

Which Asset Classes Give a Swiss Investor a Good Hedge Against Inflation?

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Motivation

- Inflation decreases purchasing power, posing a challenge for wealth preservation.
- Switzerland's unique economic conditions require tailored inflation-hedging strategies.
⇒ Swiss investors face unique challenges due to historically low inflation rates and currency stability.
- This study explores assets such as stocks, commodities, fixed income, real estate, and cryptocurrencies, to build inflation-resilient portfolios.
- Arnold and Auer (2015) highlight mixed results across asset classes as inflation hedges in their comprehensive review "What Do Scientists Know About Inflation Hedging?".

Research Objectives

- Assess the inflation-hedging effectiveness of various asset classes.
- Compare asset performance across different inflationary environments (i.e. short-, medium-, and long-term horizons).
- Extend analysis to evaluate emerging asset classes, such as cryptocurrencies, for inflation protection.
- Provide insights for constructing diversified, inflation-resilient portfolios.

Disclaimer! The analysis and findings presented in this project are for informational, analytical research and academic purposes only and should not be construed as financial advice or recommendations.

Overview - Asset Classes

- Stocks
- Commodities
- Fixed Income
- Real Estate
- Cryptocurrency

Stocks

⇒ Literature: Limited short-term inflation-hedging ability, but potential long-term inflation hedging.

SMI Constituents	European Companies
<ul style="list-style-type: none">● SMI: SSMI● Roche: ROG.SW● Nestle: NESN.SW	<ul style="list-style-type: none">● Novo Nordisk: NVO● LVMH: MC.PA● SAP: SAP
S&P 500 Constituents	Asian Companies
<ul style="list-style-type: none">● S&P 500: GSPC● Apple: AAPL● Nvidia: NVDA	<ul style="list-style-type: none">● TSMC: TSM● Tencent: TCEHY

Table: Stock Tickers

Commodities

⇒ Literature (Gold): Historically strong correlation with inflation, suitable for short to medium-term benefits.

Broad Commodity ETFs	Energy ETFs
• Invesco Commodity Composite UCITS ETF: LGCF.L	• WisdomTree Brent Crude Oil: BRNT.L
Gold ETFs	Silver ETFs
• iShares Physical Gold ETF: IGLN.L	• iShares Physical Silver ETF: ISLN.L
Specific Commodity ETFs	
• WisdomTree Natural Gas: NGAS.L • WisdomTree Wheat: WEAT.L	• WisdomTree Corn: CORN.L • WisdomTree Soybeans: SOYB.L

Table: Commodity Tickers

Fixed Income

⇒ Literature: Nominal bonds lose value during inflation, inflation-linked bonds offer more direct protection.

Broad Market Bond ETFs	Government Bond ETFs
• iShares Global Corporate Bond UCITS ETF: CORP.L	• iShares US Treasury Bond 7-10 Year UCITS ETF: IBTM.L
Corporate Bond ETFs	High Yield Bond ETFs
• iShares USD Corporate Bond UCITS ETF: LQDE.L	• iShares Euro High Yield Corporate Bond UCITS ETF: IHYG.L
Emerging Markets Bond ETFs	Short Duration Bond ETFs
• iShares JP Morgan EM Local Government Bond UCITS ETF: IEML.L	• iShares Euro Ultrashort Bond UCITS ETF: ERNE.L
Inflation-Linked Bond ETFs	
• iShares Euro Inflation-Linked Government Bond UCITS ETF: IBCI.L	• UBS ETF US TIPS UCITS ETF: TIPS.L

Table: Fixed Income Tickers

Real Estate (RE)

- ⇒ Literature: Consistent and reliable long-term inflation hedge, effectiveness may vary depending on property types and inflation conditions.

Swiss RE Funds	International RE ETFs
<ul style="list-style-type: none">• UBS ETF SXI Real Estate: SRECHA.SW• Procimmo Swiss Commercial Fund: PSCF.SW	<ul style="list-style-type: none">• iShares US Real Estate ETF: IYR• iShares Global REIT ETF: REET
Swiss RE Companies	
<ul style="list-style-type: none">• Swiss Prime Site: SPSN.SW• PSP Swiss Property: PSPN.SW	<ul style="list-style-type: none">• Allreal Holding: ALLN.SW• Mobimo Holding: MOBN.SW

Table: Real Estate Tickers

Cryptocurrency

⇒ Literature: Potential inflation hedges due to their scarcity, but effectiveness remains uncertain due to high volatility and limited history.

