Discussion of "Who Invests in Crypto? Wealth, Financial Constraints, and Risk Attitudes"

by D. Aiello, S. Baker, T. Balyuk, M. Di Maggio
M. Johnson, and J. Kotter

Discussant: Massimo Guidolin
(Bocconi University)

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Collegio Carlo Alberto, Turin

Summary of the Paper/1

- **Cryptocurrency adoption has experienced recent, significant growth**
  - As of the end of 2021, an estimated 20% of U.S. households hold some crypto
  - Attracted the attention and concern of policymakers for risk exposures

- <u>Key point</u>: Despite potentially questionable demand drivers («FOMO»), cryptocurrencies are not much different from other asset classes
  - Unique, non-anonymous (≠ blockchain) transaction data covering >60 million US individuals over 2014- mid-2023, involving largest crypto trading platforms
  - Data provided directly by major U.S. banks that disclosed these transactions to a data aggregator ⇒ not subject to selection bias from joining planning platform

- This differs substantially from contemporaneous literature (e.g., Weber et al., 2023), based on household surveys

- Households that participate in crypto are largely similar in terms of characteristics to everyone else

- However, households invest more in crypto when their inflation expectations are high, consistent with inflation hedging motives
  - Use recent local price changes across shopping categories and ex-ante consumption baskets to create individual-level proxies for inflation expectations

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Summary of the Paper/2

- o Traditional investments for both crypto and non-crypto investors respond positively to consumers' inflation expectations as well and much more so during the inflationary period

- The performance of Bitcoin massively contributed to the subsequent entry of new investors in the asset class (so there is FOMO, after all)

- Investors who adopted crypto before the boom are contrarians while those who adopted it during the run-up are trend-followers

  - o Early adopters have relatively higher income and spending and are financially sophisticated; they live in wealthier, more educated zip codes with a higher concentration of professional industries; in some ways, they are "gamblers"

- The response of retail crypto investing to (endogenous) positive income shocks in an event study ⇒ ⇑ demand in the 2 weeks after the shocks but ⇓ rapidly when the shock is temporary, similar to traditional investments

  - o Yet, no effect of negative permanent income shocks and symmetric (⇓) response from negative temporary ones, similar to the response for traditional investments

- Effects hold but are stronger for the exogenous shocks represented by the 3 stimulus checks (April 2020, December 2020, and March 2021), but are also homogenous across asset classes ⇒ stimulus didn't boost crypto

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Comments/1: Transaction vs. Survey Data?

- A few competing papers asking similar questions but using surveys and reporting quite different results

  o Weber, Candia, Coibion, and Gorodnichenko (2023) rely on a quarterly survey of US households participating in the Nielsen Homescan Panel since 2018

  o They conclude that «(…) cryptocurrency has a unique place among current financial assets, perhaps as a result of how new it is and how uninformed most individuals remain about it.»

  o Their causal information experiments find results supporting the pervasiveness of the mechanisms through which bubbles arise

- Survey-based papers can test empirical hypotheses concerning a range of household-specific variables not (directly) addressed by this paper:

  o Trader's gender identification

  o Investor's age

  o Behaviors reflecting risk aversion (gambling may reflect skewness-seeking)

  o Financial education

  o Political views

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▪ Even in the camp of transaction data-based empirical work, the dominating view seems to be that "crypto investors are different"

  o Kogan, Makarov, Niessner, and Schoar (2023) based on e-Toro data

  o Conclude that investors in cryptocurrencies «(…) **have a different model of the underlying price dynamics in cryptocurrencies relative to other assets**. Retail traders in our sample are contrarian in stocks and gold, yet the same traders follow a momentum-like strategy in cryptocurrencies. Individual characteristics do not explain the differences in how people trade cryptocurrencies versus stocks, suggesting that our results are orthogonal to differences in investor composition(…)»

  o Hackethal, Hanspal, Lammer, and Rink (2022, RoF) analyze (German) bank records concerning crypto derivatives (certificates) trading and not cryptocurrencies directly

  o They find considerable differences: «In contrast to the average retail investor (…) crypto-currency investors are more active traders and they log into their brokerage accounts almost three times as often. Cryptocurrency investors also compose their portfolios differently (…). They are significantly more likely to hold single stocks, equity derivatives, and warrants in their portfolios.»

