

Bitcoin Allocation in a Tanzanian Portfolio: A Performance Analysis



Coinsoflation
Research Paper

Country Overview—Tanzania (United Republic of)



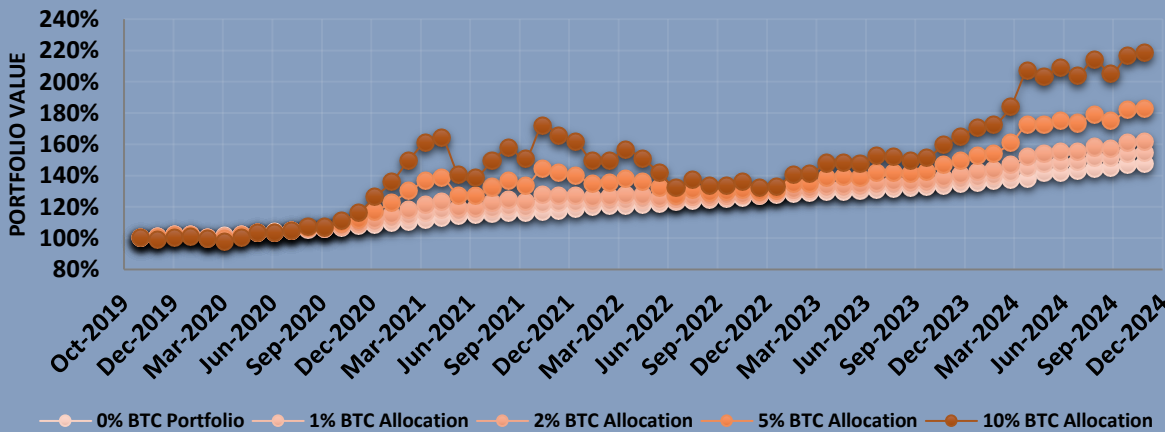
- **Equity Index Used:** Tanzania All Share Index (DSEI), the primary index of the Dar es Salaam Stock Exchange. It includes companies from various sectors such as banking, agriculture, manufacturing, and mining.
- **Fixed Income Used:** 10-Year Bond
- **Analysis Period:** Five years—Nov-2019 to Oct-2024
- **Portfolio Allocation:** 20/80 Equity/Fixed Income over the analysis period. See *Notes* for this unusual allocation.

Portfolio Performance vs. BTC Allocation

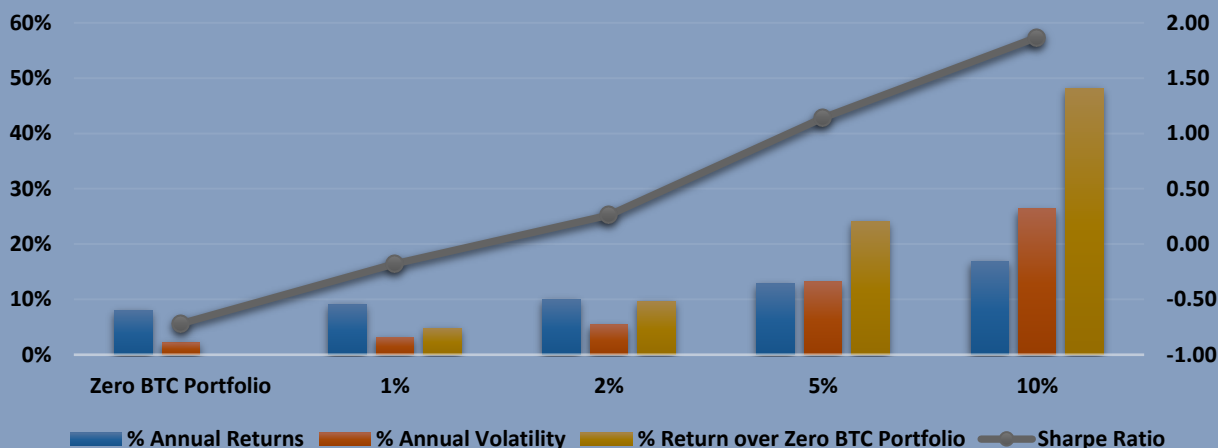
BTC ETF Allocation	0%	1%	2%	5%	10%
Annual Returns (%)	8%	9%	10%	13%	17%
Volatility (%)	2%	3%	5%	13%	26%
Sharpe Ratio	-0.72	-0.18	0.26	1.14	1.87

- **Annual Returns (%)** - average percentage increase or decrease in the value of an investment over one year. A measure of what an investment might earn or lose annually.
- **Volatility (%)** - degree of variation in the price of an investment over time. Higher volatility means the investment's price fluctuates more, indicating greater risk.
- **Sharpe Ratio** - ratio of the investment's excess return and its volatility. A higher Sharpe Ratio indicates better returns for the level of risk taken.