- Bitcoin (BTC): BTC-USD
- Ethereum (ETH): ETH-USD
- Binance Coin (BNB): BNB-USD
- XRP (XRP): XRP-USD
- Cardano (ADA): ADA-USD

Data Collection

- Swiss CPI data from Swiss Federal Statistical Office.
- Asset price data and Tickers from Yahoo Finance.
- Instruments analyzed for Swiss and global markets.
- Adjusted closing prices used for accuracy and consistency.
- Focused on CHF-denominated instruments or other widely recognizes global currencies (USD, EUR) for Swiss investor relevance (no currency conversion).
- Processed using Python's `yfinance` library.

Evaluation

Evaluation Frameworks:

- *All Possibilities Method*: Generates all portfolio combinations for analysis.
- *Rolling Window Method*: Analyzes data dynamically over a sliding 12-month window.
- *Single-Value Method*: Provides static metrics over the entire period.

Evaluation Metrics:

- *Correlation*: Measures co-movement of returns and inflation.
- *Real Return*: Adjusts nominal returns for inflation, focusing on purchasing power.
- *Single-Beta Linear Regression*: Models sensitivity of asset returns to inflation changes, offering predictive insights.

Steps

Step 1: Generate Portfolios using Evaluation Frameworks

Step 2: Computations and Analysis of Metrics

- Correlation:
 - ▶ Measures co-movement between portfolio returns and inflation.
- Real return:
 - ▶ Adjusts nominal returns for inflation to assess true purchasing power growth.
- Single-beta linear regression:
 - ▶ Models the relationship between inflation and portfolio returns to assess sensitivity.

Steps

Step 3: Additional Exploration → Analyze expected vs. unexpected inflation impacts:

- Use historical data or AR models to separate inflation components.
- Regression to determine sensitivity to each component.

Note: Other methods include (but are not limited to): OLS, Cointegration Techniques, Panel Regression and Cross-Sectional Analyses, Markov-Switching Models, Kalman Filter and Vector Auto-Regression (VAR).

⇒ There is no single approach suitable in analyzing all assets in general. Each of them presents certain limitations and are more or less appropriate regarding different asset classes.

Results – Regression (1/2)

Maximum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	^SSML_NESN.SW_SAP_TCEHY_1mo_2y: 0.00	NGAS_L_CORN_L_SOYB_L_1mo_2y: 0.00	CORP_L_BTM_L_LODE_L_JHYG_L_BCL_L_TIPS_L_ERNE_L_JEML_L_1mo_2y: 0.00	SPSN.SW_ALLN.SW_SRECHA.SW_JYR_JYR_1mo_2y: 0.00	BNB-USD_XRP-USD_ADA-USD_1mo_2y: 0.00
5y	MC_PA_NVDA_1mo_5y: 51.06	IGLN_L_ISLN_L_1mo_5y: 6.56	CORP_L_LODE_L_1mo_5y: 11.72	FR_REET_1mo_5y: 25.29	BTC-USD_BNB-USD_1mo_5y: 59.62
10y	NVDA_TSM_1mo_10y: 26.68	BRNT_L_SOYB_L_1mo_10y: 5.82	TIPS_L_JEML_L_1mo_10y: 1.15	FR_REET_1mo_10y: 2.55	BTC-USD_ADA-USD_1mo_10y: 41.36
max	NVDA_TSM_1mo_max: 20.33	LGCF_L_BRNT_L_1mo_max: 16.98	CORP_L_BCL_L_TIPS_L_ERNE_L_1mo_max: 42.98	FR_REET_1mo_max: 1.73	BTC-USD_ADA-USD_1mo_max: 51.32