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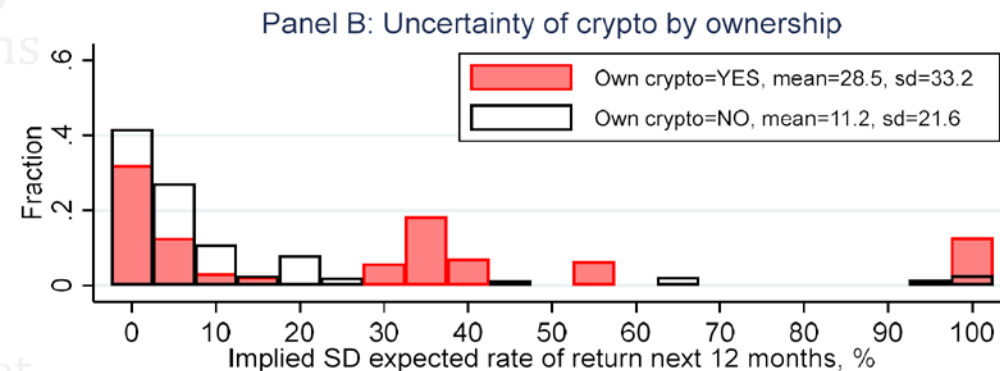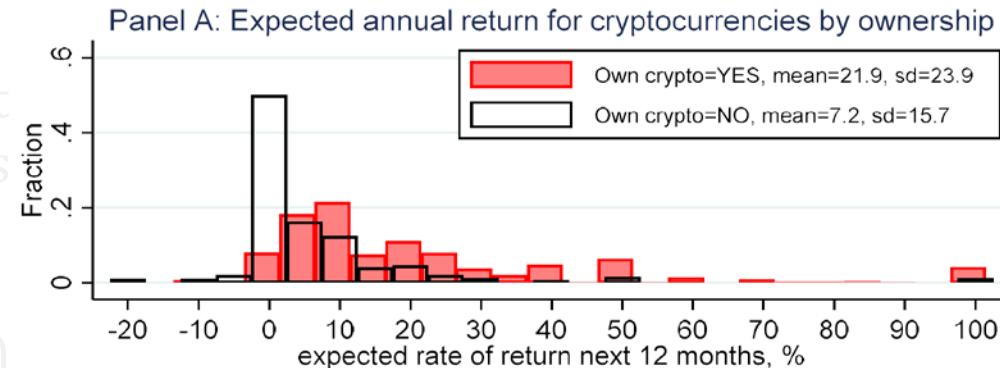
Comments /2: Can One Back Out Expectations Anyway?

- Weber et al. (2023) perform extensive tests and report a number of interesting results concerning the impact of expectations on the demand and diffusion of cryptocurrencies among investors

- For obvious reasons, transaction data fail to contain explicit, direct information on such expectations or on risk perceptions: can something be done about it? And can the lack (although structural) of information on beliefs threatens impact of paper?

- Can anything be done?
  o Follow seminal French and Poterba (1992): given a simple (e.g., static mean-variance?) asset allocation model, back out the range of beliefs on future mean returns and risk (variances) that rationalize observed portfolio choices
  o Of course, assumptions are needed and only a plausible range of beliefs can be obtained

