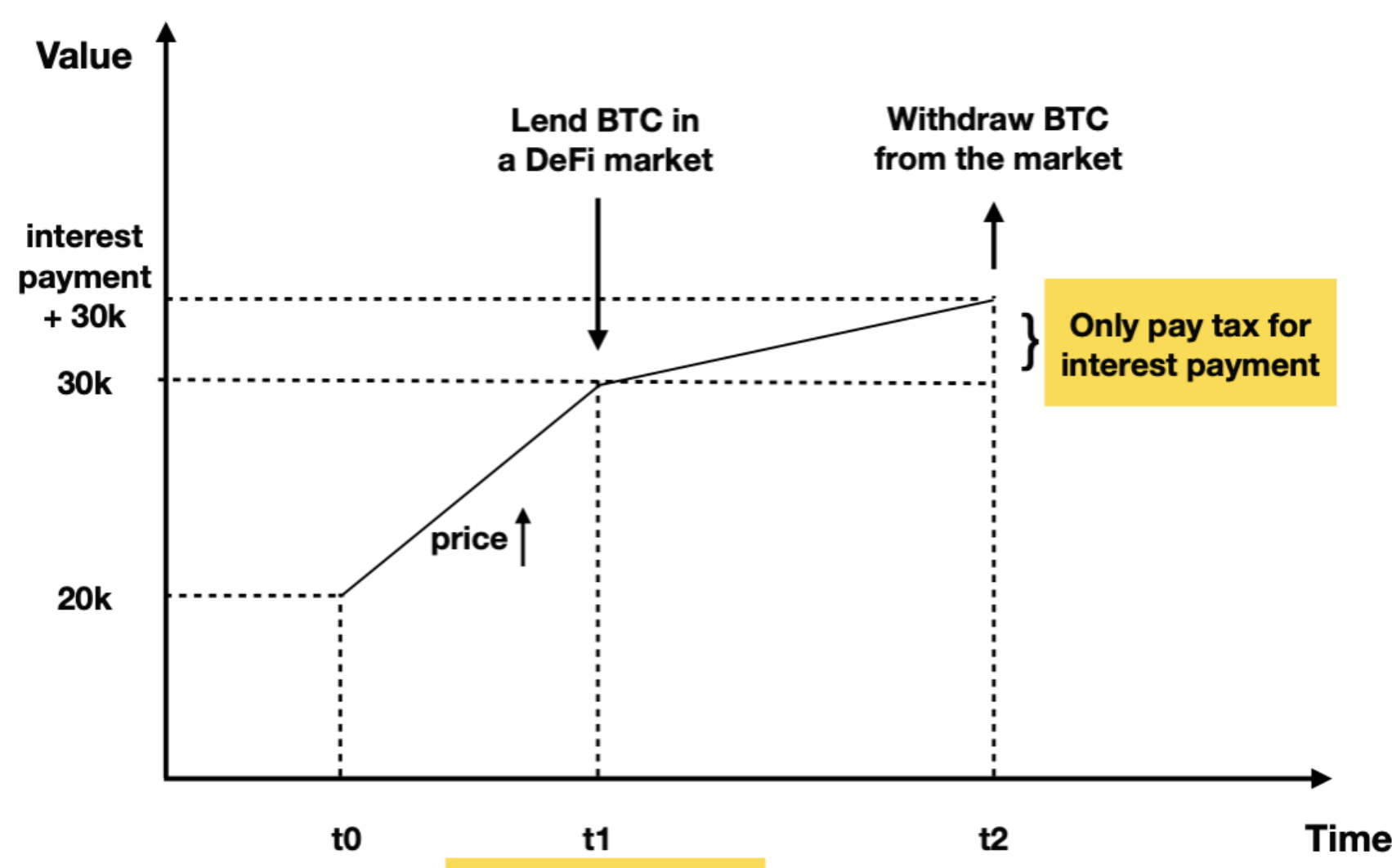
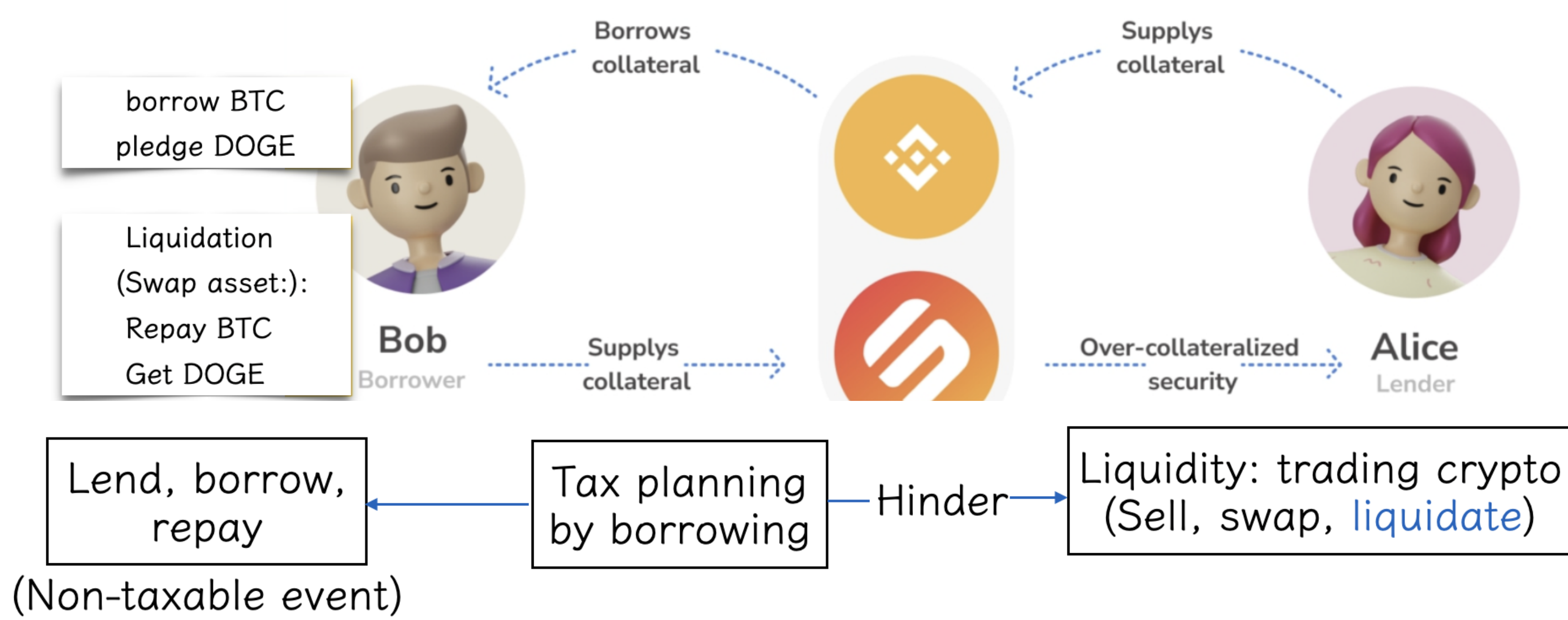