Maximum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	^SSML_SAP_API_TSM_1mo_2y: 0.00	IGLN_L_ISLN_L_NGAS_L_WEAT_L_CORN_L_1mo_2y: 0.00	LODE_L_JHYG_L_JEML_L_1mo_2y: 0.00	ALLN.SW_SRECHA.SW_PSCF.SW_JYR_REET_1mo_2y: 0.00	BTC-USD_ETH-USD_1mo_2y: 0.00
5y	NESN.SW_NVO_1mo_5y: 3.61	LGCF_L_BRNT_L_1mo_5y: 8.12	IBTM_L_ERNE_L_1mo_5y: -0.54	SPSN.SW_PSPN.SW_1mo_5y: 5.33	BNB-USD_XRP-USD_1mo_5y: -27.47
10y	NVO_MC_PA_1mo_10y: 4.29	LGCF_L_BRNT_L_1mo_10y: 11.36	ERNE_L_JEML_L_1mo_10y: 0.08	PSPN.SW_REET_1mo_10y: 1.37	BNB-USD_XRP-USD_1mo_10y: -8.45
max	MC_PA_NVDA_1mo_max: 4.70	LGCF_L_BRNT_L_1mo_max: 13.40	ERNE_L_JEML_L_1mo_max: 0.42	PSPN.SW_REET_1mo_max: 3.29	BNB-USD_XRP-USD_1mo_max: -8.45

Results – Regression (2/2)

Minimum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	^SSM_NESN.SW_SAP_TCEHY_1mo_2y: 0.00	NGAS.L_CORN.L_SOYB.L_1mo_2y: 0.00	CORR.L_BTM.L_LQDE.L_IHYG.L_IEM.L_TIPS.L_ERNE.L_IEM.L_1mo_2y: 0.00	SPSN.SW_ALLN.SW_SRECHA.SW_YR_1mo_2y: 0.00	BNB+USD_XRP+USD_ADA+USD_1mo_2y: 0.00
5y	ROG.SW_TCEHY_1mo_5y: 1.45	BRNT.L_NGAS.L_1mo_5y: -50.90	BTM.L_ERNE.L_1mo_5y: 1.52	MOBN.SW_SRECHA.SW_1mo_5y: 2.94	ETH+USD_XRP+USD_1mo_5y: -44.17
10y	NESN.SW_ROG.SW_1mo_10y: -2.28	ISLN.L_NGAS.L_1mo_10y: -11.98	BTM.L_TIPS.L_1mo_10y: -3.75	SPSN.SW_PSCF.SW_1mo_10y: -10.65	ETH+USD_BNB+USD_1mo_10y: -2.21
max	NESN.SW_TCEHY_1mo_max: -2.78	BRNT.L_NGAS.L_1mo_max: -23386.10	ERNE.L_IEM.L_1mo_max: -2.53	ALLN.SW_SRECHA.SW_1mo_max: -5.76	ETH+USD_BNB+USD_1mo_max: -2.21

Minimum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	^SSM_SAP_AAP_TSM_1mo_2y: 0.00	IGLN.L_ISLN.L_NGAS.L_WEAT.L_CORN.L_1mo_2y: 0.00	LQDE.L_IHYG.L_IEM.L_1mo_2y: 0.00	ALLN.SW_SRECHA.SW_PSCF.SW_YR_REET_1mo_2y: 0.00	BTC+USD_ETH+USD_1mo_2y: 0.00
5y	NVDA_TSM_1mo_5y: -39.51	ISLN.L_SOYB.L_1mo_5y: -10.08	CORP.L_LQDE.L_1mo_5y: -4.69	ALLN.SW_SRECHA.SW_1mo_5y: -4.73	ETH+USD_ADA+USD_1mo_5y: -164.04
10y	TSM_TCEHY_1mo_10y: -17.55	ISLN.L_WEAT.L_1mo_10y: -2.36	BTM.L_TIPS.L_1mo_10y: -3.14	ALLN.SW_MOBN.SW_1mo_10y: -4.20	ETH+USD_ADA+USD_1mo_10y: -108.45
max	ROG.SW_TCEHY_1mo_max: -9.69	ISLN.L_NGAS.L_1mo_max: -5172.02	BTM.L_TIPS.L_1mo_max: -4.39	ALLN.SW_MOBN.SW_1mo_max: -3.84	ETH+USD_ADA+USD_1mo_max: -108.45

