 percent.

Table 1: Questionnaire Distribution and Response Rate by Respondent Category

Respondent Category	Questionnaires Distributed	Questionnaires Returned	Response Rate (%)
Foreign Investors and fund managers	120	110	91.7
Developers with foreign capital	80	72	90.0
Estate companies serving foreign clients	100	93	93.0
Property fund managers	40	37	92.5
Total	**340**	**312**	**91.8**

Source: Field survey (2026)

The main analysis computes property returns in naira terms (from rental income and capital growth) and in source-currency terms (converting naira cash flows at the prevailing exchange rate at each cash flow date), isolating the currency effect as the difference between these two return series. Parity tests employ regression analysis in which the change in the exchange rate is regressed on the inflation differential between Nigeria and each source country. Under relative PPP, the slope coefficient should equal unity: a one-percentage-point increase in the inflation differential should predict a one-percentage-point increase in the rate of naira depreciation. A slope significantly below one indicates that the naira depreciated by less than the inflation differential predicted during periods of exchange rate management, and that the correction arrived later and more abruptly than a parity-consistent trajectory would have produced.

The parity regression uses annual time-series data on the naira exchange rate and the inflation differential between Nigeria and the source economies. Exchange-rate values are the Central Bank of Nigeria annual average official rates, and inflation values are drawn from the Central Bank of Nigeria and the International Monetary Fund International Financial Statistics. The estimation sample contains 26 annual observations, which yields 24 residual degrees of freedom. Both series enter the model as annual rates of change rather than levels, so the regression relates the yearly change in the exchange rate to the annual inflation differential. Expressing the variables as rates of change makes them stationary, a property that augmented Dickey-Fuller tests confirm, and this removes the risk of a spurious regression between trending level series.

4. Findings

The analysis draws on three distinct bases that should not be conflated. The full survey sample is the 312 respondents across the four categories in Table 1. Table 2 profiles the 147 respondents who carry direct currency exposure, namely the foreign investors and fund managers, and their responses inform the currency-risk discussion. Table 3 reports 180 physical properties measured in the field, which is a property-level unit rather than a respondent count. Holding these three bases apart prevents the misreading that one group of 312 individuals populates every table.

Table 2 shows that American investors constitute the largest group at 28.6 percent, followed by British investors at 23.8 percent and South African investors as the smallest group at 10.9 percent. Portfolio sizes are predominantly in the USD 1 to 5 million range, and 53.1 percent of investors hold

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two to five properties. The 5-to-10-year experience band dominates at 48.3 percent, indicating a base of investors with established market knowledge. The diversity of origin markets provides the currency pair variation necessary for cross-country parity testing, since each pair exhibits distinct inflation and interest rate differentials with Nigeria.

Table 2: Profile of Foreign Investors and Fund Managers (n = 147)

Variable	Category	Frequency	Percentage (%)
Source Country	United States	42	28.6
	United Kingdom	35	23.8
	Eurozone	28	19
	China	26	17.7
	South Africa	16	10.9
Experience in Nigeria	Under 5 years	38	25.9
	5–10 years	71	48.3
	Over 10 years	38	25.8
Properties Held	1 property	49	33.3
	2–5 properties	78	53.1
	Over 5 properties	20	13.6
Portfolio Value (USD)	Under $1 million	53	36.1
	$1–5 million	70	47.6
	Over $5 million	24	16.3

Source: Field survey (2026)
Note: Percentages are based on the total number of respondents (**n = 147**).

Table 3 shows that Lagos and Abuja account for 34.4 and 25.6 percent of the property sample, respectively. The oil-producing cities of Port Harcourt, Warri, and Uyo are predominantly residential, reflecting corporate and expatriate housing demand driven by the oil industry. This spatial distribution influences the return profile, as Lagos and Abuja generate higher capital growth from commercial and prime residential segments while the oil cities generate higher yields from sustained occupier demand. This corroborates with studies of Zadonsky (2016).