Panel A: Expected annual return for cryptocurrencies by ownership

Own crypto=YES, mean=21.9, sd=23.9
Own crypto=NO, mean=7.2, sd=15.7

expected rate of return next 12 months, %

Panel B: Uncertainty of crypto by ownership

Own crypto=YES, mean=28.5, sd=33.2
Own crypto=NO, mean=11.2, sd=21.6

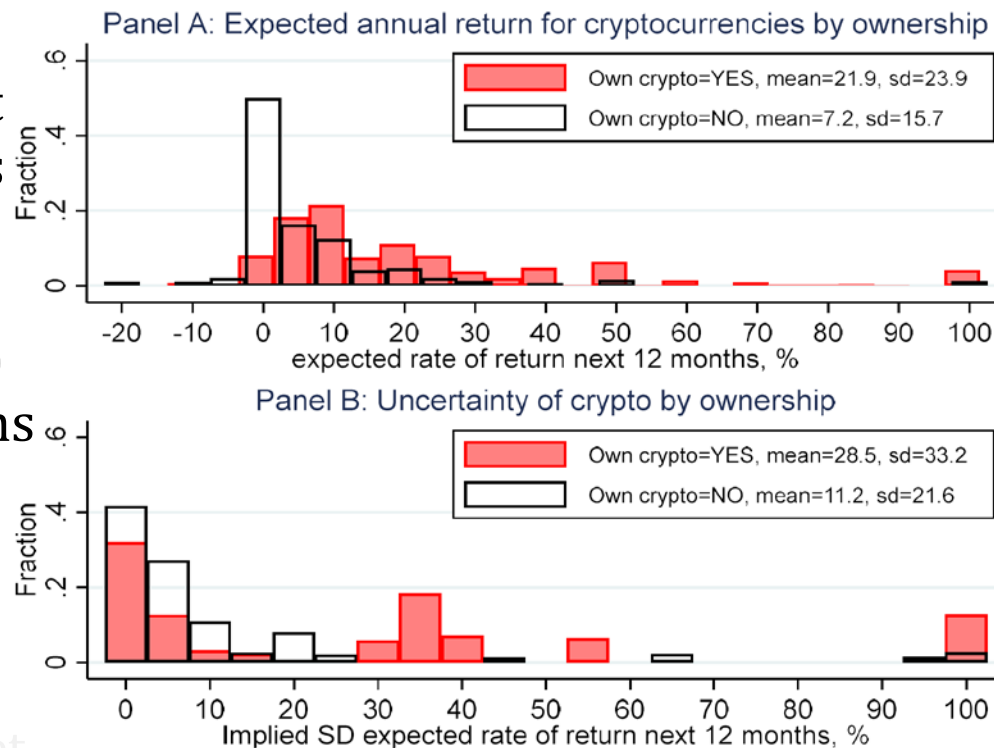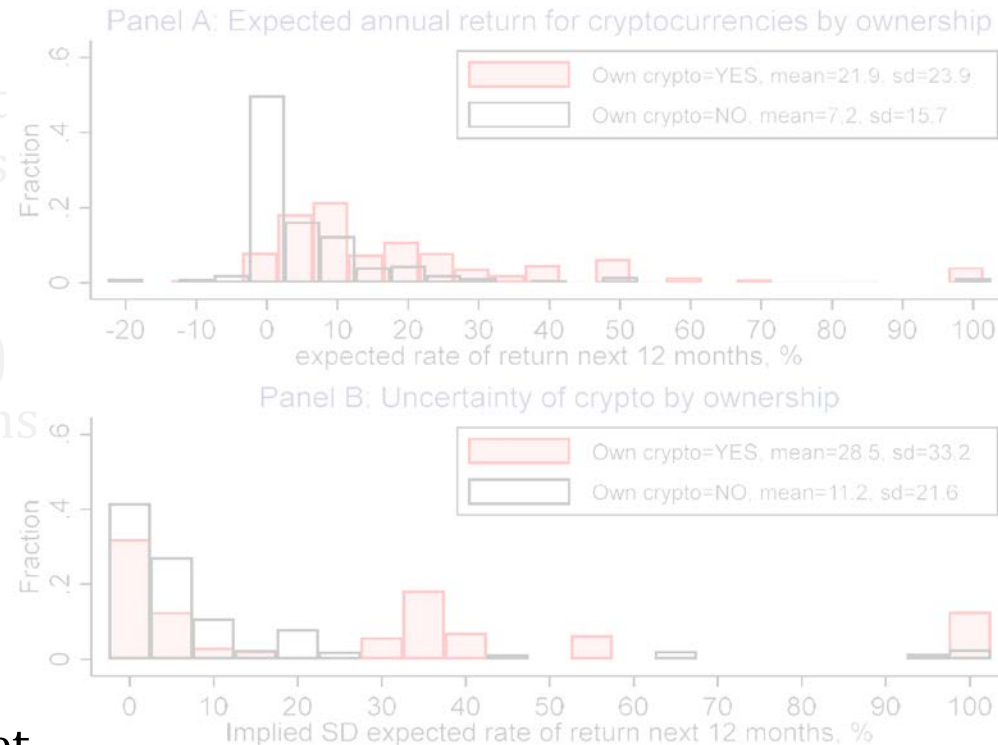Implied SD expected rate of return next 12 months, %