Figure: Regression – All possibilities

Results – Correlation (1/2)

Maximum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	No valid data	No valid data	No valid data	No valid data	No valid data
5y	MC_PA_AAPL_1mo_5y: 0.98	IGLN.L_ISLN.L_1mo_5y: 0.73	IBTM.L_IJEM.L_1mo_5y: 0.99	SPSN.SW_PSPN.SW_MOBN.SW_SRECHA.SW_PSCF.SW_REET_1mo_5y: 1.00	BTC-USD_BNB-USD_1mo_5y: 0.61
10y	AAPL_TSM_1mo_10y: 0.77	IGLN.L_BRNT.L_1mo_10y: 0.30	IHYG.L_ERNE.L_1mo_10y: 0.27	IYR_REET_1mo_10y: 0.12	BTC-USD_ADA-USD_1mo_10y: 0.39
max	MC_PA_TSM_1mo_max: 0.51	LGCF.L_IGLN.L_BRNT.L_1mo_max: 0.48	CORP.L_IBCL.L_IPS.L_ERNE.L_1mo_max: 0.57	IYR_REET_1mo_max: 0.08	BTC-USD_BNB-USD_1mo_max: 0.52

Maximum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	No valid data	No valid data	No valid data	No valid data	No valid data
5y	NESN.SW_NVO_1mo_5y: 0.45	IGLN.L_BRNT.L_1mo_5y: 0.46	IHYG.L_ERNE.L_1mo_5y: -0.41	SPSN.SW_PSPN.SW_1mo_5y: 0.62	BNB-USD_XRP-USD_1mo_5y: -0.23
10y	NVO_MC_PA_1mo_10y: 0.31	IGLN.L_BRNT.L_1mo_10y: 0.63	ERNE.L_IJEM.L_1mo_10y: 0.02	PSPN.SW_REET_1mo_10y: 0.14	BTC-USD_BNB-USD_1mo_10y: -0.05
max	^SSM.L_NESN.SW_1mo_max: 0.12	IGLN.L_BRNT.L_1mo_max: 0.67	ERNE.L_IJEM.L_1mo_max: 0.08	PSPN.SW_REET_1mo_max: 0.09	BTC-USD_BNB-USD_1mo_max: -0.05

Results – Correlation (2/2)

Minimum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	No valid data	No valid data	No valid data	No valid data	No valid data
5y	ROG.SW_TCEHY_1mo_5y: 0.05	ISLN.L_NGAS.L_1mo_5y: -0.74	IBTM.L_ERNE.L_1mo_5y: 0.36	SRECHA.SW_PSCF.SW_1mo_5y: 0.52	ETH-USD_XRP-USD_1mo_5y: -0.19
10y	NESN.SW_ROG.SW_1mo_10y: -0.15	ISLN.L_WEAT.L_1mo_10y: -0.50	IBTM.L_TIPS.L_1mo_10y: -0.33	SPSN.SW_MOBN.SW_SRECHA.SW_PSCF.SW_1mo_10y: -0.69	ETH-USD_BNB-USD_1mo_10y: -0.02
max	NESN.SW_TCEHY_1mo_max: -0.17	IGLN.L_ISLN.L_1mo_max: -0.52	ERNE.L_IEM.L_1mo_max: -0.31	ALLN.SW_PSCF.SW_1mo_max: -0.38	ETH-USD_BNB-USD_1mo_max: -0.02

Minimum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	No valid data	No valid data	No valid data	No valid data	No valid data
5y	NESN.SW_NVO_TSM_1mo_5y: -1.00	IGLN.L_ISLN.L_WEAT.L_1mo_5y: -0.65	IBTM.L_IBCL.L_TIPS.L_ERNE.L_1mo_5y: -1.00	ALLN.SW_SRECHA.SW_1mo_5y: -0.65	BTC-USD_XRP-USD_1mo_5y: -0.98
10y	NESN.SW_ROG.SW_SAP_TSM_1mo_10y: -0.63	ISLN.L_WEAT.L_1mo_10y: -0.22	IBTM.L_TIPS.L_1mo_10y: -0.72	ALLN.SW_SRECHA.SW_1mo_10y: -0.45	ETH-USD_ADA-USD_1mo_10y: -0.59
max	ROG.SW_TCEHY_1mo_max: -0.35	ISLN.L_WEAT.L_1mo_max: -0.29	CORPL.IBTM.L_LQDE.L_TIPS.L_1mo_max: -0.63	SRECHA.SW_PSCF.SW_1mo_max: -0.32	ETH-USD_ADA-USD_1mo_max: -0.59

