

#### Discussion of "Inflation Expectation and Cryptocurrency Investment"

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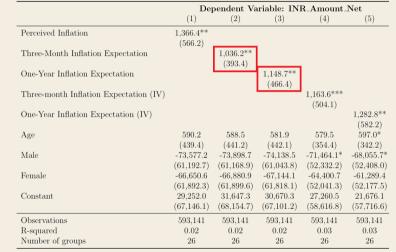
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Table 5: Inflation Expectations and Cryptocurrency Investment (Jan 2018 - June 2022)

### Inflation hedging:

1.Inflation expectation increases crypto investment in rupee (4-5% of income)

2.But not for crypto settled in Tether



This table presents the regression results of

$$\begin{split} Inr\_Amount\_Net_{i,t+1} &= \alpha + \beta \times \text{Inflation\_Expectation}_{i,t} + \gamma \times \text{Age}_{i,t} + \\ &+ \lambda \times \text{Male}_{i,t} + \theta \times \text{Female}_{i,t} + \epsilon_{i,t+1} \end{split}$$

# Comment 1: hedging is about risk

But expected inflation rate  $\neq$  inflation risk.

- Higher inflation expectation means lower expected return of cash (in real).
- People hold less cash and more crypto; can be purely portfolio choice driven by expected return.
- Any measure of (perceived) inflation risk in the survey to verify the hedging story?
- Inflation risk and inflation expectation are likely correlated; disentangling the two in, for example, oil price literature (see works by Lutz Kilian of Dallas Fed)

# Comment 2: why hedging with riskier assets?

Crypto Euler equation: 
$$P_t = E_t \{ M_{t+1} P_{t+1} \} = \frac{E_t P_{t+1}}{1+i_t} + COV_t \{ M_{t+1}, P_{t+1} \}.$$

- A higher inflation realized increases the stochastic discount factor  $M_{t+1}$ .
- Crypto is a good hedge against inflation if  $COV_t \{M_{t+1}, P_{t+1}\} > 0$ .
- i.e., future crypto price (in rupee) is positively correlated with rupee inflation
- Is it true in India data?
- If so, can we estimate the effect of the correlation in crypto investment?

### Comment 3: theory?

Unlike typical return regression of various assets, here is about the quantity of crypto invested by various investors.

- Arena of demand system asset pricing (Koijen Yogo 2019 JPE).
- But still huge debate on the micrfoundation for this kind of quantity regression, e.g.
  Fuchs et al (2025), Kocherlakota (2025), etc.
- Unlike traditional portfolio choice (Cochrane et al 2008 RFS, Martin 2013 ECTA), here the investor exposure to inflation comes from the demand for money: how  $M_{t+1}$  is affected by inflation and money.
- A nice contribution if put a microfoundation of money and crypto, derive the hedging demand for crypto, and estimate with India data on the investor level.

# A toy model

Based on Wong (2016 ReStud) and Rocheteau, Weill, Wong (2018 TE)

- Continuous time, two assets (money and crypto), investors with heterogeneous income (as in the data).
- Holding money is useful for purchase (CRRA), arriving at some Poisson rate.
- But money also subject to the risk of inflation, realizing in 3 month or 1 year on average (measured in the survey).
- Crypto price follows a volatile geo-Brownian motion, but positively correlated with future inflation, making it a good hedge for inflation risk.
- Close-form solution, testible implications on the holding of crypto on the investor level.

#### Other comments

- As an inflation hedge, why is crypto better than gold? financial access,
  disintermediation, no storage/custodian cost, more liquid secondary market?
- Role of 2016 India demonetization? Huge difference of money velocity across India (Chodorow-Reich et al QJE) - can be checked with the investor's location.
- The net holding is actually negative during the period of higher inflation expectation. Seems like people realized capital gain; more controls needed in the regression (so far even no time FE...).
- Why call it Fama-Macbeth regression? Not regressing on return, not regressing on the factor loading...

Interesting data, a lot of follow-up!