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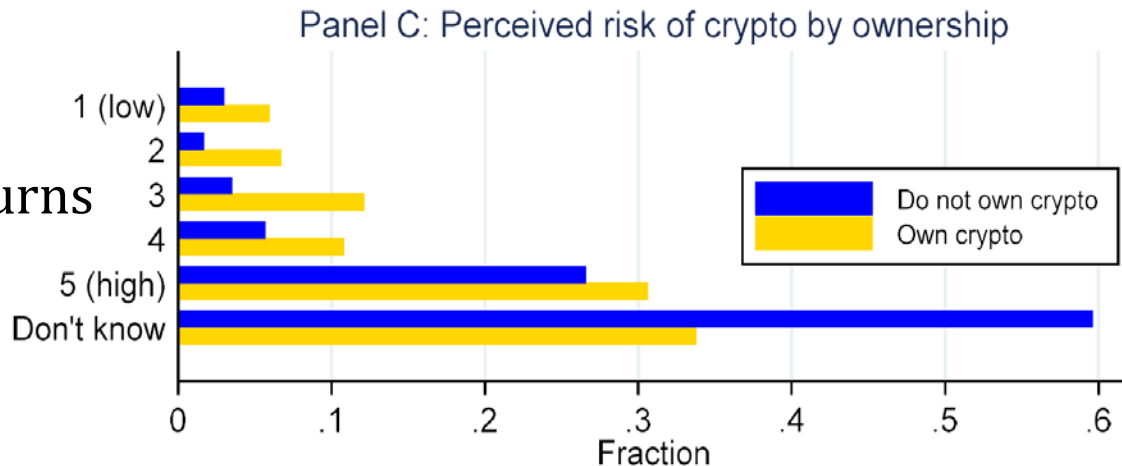Implied SD expected rate of return next 12 months, %

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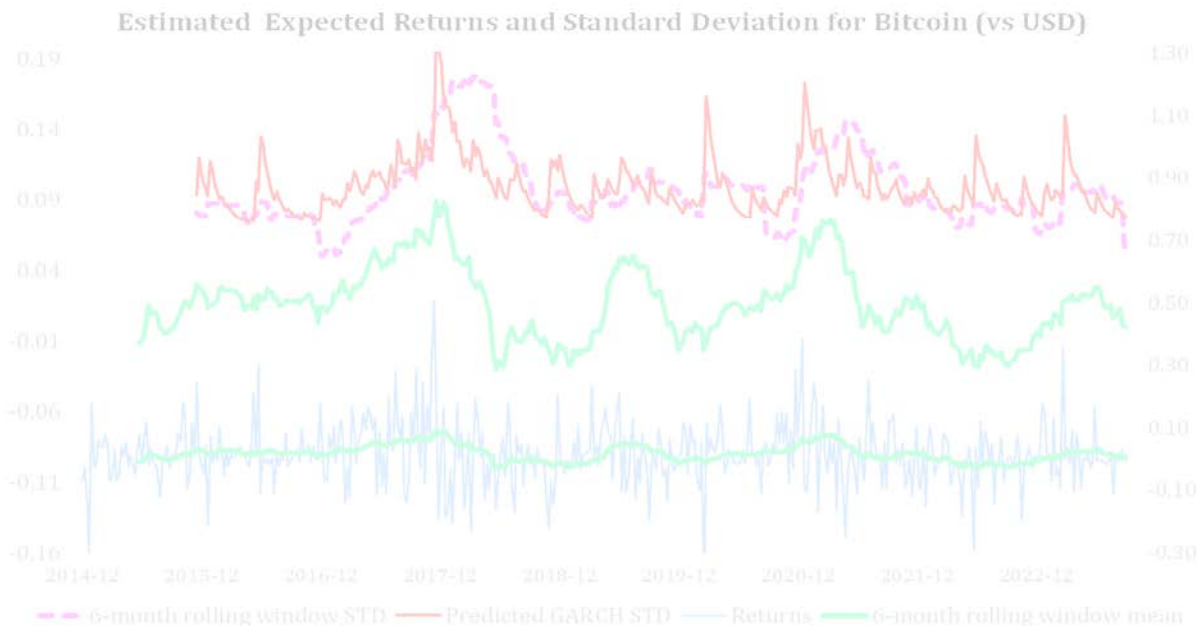
Comments /3: No Role Played by (Bitcoin) Volatility?

