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Discussion of "Inflation Expectation and Cryptocurrency Investment"

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Inflation hedging:

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

2. But not for crypto settled in Tether

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

	Dependent Variable: INR_Amount_Net				
	(1)	(2)	(3)	(4)	(5)
Perceived Inflation	1,366.4**				
	(566.2)				
Three-Month Inflation Expectation		1,036.2**			
		(393.4)			
One-Year Inflation Expectation			1,148.7**		
			(466.4)		
Three-month Inflation Expectation (IV)				1,163.6***	
				(504.1)	
One-Year Inflation Expectation (IV)					1,282.8**
					(582.2)
Age	590.2	588.5	581.9	579.5	597.0*
	(439.4)	(441.2)	(442.1)	(354.4)	(342.2)
Male	-73,577.2	-73,898.7	-74,138.5	-71,464.1*	-68,055.7*
	(61,192.7)	(61,168.9)	(61,043.8)	(52,332.2)	(52,408.0)
Female	-66,650.6	-66,880.9	-67,144.1	-64,400.7	-61,289.4
	(61,892.3)	(61,899.6)	(61,818.1)	(52,041.3)	(52,177.5)
Constant	29,252.0	31,647.3	30,670.3	27,260.5	21,676.1
	(67,146.1)	(68,154.7)	(67,101.2)	(58,616.8)	(57,716.6)
Observations	593,141	593,141	593,141	593,141	593,141
R-squared	0.02	0.02	0.02	0.03	0.03
Number of groups	26	26	26	26	26

This table presents the regression results of

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

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!