Table 3: Field-Measured Property Sample by City and Segment

City	Commercial Properties	Residential Properties	Total	Percentage (%)
Lagos	28	34	62	34.4
Abuja	20	26	46	25.6
Port Harcourt	8	20	28	15.6
Warri	5	16	21	11.7
Uyo	4	19	23	12.8
Total	**65**	**115**	**180**	**100**

Source: Field measurement (2026)
Note: Percentages represent each city's share of the total field-measured property sample (n = 180).

Table 4 shows a mean total naira return of 16.6 percent across the five cities, with Lagos producing the highest total return at 19.2 percent. The Lagos and Abuja markets exhibit the inverse relationship between capital growth and yield typical of more mature urban markets, while the oil-producing cities deliver higher yields but more moderate capital appreciation. These naira-denominated returns appear attractive when considered in isolation. As Nworah et al. (2023) documented in their analysis of Lagos commercial property returns from 2005 to 2022, nominal naira returns have consistently exceeded domestic inflation over multiple sub-periods, supporting the property-as-inflation-hedge narrative for naira-based investors. The critical question, addressed in Table 5, is whether these returns survive the currency conversion demanded by foreign investors.

Table 4: Field-Measured Property Returns by City (Mean Percent per Annum)

City	Rental Yield (%)	Capital Growth (%)	Total Return (%)
Lagos	6.8	12.4	19.2
Abuja	6.2	11.1	17.3
Port Harcourt	7.4	8.9	16.3
Warri	7.9	7.2	15.1
Uyo	7.1	7.8	14.9
Mean	7.1	9.5	16.6

Source: Field survey (2026)
Note: Figures represent mean annual property returns measured across the sampled properties in each city. Total return represents the combined effect of rental yield and capital growth.

Table 5 reveals the core finding. A mean naira return of 16.6 percent is reduced to between −0.3 and 5.0 percent when converted into the investor's source currency. The adverse currency effect ranges from negative 11.6 percentage points for South African rand investors to negative 16.9 percentage points for US dollar investors, reflecting the differing rates of naira depreciation against each currency. The South African rand's own depreciation against the naira on a relative basis produces a smaller loss than the dollar or euro, but all source-currency returns are sharply below the naira return regardless of investor origin. This finding aligns with Kroencke and Schindler (2012), whose earlier evidence established that currency risk creates a veiling glare that obscures the true diversification properties of international real estate. The present findings demonstrate that in Nigeria's case, the veil is not incidental but structural: the currency effect exceeds the source-currency return for every origin, and for dollar and euro investors it removes almost the entire naira return.

These results extend the findings of Ibikunle (2025), who documented the challenges of international real estate investment in emerging economies including Nigeria and identified exchange rate risk and repatriation barriers as the most severe constraints. They are also consistent with the broader finding of Zoha (2026) that cross-border real estate investment is characterised by a systematic currency risk premium that conventional portfolio models do not adequately price.

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Table 5: Currency Effect: Naira Return versus Source-Currency Return by Investor Origin

Source Country	Naira Return (%)	Naira Depreciation (%)	Source-Currency Return (%)	Currency Effect (%)
United States (USD)	16.6	17	-0.3	**-16.9**
United Kingdom (GBP)	16.6	15.5	1	**-15.6**
Eurozone (EUR)	16.6	16	0.5	**-16.1**
China (CNY)	16.6	14	2.3	**-14.3**
South Africa (ZAR)	16.6	11	**5**	**-11.6**

Source: Field survey (2026). Figures are mean annual percentages. Currency effect equals source-currency return minus naira return.

Note: Figures represent mean annual percentages. Currency effect is calculated as source-currency return minus naira return. Negative values indicate a reduction in investment return when expressed in the investor's source currency.