- Literature has vigorously investigated the impact of realized risk and crypto returns on the decision by house-holds to hold cryptocurrencies

Panel C: Perceived risk of crypto by ownership

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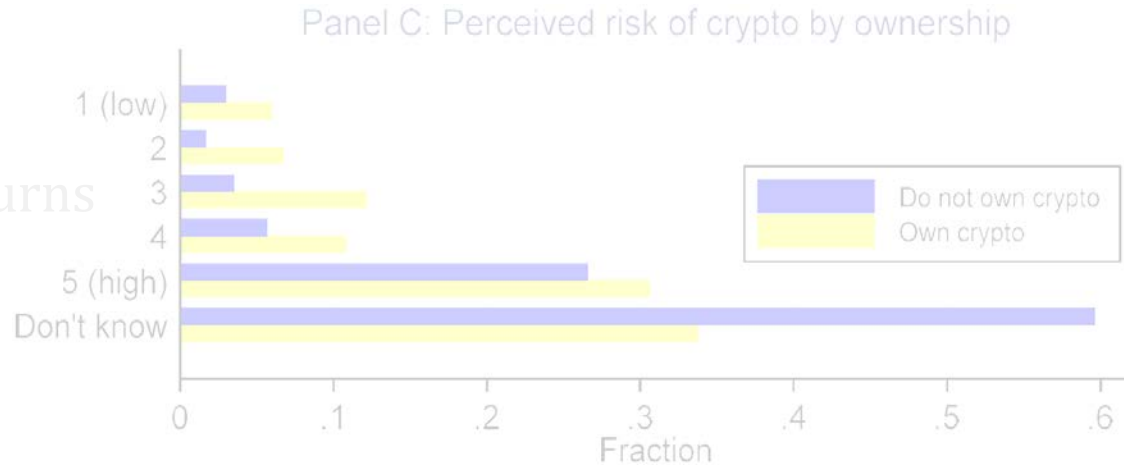
- That is a bit surprising as cryptocurrency returns are famous for their (strongly time-varying) risk