Figure: Correlation – All possibilities

Results – Real Returns (1/2)

Maximum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	SAP_NVDA_1mo_2y: 17.91	LGCF,I_BRNT,I_1mo_2y: 2.60	LQDE,I_ERNE,I_1mo_2y: 1.27	ALLN,SW_SRECHA,SW_1mo_2y: 2.06	BTC-USD_ETH-USD_1mo_2y: 0.23
5y	TSM_TCEHY_1mo_5y: 48.17	BRNT,I_CORN,I_1mo_5y: 22.69	LQDE,I_ERNE,I_1mo_5y: 0.85	SPSN,SW_ALLN,SW_1mo_5y: -0.10	ETH-USD_ADA-USD_1mo_5y: 87.13
10y	NVDA_TCEHY_1mo_10y: 85.37	IGLN,I_BRNT,I_1mo_10y: 27.61	LQDE,I_TIPS,I_1mo_10y: 8.40	PSCF,SW_REET_1mo_10y: 35.14	ETH-USD_ADA-USD_1mo_10y: 172.28
max	TSM_TCEHY_1mo_max: 681.61	BRNT,I_NGAS,I_1mo_max: 105802.92	LQDE,I_TIPS,I_1mo_max: 19.66	PSCF,SW_IYR_1mo_max: 122.32	ETH-USD_ADA-USD_1mo_max: 172.28

Maximum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	NVO_NVDA_1mo_2y: 138.23	IGLN,I_BRNT,I_1mo_2y: 3.93	IHYG,I_EML,I_1mo_2y: 5.69	SPSN,SW_MOBN,SW_1mo_2y: 11.51	BTC-USD_ETH-USD_1mo_2y: 61.88
5y	NVO_NVDA_1mo_5y: 607.98	BRNT,I_SOYB,I_1mo_5y: 83.45	IHYG,I_TIPS,I_1mo_5y: -0.75	SRECHA,SW_IYR_1mo_5y: -3.91	ETH-USD_BNB-USD_1mo_5y: 1965.69
10y	NVO_NVDA_1mo_10y: 4473.53	IGLN,I_BRNT,I_1mo_10y: 64.98	IBTM,I_TIPS,I_1mo_10y: 19.03	SPSN,SW_MOBN,SW_1mo_10y: 61.70	BTC-USD_BNB-USD_1mo_10y: 80572.20
max	AAPL_NVDA_1mo_max: 906707.28	LGCF,I_IGLN,I_BRNT,I_ISLN,I_NGAS,I_SOYB,I_1mo_max: 14760.20	LQDE,I_IHYG,I_1mo_max: 50.80	PSPN,SW_IYR_1mo_max: 664.67	BTC-USD_BNB-USD_1mo_max: 80572.20

Results – Real Returns (2/2)

Minimum MoM Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	AAPL_TCEHY_1mo_2y: -6.17	NGAS,L_SOYB,L_1mo_2y: -8.44	IBCI,L_IJML,L_1mo_2y: -3.59	IYR_REET_1mo_2y: -3.96	XRP-USD_ADA-USD_1mo_2y: -17.30
5y	NESN,SW_ROG,SW_1mo_5y: -7.30	NGAS,L_WEAT,L_1mo_5y: -7.75	IBCI,L_IJML,L_1mo_5y: -7.26	MOBN,SW_PSCF,SW_1mo_5y: -5.30	BTC-USD_BNB-USD_1mo_5y: 18.23
10y	NESN,SW_ROG,SW_1mo_10y: -3.94	NGAS,L_SOYB,L_1mo_10y: -4.06	IBCI,L_IJML,L_1mo_10y: -8.06	ALLN,SW_MOBN,SW_1mo_10y: 6.83	BTC-USD_XRP-USD_1mo_10y: -4.41
max	^SSM _NESN,SW_1mo_max: -2.24	LGSF,L_BRNT,L_1mo_max: -26.42	IBCI,L_IJML,L_1mo_max: -99.27	SRECHA,SW_REET_1mo_max: -81.53	BTC-USD_XRP-USD_1mo_max: -34.80