Table 6 presents the descriptive statistics for the Likert-scale constructs. Currency risk perception scores the highest mean of 4.21, indicating that investors are acutely aware of naira depreciation as a threat to returns. Parity awareness scores the lowest mean of 2.38, indicating that awareness of formal parity conditions and their implications for entry and exit timing is low. This gap between risk perception and technical knowledge is particularly problematic because optimal currency hedging requires investors to model the interaction between exchange rates, inflation differentials, and asset returns rather than relying on intuitive risk aversion (Campbell et al., 2010). The moderate hedging usage mean of 2.95 confirms that concern does not translate into systematic hedging. Garcia-Feijoo et al. (2022) established that capital market maturity directly determines hedging instrument effectiveness, and Nigeria's shallow FX derivative market limits the options available to investors who wish to hedge naira exposure at the tenors relevant for property investment.

Table 6: Descriptive Statistics of Likert Constructs

Construct	Mean	Standard Deviation (SD)	Remark
Currency risk perception	4.21	0.62	High
Repatriation difficulty	3.92	0.7	High
Diversification motive	3.74	0.66	High
Hedging usage index	2.95	0.88	Moderate
Parity awareness	2.38	0.74	Low

Source: Field survey (2026). Five-point scale: 1 = strongly disagree, 5 = strongly agree.

Note: The constructs were measured using a five-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree. The mean scores were interpreted according to the applicable scale classification. A construct mean of 1.00 to 2.59 is classified Low, 2.60 to 3.39 Moderate, and 3.40 to 5.00 High.

Table 7 reports the regression of the exchange rate change on the inflation differential. The R-squared of 0.180 indicates that the inflation differential explains less than one-fifth of the variation in the exchange rate change, a weak predictive relationship that is the expected outcome when exchange rates are managed rather than market-determined. The slope of 0.341, significant at $p = 0.034$, indicates a positive partial relationship between inflation differentials and naira depreciation,

consistent with the direction predicted by relative PPP, but the magnitude is far below unity. As Odionye et al. (2023) confirmed in their analysis of Nigerian capital flows, the relationship between interest rate differentials, inflation, and exchange rate movements in Nigeria is non-linear and subject to threshold effects that a simple linear regression cannot fully capture.

Table 7: Model Summary for the Regression of Exchange Rate Change on Inflation Differential

Panel A: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	R^2 Change	F Change
1	0.424	0.18	0.144	6.1125	0.18	5.053

Panel B: Regression Coefficients

Predictor	B	Std. Error	Beta (β)	t	Sig. (p)	95% CI
Constant	11.682	2.297	—	5.087	<0.001	—
Inflation gap (%)	0.341	0.152	0.424	2.248	0.034	0.027–0.655

Source: SPSS computation

Notes: R^2 = coefficient of determination; B = unstandardized regression coefficient; β = standardized regression coefficient; CI = confidence interval. The dependent variable is **exchange rate change**, while the independent variable is **inflation differential**. The regression is estimated on 26 annual observations, giving $F(1, 24) = 5.053$, $p = .034$ and $R^2 = .18$. The relative PPP restriction that the slope equals one is rejected: $t = (0.341 - 1) / 0.152 = -4.34$, $p < .001$, and the 95 percent confidence interval for the slope, 0.027 to 0.655, excludes unity.

The relative PPP restriction that the slope equals one is rejected by the direct Wald test reported in the note to Table 7, which evaluates the estimated coefficient itself rather than a separate transformed regression. The naira did not depreciate in line with the inflation differential over the study period, consistent with the managed exchange rate regime that prevented market-clearing adjustment during the pre-unification years. When the correction arrived in June 2023, it arrived as a discrete 100 percent depreciation rather than a gradual trajectory, as documented by IMF (2024). This pattern of suppressed adjustment followed by abrupt correction is characteristic of managed exchange rate regimes and has been documented across emerging markets by Cerutti and Zhou (2023).

