

“Inflation Expectation and Cryptocurrency Investment”

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This Paper

- Timely Answers to Important Topics!
 - Drivers of Crypto demand
 - Direct (actual crypto trade) and causal evidence on Crypto as an inflation hedge
 - Stylized facts from non-US markets
- Findings:
 - Higher inflation expectations trigger more purchases BTC and USDT
 - True to crypto adoption
 - More so in semi-urban areas
 - Robust to multiple IV analyses and speculative motive
 - Main instrument and auxiliary tests
 - No effect for USDT trading pairs
- Great data, smooth writing and convincing analyses!

My Comments

- Narrative
- Identification
- Investor Heterogeneity

#1 Narrative: What Do We Know about Inflation Hedge?

- **Current Pitch: Sources of BTC Demand**
 - Finance illicit activities, value decentralization, pursue financial privacy, circumvent capital controls
- **Inflation hedge: little and mixed evidence!**
 - Especially in high inflation emerging markets
- **Do (Retail) investors hedge against inflation?**
 - Higher inflation expectations increase demand for inflation-indexed financial instruments
 - Kanz, Perez-Truglia, and Galashin (2022)
 - Retail investors facing higher inflation reduce stock holdings
 - Braggion, von Meyerinck, and Schaub (2023)

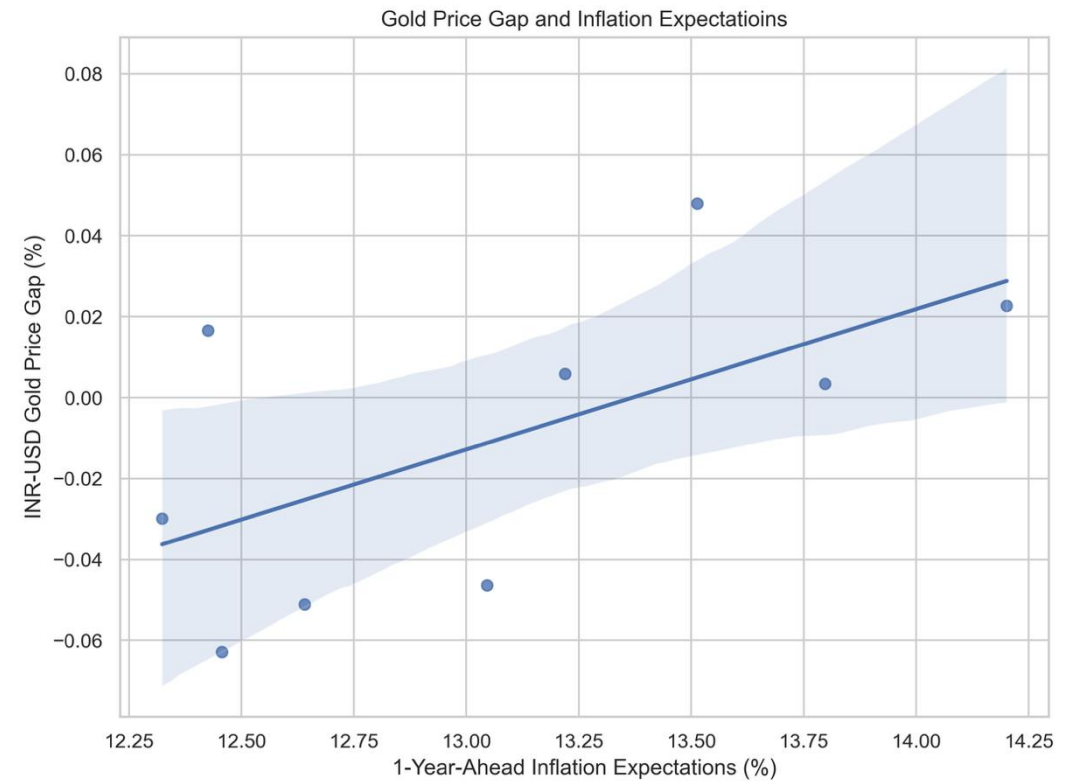
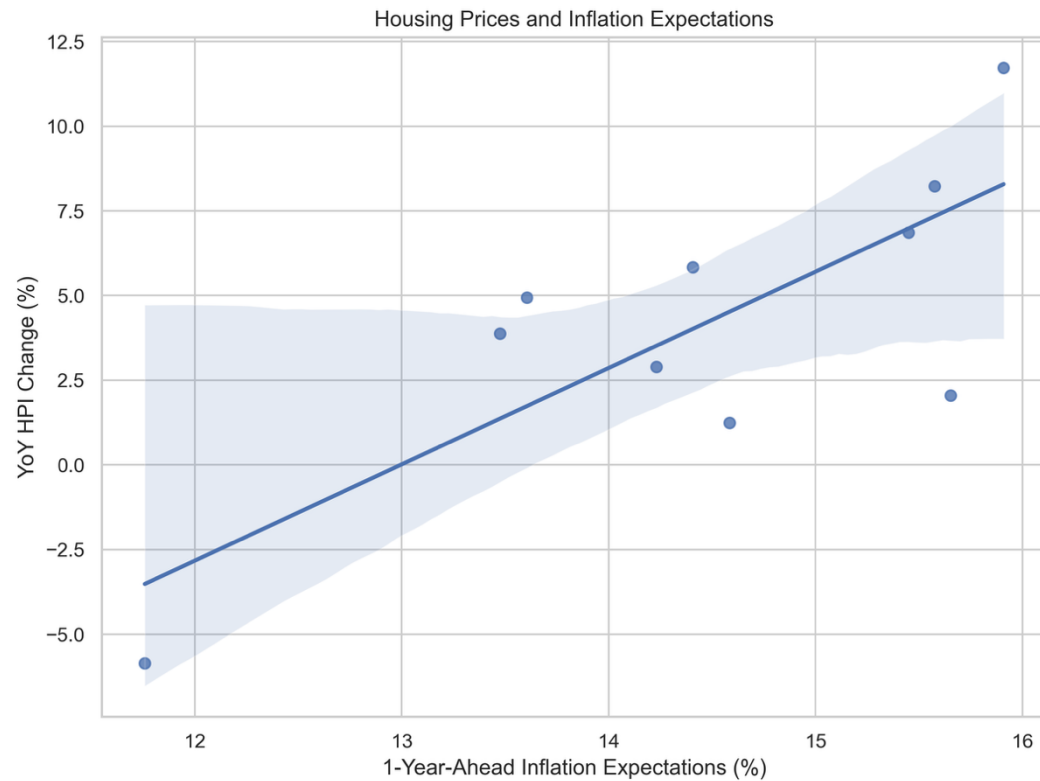
#1 Narrative: What Do We Know about Inflation Hedge?