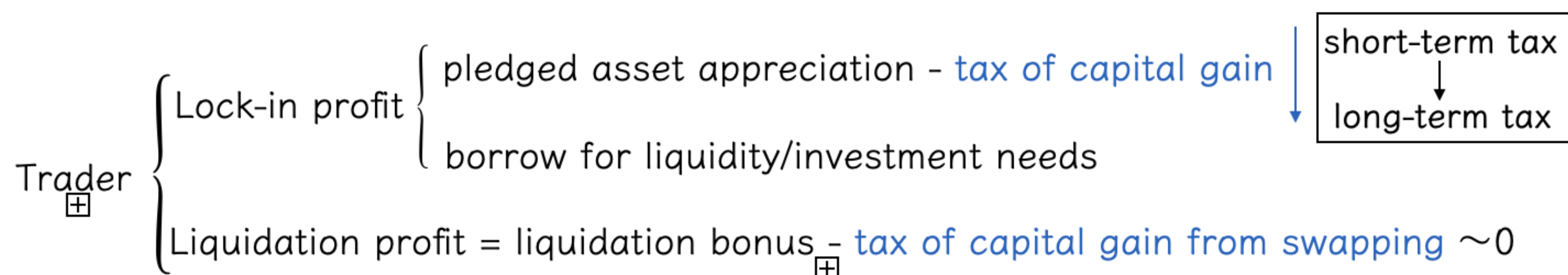
## Setting



Lock-in profit

Tax-motivated borrowing: "Borrow-up. Trade-down":

borrowing certain token by pledging another token, instead of purchasing that token which is taxable.