5. Discussion

The results establish two findings. Property fundamentals in Nigeria generate attractive naira returns, with a mean of 16.6 percent across the study cities and a peak of 19.2 percent in Lagos. These returns are not accessible to foreign investors in their source currencies because naira depreciation erodes them to between −0.3 and 5.0 percent on average, a reduction of 11.6 to 16.9 percentage points depending on investor origin. The parity test confirms that this currency loss is not compensated by the inflation differential mechanism that relative PPP predicts: the slope of 0.341 is far below the unity coefficient required for PPP to hold, and the direct test of the restriction, $t = -4.34$, $p < .001$, confirms the rejection.

These findings locate Nigeria within the broader pattern of PPP failure in volatile emerging markets documented by Yilanci et al. (2024) for Emerging-7 economies and by Nazlioglu et al. (2021) for economies with structural breaks in exchange rate series. The Nigerian result is consistent with what Vo and Vo's (2022) comprehensive survey identifies as the standard empirical outcome for

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developing economies with managed exchange rates over medium-term horizons: PPP fails systematically, with deviations persisting for years rather than quarters.

The practical implication, as Dabara et al. (2023) noted in the context of Nigerian REIT portfolio construction, is that cross-border investors cannot rely on domestic property returns as an indicator of foreign-currency portfolio outcomes. Currency risk is not a secondary consideration to be managed after the property investment decision; it is the primary determinant of the realized return for foreign investors in Nigeria. This finding is consistent across all five source countries studied, with the magnitude of the currency effect exceeding the source-currency return in every case.

5.1 Limitations

Several limitations qualify these findings. The study covers a single country, so the results describe the Nigerian market and do not transfer automatically to other emerging economies. The parity regression rests on a short annual series, which limits statistical power and precludes robust modelling of nonlinearity or of structural breaks around the June 2023 unification. Returns obtained from survey responses and from field measurement carry measurement error. The study tests relative purchasing power parity alone, leaving interest rate parity and the International Fisher Effect for future work. The cross-sectional survey captures one period and cannot track how currency exposure evolves across an investment holding period.

6. Conclusion

This study tested relative PPP for cross-border real estate investment between Nigeria and five source market countries and found it does not hold over the sample period. A mean naira return of 16.6 percent was reduced to between −0.3 and 5.0 percent after currency conversion, with the currency effect accounting for between 11.6 and 16.9 percentage points of annual loss depending on the source country. The slope coefficient of 0.341 and the direct test of the unity restriction, $t = -4.34$, $p < .001$, both confirm that the naira did not depreciate proportionally to the inflation differential, producing real losses for foreign investors that the theoretical parity correction did not offset.

The study makes three contributions. It provides the first empirical parity test applied specifically to Nigerian real estate return data, filling the gap identified in both the Nigerian property literature and the international parity testing literature for sub-Saharan African real estate. It demonstrates that currency risk, not property market fundamentals, is the primary driver of cross-border real estate investment outcomes in Nigeria, a finding with direct implications for how institutional investors should model Nigerian real estate in international portfolios. It connects these empirical findings to the specific features of CBN exchange rate management, showing that the pre-2023 managed-float regime produced the conditions for systematic PPP failure through suppressed adjustment and periodic abrupt corrections.

Policy recommendations follow from these findings. The Central Bank of Nigeria should sustain the unified exchange rate framework established in June 2023 and deepen the naira-settled FX futures market, including regulatory authorization of longer-dated forward contracts that would allow investors to hedge multi-year property investments. The CBN's introduction of the Electronic Foreign Exchange Matching System in December 2024 is a step toward improved price discovery and should be extended to include standardized forward contract facilities accessible to foreign property investors. Foreign investors should adopt minimum-variance hedge ratios for naira exposure, diversify across source currencies to exploit their differing depreciation rates, and calibrate

entry and exit decisions using downside-risk evaluation rather than parity-based return projections. Future research should extend the analysis to interest rate parity and the International Fisher Effect with a larger property return dataset and should incorporate post-2023 data to assess whether the exchange rate unification has improved PPP performance for cross-border real estate investors.

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