Minimum YoY Correlation Table

	stocks	commodities	fixed_income	real_estate	cryptocurrency
2y	ROG,SW_TCEHY_1mo_2y: -18.22	NGAS,L_WEAT,L_1mo_2y: -41.19	IBTM,L_IBCI,L_1mo_2y: -2.74	IYR_REET_1mo_2y: -4.71	BNB-USD_XRP-USD_1mo_2y: 8.60
5y	ROG,SW_TCEHY_1mo_5y: -15.12	NGAS,L_WEAT,L_1mo_5y: -47.59	IBTM,L_IJML,L_1mo_5y: -12.33	SPSN,SW_PSPN,SW_1mo_5y: -15.90	BTC-USD_XRP-USD_1mo_5y: 210.03
10y	^SSM _ROG,SW_1mo_10y: 27.52	NGAS,L_WEAT,L_1mo_10y: -78.25	TIPS,L_IJML,L_1mo_10y: -7.65	PSCF,SW_REET_1mo_10y: 17.30	XRP-USD_ADA-USD_1mo_10y: 2.32
max	^SSM _ROG,SW_1mo_max: 692.03	BRNT,L_ISLN,L_1mo_max: -20.42	TIPS,L_IJML,L_1mo_max: -20.79	SRECHA,SW_REET_1mo_max: 43.71	XRP-USD_ADA-USD_1mo_max: 2.32

Figure: Real Returns – All possibilities

Top Performing Asset Classes

- **Short-Term Hedging:** Commodities (BRNT.L, LGCF.L), Real Estate (SPSN.SW, PSPN.SW).
- **Medium-Term Hedging:** Fixed Income (TIPS.L, IBCI.L), Real Estate (REET, IYR).
- **Long-Term Hedging:** Real Estate consistently outperformed across all horizons.

Interpretation of Results

- Commodities offer robust short-term inflation protection.
- Fixed income instruments excel in medium-term stability.
- Real estate emerges as the most consistent hedge over all time horizons.
- Cryptocurrencies show speculative potential but remain volatile and less reliable.

Key Insights

- Combining asset classes enhances inflation resilience.
- Diversification remains critical to managing risk and capturing opportunities.
- Tailored strategies needed for different time horizons.

Limitations

- **Historical Data Dependency:** Results rely on historical data, which may not predict future performance under changing economic conditions.
- **Volatility of Emerging Assets:** Cryptocurrencies and other emerging asset classes exhibit high volatility, impacting their reliability as inflation hedges.
- **Simplified Assumptions:** Linear regression assumes a constant relationship between returns and inflation, potentially oversimplifying complex dynamics.
- **Limited Geographic Scope:** Focus on Swiss inflation may not generalize to other markets with different economic conditions.
- **Data Gaps:** Potential gaps or inaccuracies in asset pricing data could affect results.
- **Limited Computing Power:** Higher-performing computers could include more asset classes and a longer time horizon in this analysis to offer more accurate results.

Key Takeaways

- Real estate proves the most reliable long-term hedge against inflation.
- Commodities and fixed income are show strong inflation-hedging properties for short and medium-term horizons.
- Cryptocurrencies offer potential, provide diversification but require caution due to volatility and speculative nature.
- Diversification is key for inflation-resilient portfolios.
⇒ Diversified portfolios performed better under varying inflationary conditions.
- Future research should explore dynamic models and look furthur into emerging asset classes.

Future Directions

- Explore dynamic econometric models for improved predictive accuracy.
- Assess private equity and infrastructure investments as alternative hedges.
- Investigate the role of currency fluctuations in global inflation-hedging strategies.
- Expand analysis to account for macroeconomic factors such as interest rates.