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Estimated Expected Returns and Standard Deviation for Bitcoin (vs USD)
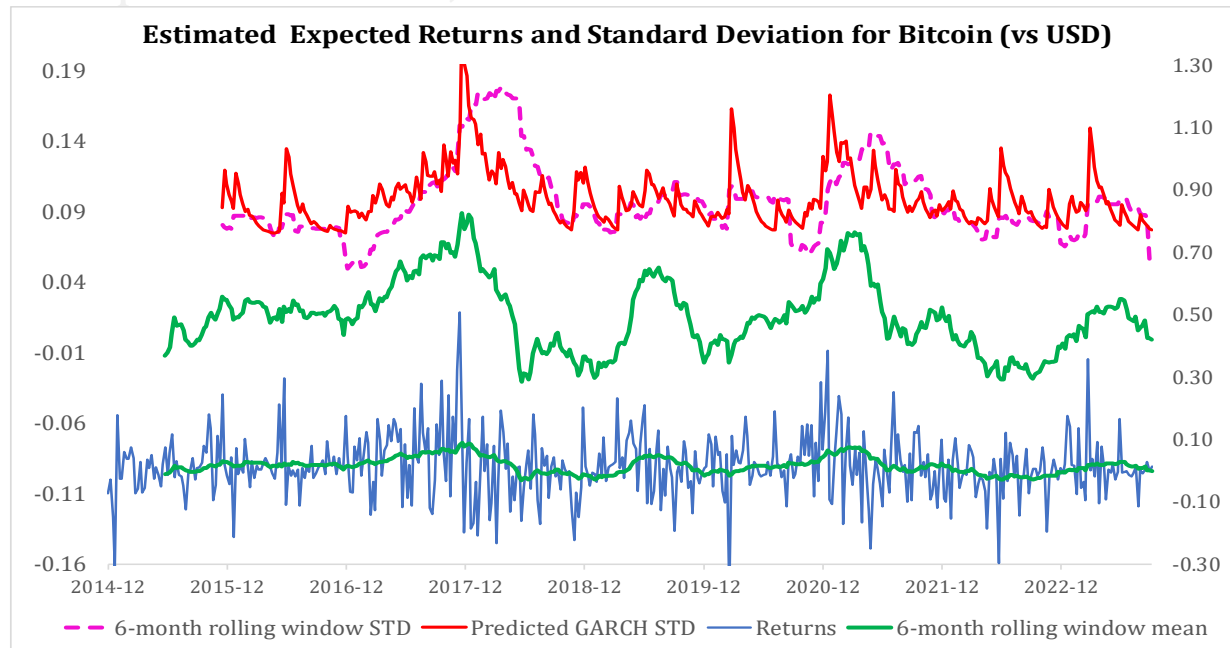
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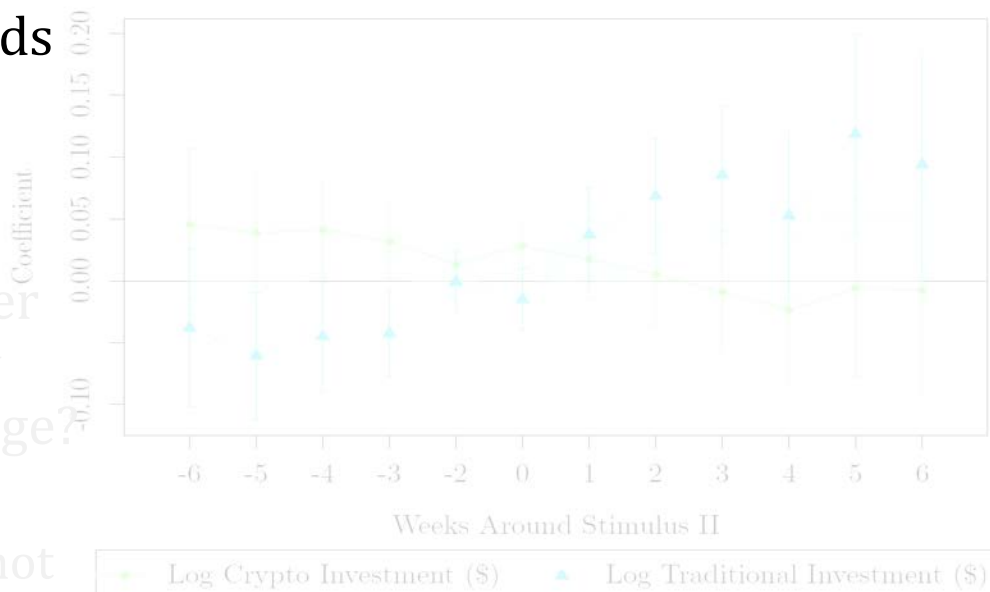

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- Comment just about structure, conditioning on solid results in the paper
  - Authors are super careful at refraining from (most) causality claims

- Story is that there is lots of empirical evidence that cryptocurrencies are dealt by households in a way that is no different from stocks and bonds
  - I assume info on other asset classes (gold, derivatives) was not available

- Why not collect instead the (never overwhelming) evidence on how crypto is different ⇒ Readers judge?
  - Or condense the evidence to conclude that such evidence is not strong enough to reject the null that "cryptocurrencies are no different"?

