

Bitcoin Allocation in a South African Portfolio: A Performance Analysis



Coinsolation
Research Paper

Country Overview—South Africa (Republic of)



- **Equity Index Used:** South Africa Top 40 (JTOPI), also known as the FTSE/JSE Top 40 Index, tracks the performance of the 40 largest companies listed on the Johannesburg Stock Exchange (JSE). These companies reflect the diverse economic landscape of South Africa.
- **Fixed Income Used:** 10-Year Bond
- **Analysis Period:** Five years—Nov-2019 to Oct-2024
- **Portfolio Allocation:** 80/20 Equity/Fixed Income over the analysis period

Portfolio Performance vs. BTC Allocation

| BTC ETF Allocation | 0% | 1% | 2% | 5% | 10% |
|--------------------|------|------|------|------|------|
| Annual Returns (%) | 9% | 10% | 10% | 12% | 15% |
| Volatility (%) | 16% | 17% | 18% | 23% | 35% |
| Sharpe Ratio | 0.69 | 0.87 | 1.01 | 1.30 | 1.55 |

- **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 South African Portfolio



Portfolio Performance vs. BTC Allocation



Impact Highlights

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|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>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.</p> |
|  | <p>Risk-Adjusted Returns: The Sharpe Ratio increases markedly with BTC allocation, from 0.69 (with no BTC) to 1.55 (with 10% BTC). This indicates that the risk-adjusted returns improve substantially, making the portfolio more efficient in compensating for the risk taken.</p> |
|  | <p>Protection Against Currency Depreciation: Higher returns from BTC allocation strengthen the portfolio, providing a buffer that helps preserve and grow value despite currency fluctuations.</p> |

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 3%
 - 2% BTC returned an additional 6%

- 5% BTC returned an additional 14%
- 10% BTC returned an additional 29%
- **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 & bond data were sourced from Investing.com. 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.



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>