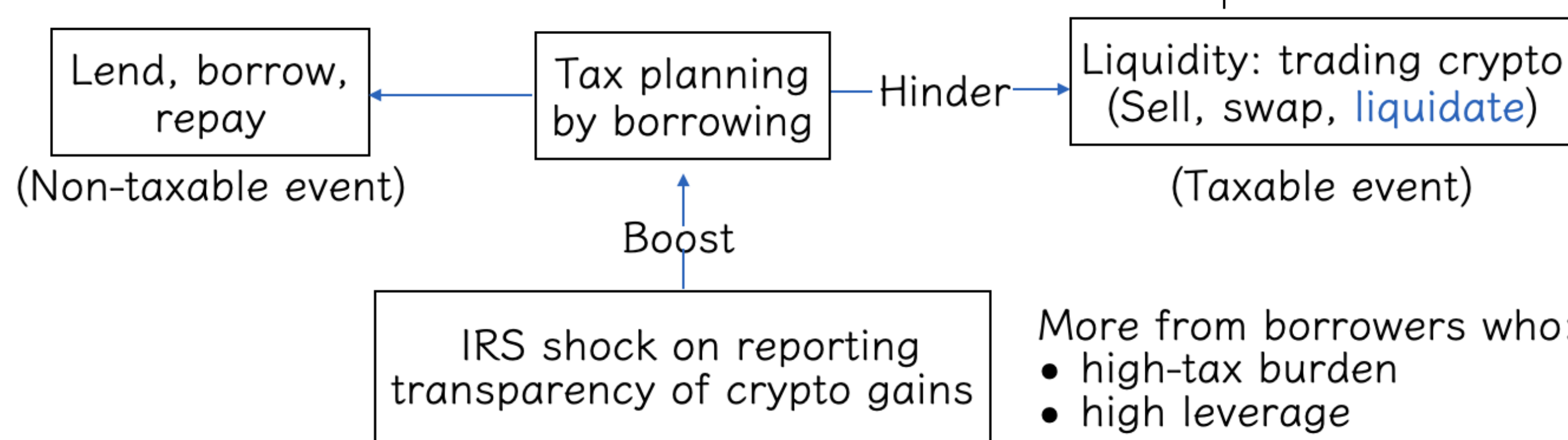


## Questions

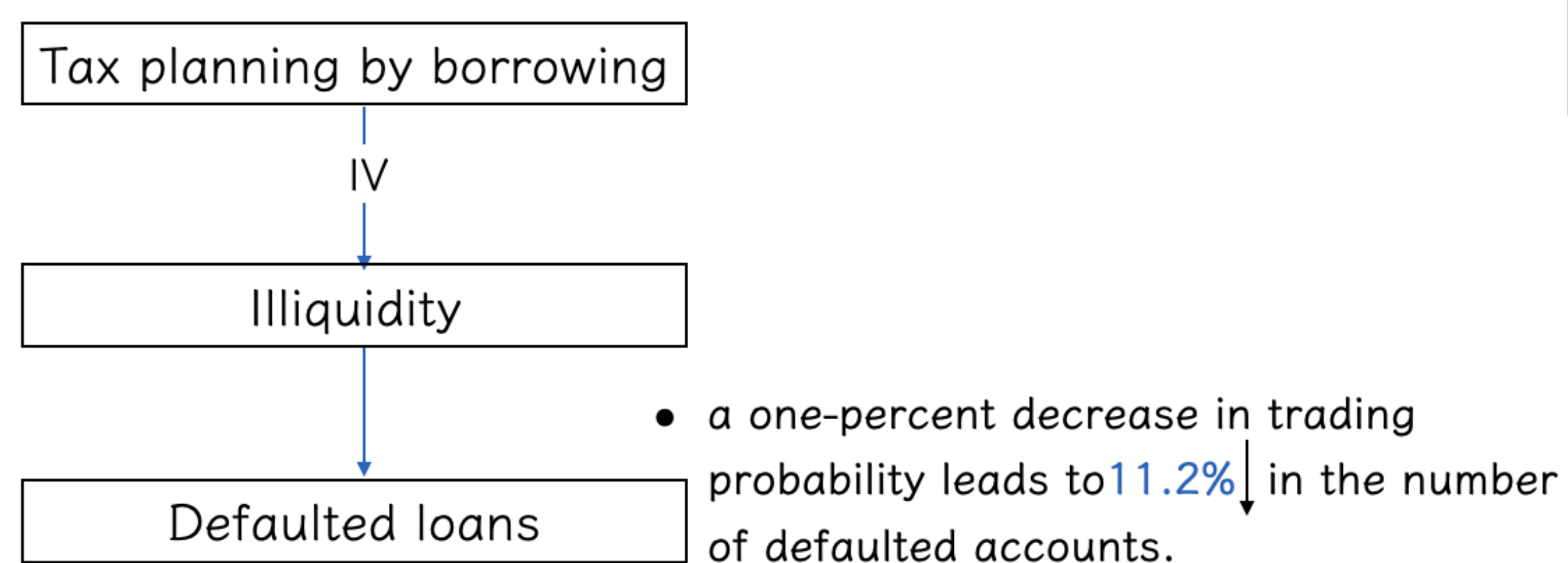
• Question 1: How do traders respond to the stricter reporting rules of crypto gains?