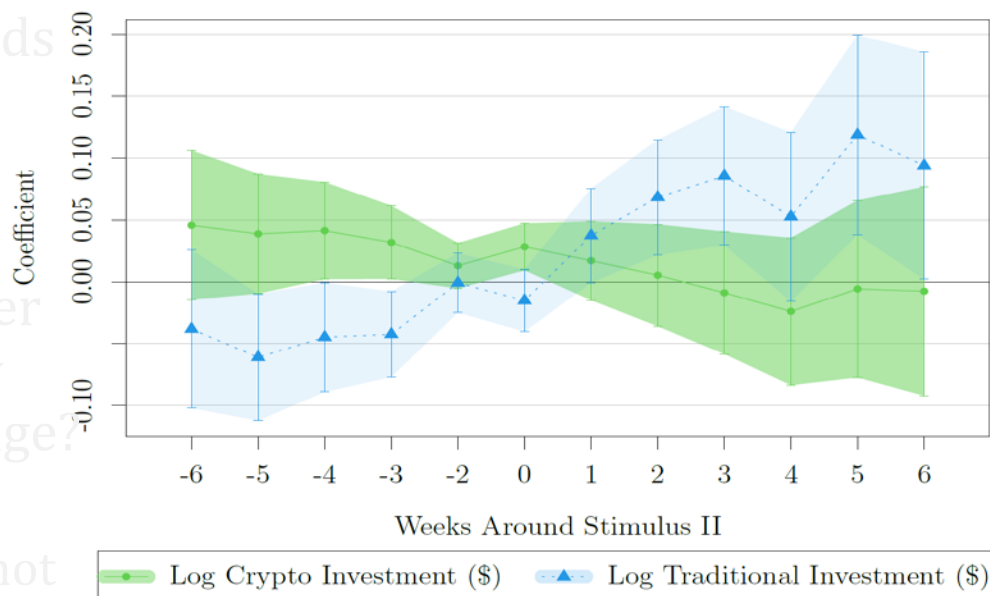Panel A: Retail Investment Responses After Stimulus II

Weeks Around Stimulus II

Log Crypto Investment ($)   Log Traditional Investment ($)

	Log Crypto Investment ($)		Log Traditional Investment ($)	
	(1)	(2)	(3)	(4)
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	(26.88)	(11.58)	(32.52)	(2.259)
Investor CPI × Inflationary Period (1/0)		1.541***		3.538***
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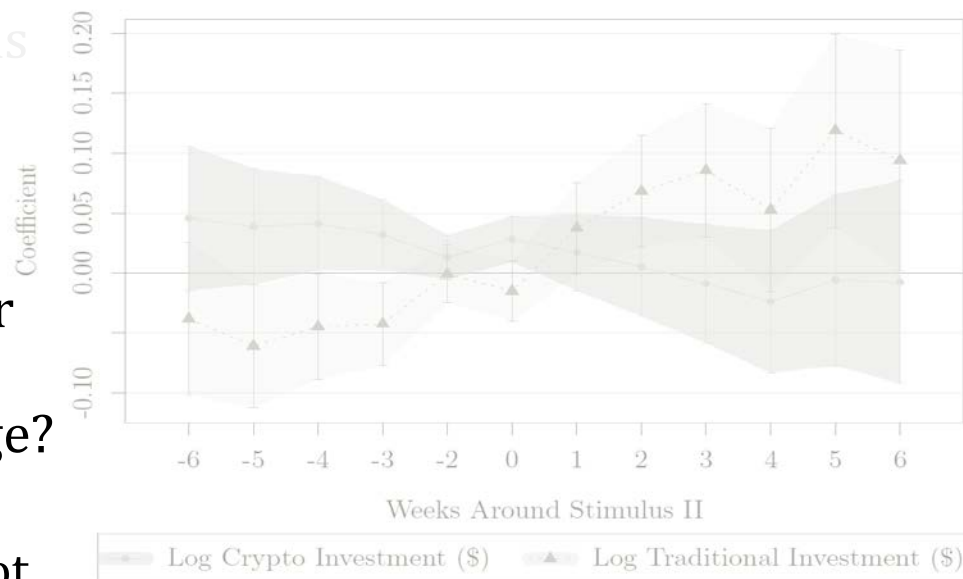Panel A: Retail Investment Responses After Stimulus II

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