Impact of Bitcoin Allocation on a Tanzanian Portfolio



Portfolio Performance vs. BTC Allocation



Impact Highlights

	Diversification Benefit: Adding a BTC allocation significantly increases annual returns, demonstrating strong diversification benefits. As BTC allocation rises, the portfolio's overall performance improves, especially at higher allocations.
	Risk-Adjusted Returns: The Sharpe Ratio increases markedly with BTC allocation, from -0.72 (with no BTC) to 1.87 (with 10% BTC). This indicates that the portfolio is more efficient in compensating for the risk taken. See Notes for negative Sharpe Ratio.
	Protection Against Currency Depreciation: Higher returns from BTC allocation strengthen the portfolio, providing a buffer that helps preserve and grow value despite currency fluctuations.

Key Insights

- **Significant Return Enhancement:**
Allocating even a small percentage to BTC dramatically increases annual returns, showcasing the potential of BTC as a strong return booster.
 - 1% BTC returned an additional 5%
 - 2% BTC returned an additional 10%

- 5% BTC returned an additional 24%
- 10% BTC returned an additional 48%

- **Improved Risk-Adjusted Performance:**

The Sharpe Ratio rises considerably with BTC allocation, indicating that the portfolio is more efficient, better compensating for the level of risk taken.

- **Protection Against Currency**

Depreciation: Higher returns from BTC allocation provide a buffer against potential currency depreciation, helping preserve and grow the portfolio's value in volatile currency environments.

Notes

- Equity data was sourced from Investing.com. Bond data was sourced from Bank of Tanzania. Bitcoin data was sourced from Google.
- 0% BTC portfolio was optimized for the single best allocation over the analysis period, with equity allocation constrained to between 20% and 80%. No change in allocation occurred during the analysis period.
- Bond was purchased at the beginning of analysis period and held for duration of analysis or to maturity. If maturity occurred during the analysis period, a new bond was purchased.
- No trading or management costs were considered.
- *Continues on the next page.*



About Coinsolation

Coinsolation supports institutional access to Bitcoin as a long-term reserve asset, offering organizations across Africa a secure entry point into this globally recognized store of value.

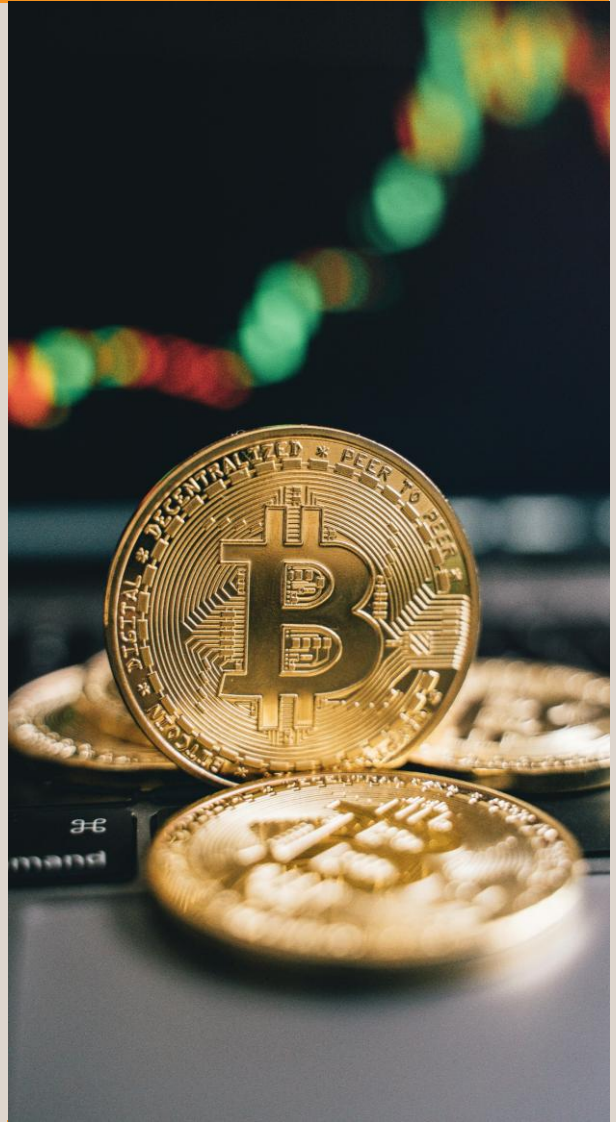
By helping mitigate currency risk and strengthen portfolio resilience, Bitcoin can serve as a powerful diversification tool in line with evolving global asset allocation trends.

Web:

<http://www.coinsolation.com/>

X (Twitter):

<https://x.com/coinsolation>



Notes (continued)

- Between Q4 2019 and Q4 2024, the DSEI exhibited notable fluctuations. In March 2020, the index experienced a steep decline. Following this downturn, the DSEI remained relatively flat until June 2024, when it saw a significant rise. The overall performance was relatively flat over the five-year period under consideration. Due to this, our Tanzania portfolio was allocated 20% equity and 80% fixed income.
- The negative Sharpe Ratio of the Zero BTC Portfolio indicates that the investment underperformed a risk-free investment, due to its 20% equity exposure.