• Data: largest DeFi lending platform in BSC (Binance Smart Chain)

• Findings: Reporting transparency → prob. crypto transactions of borrowers ↓ at least 1.1%  
"Borrow-up, Trade-down"



• Questions 2: Does this illiquidity lead to credit risk in the market?



## Empirical Analysis

Data:

We leverage Venus, the largest DeFi lending platform in Finance Smart Chain from 2020.5 - 2022.12.

- the largest one out of US, less regulated
- don't have short selling (unlike other major platforms Aave, Compound)

Diff-in-diff (first stage):

$$\mathbb{1}(\text{Asset Trading}_{i,t}) = \alpha_0 + \beta_1(\text{US trader}_i) + \beta_2(\text{Post}_t) + \beta_3(\text{US trader}_i \times \text{Post}_t) + \Theta_{i,t} + \Lambda_t + \epsilon_{i,t}$$

- Treatment group: US trader

- Control group: others

- Dependent var: prob. of trading

We include account and daily fixed effects. The control variables include loan-to-value (LTV) ratio, the natural logarithm of the total value, asset diversity, asset volatility, and rate of return.

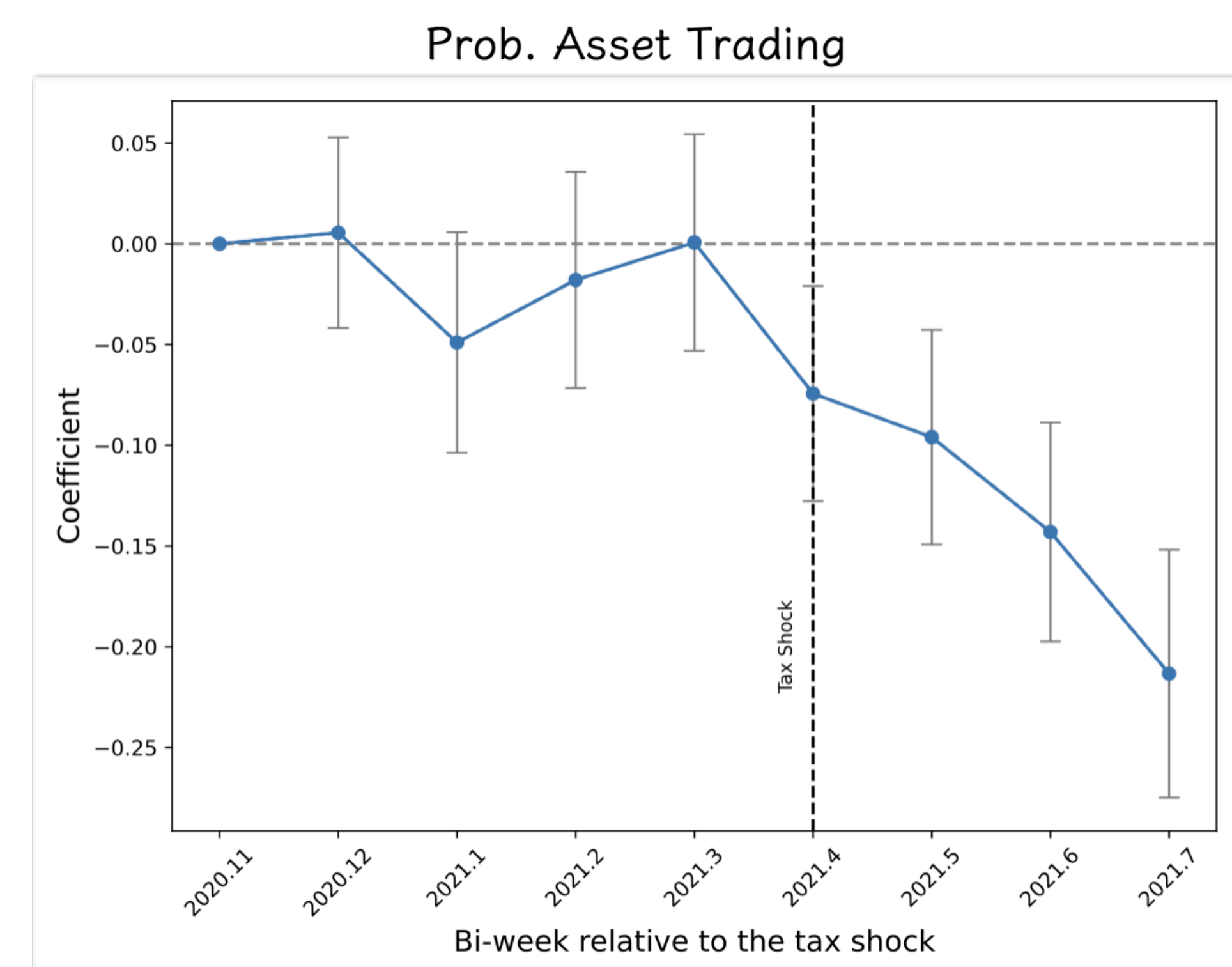
IV Analysis

$$IV_{i,t} : \text{US trader}_i \times \text{Post}_t + \text{US trader}_i$$

$$\text{First stage: } \mathbb{1}(\text{Liquidity}_{i,t}) = \alpha_0 + \beta(IV_{i,t}) + \Theta_{i,t} + \Lambda_t + \epsilon_{i,t}$$

$$\text{Second stage: } \text{Defaulted loans} = \alpha_i + \beta_1(\widehat{\text{Liquidity}}_{i,t}) + \Theta_{i,t} + \Lambda_t + \epsilon_{i,t}$$

## Results



Panel A: Borrow-Up, Trade-Down Count

	0.157*	0.157	0.155*	0.008
DID	(0.081)	(0.103)	(0.083)	(0.107)
DID × Borrow Stablecoins		0.002		(0.099)
LTV × DID			0.108*	
Rate of Return × DID				0.658*
LTV	-0.000	-0.000	-0.000	-0.000