- How? Which assets hedge against Inflation?
 - Theoretic framework: asset returns positively correlate or outpace inflation expectations
- Applicable to crypto investments?
 - Investors may buy crypto : fixed supply
 - Investors may sell crypto:
 - Crypto have no cash flow or dividends that can grow with inflation
 - Risk averse and sell volatile assets
- Ultimately an empirical question that requires granular data
 - US evidence: Aiello et al. (2023)

#1 Narrative: What Makes BTC a Good Hedge?

- What makes BTC a good inflation hedge?
 - Fixed supply?
 - Compare with inflationary cryptos such as ETH
 - Expected return?
 - Already controlled for expected crypto return, but does past btc rally amplify the effect?
 - Liquidity? 24*7
 - Condition on BTC trading volume, bid-ask spread, trading time/rules, etc
 - Uncorrelated with other assets?
 - Condition on BTC correlation with equity indices
 - Uncorrelated with monetary policies?
 - Decentralization
- Substitute traditional assets in hedging? Reallocate across cryptos?
 - Beyond crypto holdings, do on-ramps and off-ramps align with inflation hedge motive?

#1 Narrative: Which Assets Hedge against Inflation?



#1 Narrative: Implications of Crypto Hedge

- Do investors hedge inflation effectively ex-post?
 - What should be the benchmark?
 - No hedge, hedge with gold, IIB, real estate, equity, etc?
- Inflation disproportionately hurt low-income households
 - Does BTC as inflation hedge help reduce income inequality?
 - If so, echoes the original mission of crypto --- leveling the playing field

#1 Narrative: Are All Inflation Episodes Equal?

- Long- or short-term?
 - Paper already compares three-month vs one-year ahead expectations
- Supply- and demand- side inflation?
- Level of disagreement?
 - Dispersion of inflation expectation within states
- Which types of inflations do crypto hedge more effectively against?

#2 Identification: Specification

- Identification Concerns:
 - Inflation expectation at pincode-time level
 - Concerns:
 - Pincode-time-varying unobservables that correlate with both inflation expectation and crypto investment
 - How to address:
 - Panel specifications with city*time or district*time FE
 - Subtly different interpretations from individual or household-level inflation expectation
- Speculative motive proxied by expected crypto returns
 - Sample size drops significantly: possible selection?
 - Use sentiment measures that help preserve sample size

#2 Identification: Instruments

- **Relevance Condition:**
 - High correlation btw expected and perceived inflation
- **Exogeneity Restriction:**
 - Randomness in perception shaped by idiosyncratic purchases and reasons
 - Randomness affects crypto investments only through inflation expectation
 - However, the randomness may correlate with time-varying local conditions (authors already control for urban/rural)
 - IV magnitudes are slightly larger!
 - Random at the individual level but may wash out when aggregating at the PINCODE
 - LATE
- **Other possible instruments?**
 - **Natural disasters** → Food price shocks
 - Rupee swings
 - Local monetary policy shocks

#3 Investor Heterogeneity

- New Fact: extensive margin, both crypto and non-crypto investors
- Weber et al. (2023): *“crypto-owners tend to perceive cryptocurrency as a strong hedge against inflation whereas those who do not hold cryptocurrencies view them as largely uncorrelated with inflation”*

#3 Investor Heterogeneity

- Leverage the trade data even more! Curious to know:
 - Does the hedging effect interact with the dimensions like investor sophistication, diversification, experience, trading frequencies, biases and performance, etc
 - Is the effect driven by long vs short positions?
 - Does the hedging effect vary across crypto boom and bust?
 - Exploit non-IDR investors as an external validity check beyond the Indian context

Take-away

- Enrich the narrative
- Sharpen identification
- Uncover even more stylized (and nuanced) facts
- Highly recommend reading it!