LN(Total Value)	-0.070***	-0.070***	-0.070***	-0.063***
Asset Diversity	-0.000	-0.000	-0.000	-0.000
Rate of Return	0.003***	0.003***	0.003***	-0.681***
U.S. Trader		Daylight, Asset, Holiday		
Date FE	Yes	Yes	Yes	Yes
Trader FE	Yes	Yes	Yes	Yes
# Obs	762,696	762,696	762,696	751,429
R-squared	0.665	0.665	0.665	0.680

Credit Risk

	Y = Num. Defaulted Accounts			Y = LN(Value of Defaulted Loans)		
	OLS	2SLS	GMM	OLS	2SLS	GMM
Liquidity	-0.002	-0.123***	-0.112***	-0.004	-0.469***	-0.396***
LTV	-0.000**	-0.000*	-0.000*	-0.000	-0.000	-0.000
LN(Total Value)	-0.000	-0.002	-0.002*	0.004	0.011*	0.009
Asset Diversity	-0.000	-0.000	-0.000	0.000	-0.000	-0.000***
Asset Volatility		-0.003	-0.003		-0.005	-0.005
Rate of Return	0.000**	-0.001***	-0.001***	0.000	-0.003***	-0.003***
U.S. Trader		Daylight, Asset, Holiday				
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
Trader FE	Yes	Yes	Yes	Yes	Yes	Yes
# Obs	762,696	762,696	762,696	762,696	762,696	762,696
R-squared	0.568		0.457			
Overid p-value		0.02	0.107		0.144	0.200

## Conclusions

- The "borrow-up, trade-down" behavior provides micro-level evidence of tax-motivated substitution. We find that both the number and share of tokens used in this way increase significantly after the reporting shock.
- These effects are amplified for tokens with high loan-to-value ratios or strong recent returns
- Stricter reporting requirements on crypto gains reduced U.S. traders' likelihood of triggering taxable transactions by at least 1.1% relative to their international peers.
- This reduction in liquidity contributes to a rise in defaulted loans and defunct accounts: a one-percent decrease in trading probability leads to substantial increases of 5.6% in the number of defunct accounts.