

# Large Missed-Opportunity Wins Increase Subsequent Risk-Taking in Real-World Crypto Gambling

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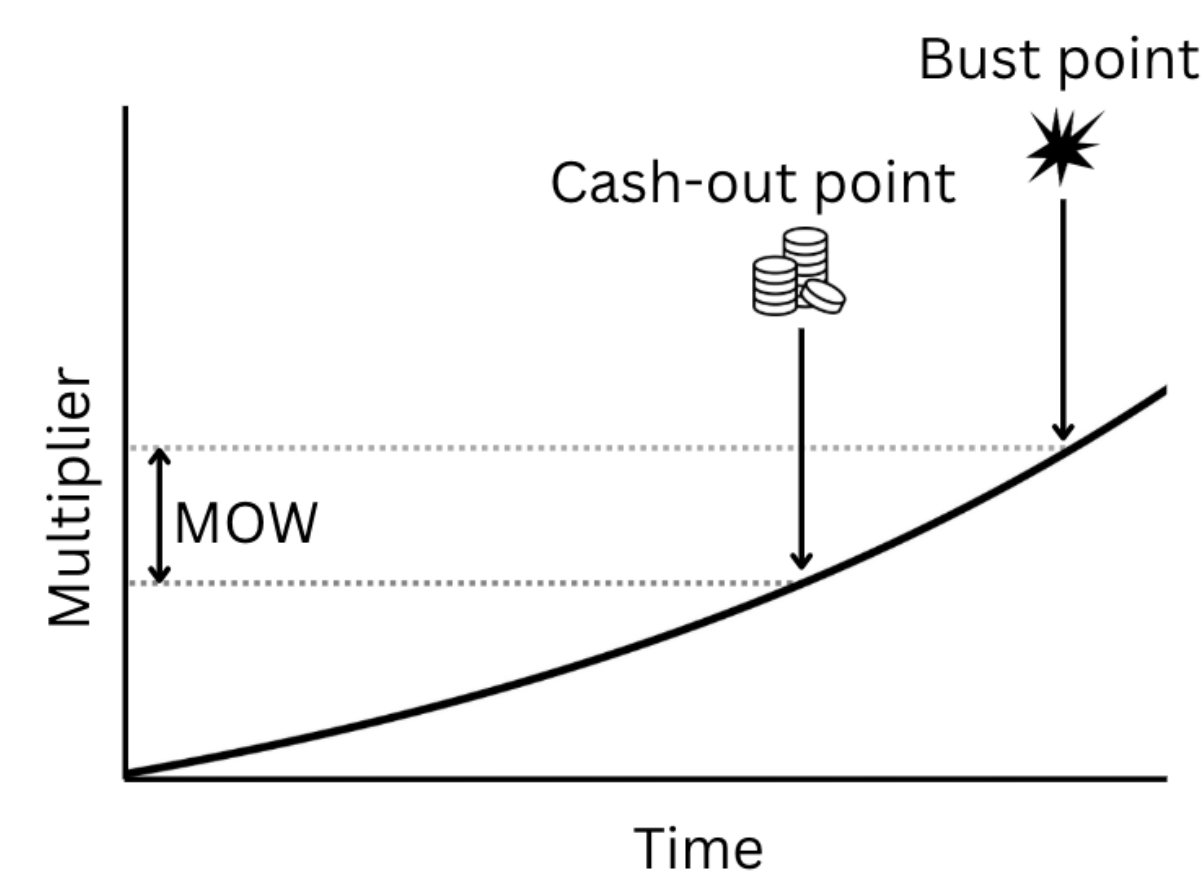
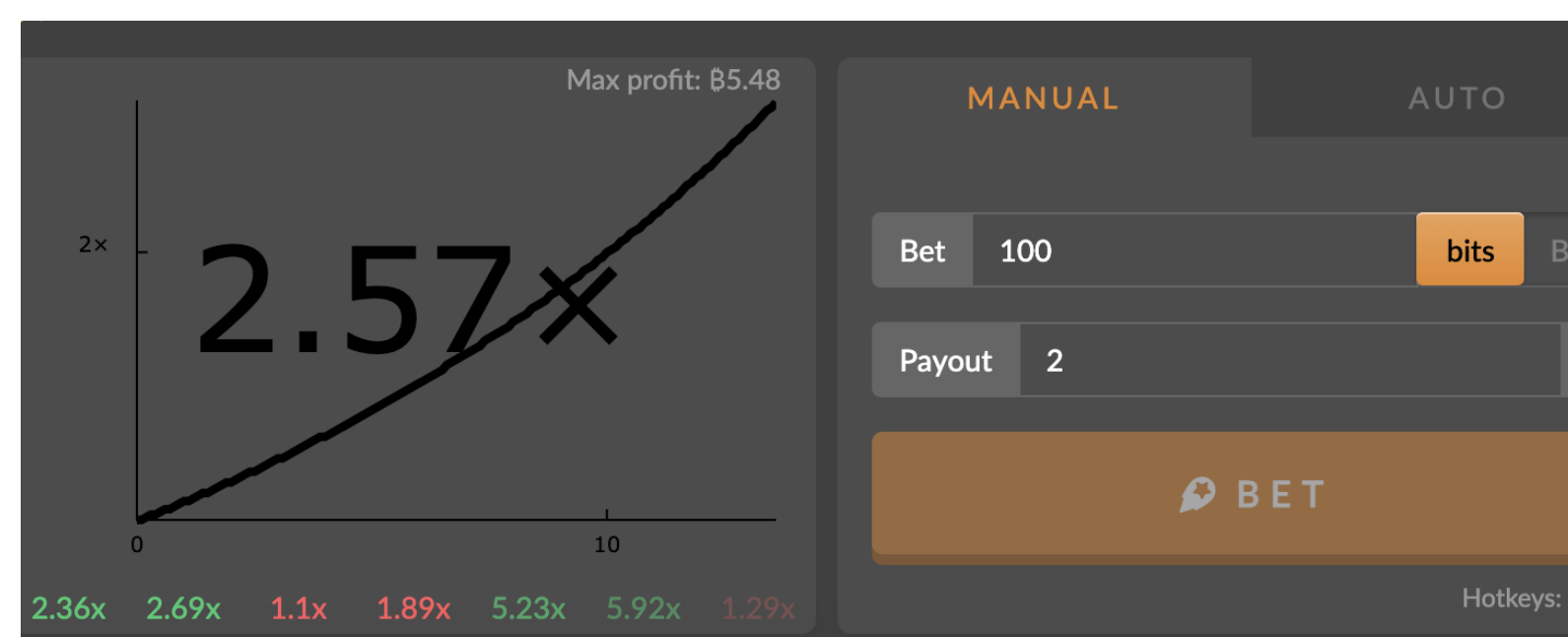
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## Background

Online gambling is popular but carries addictive risks. Despite known harms, products evolve with persuasive designs that maximize engagement.

- **Crash gambling:** players wager and must cash out before a randomly determined bust.

- **BustaBit**



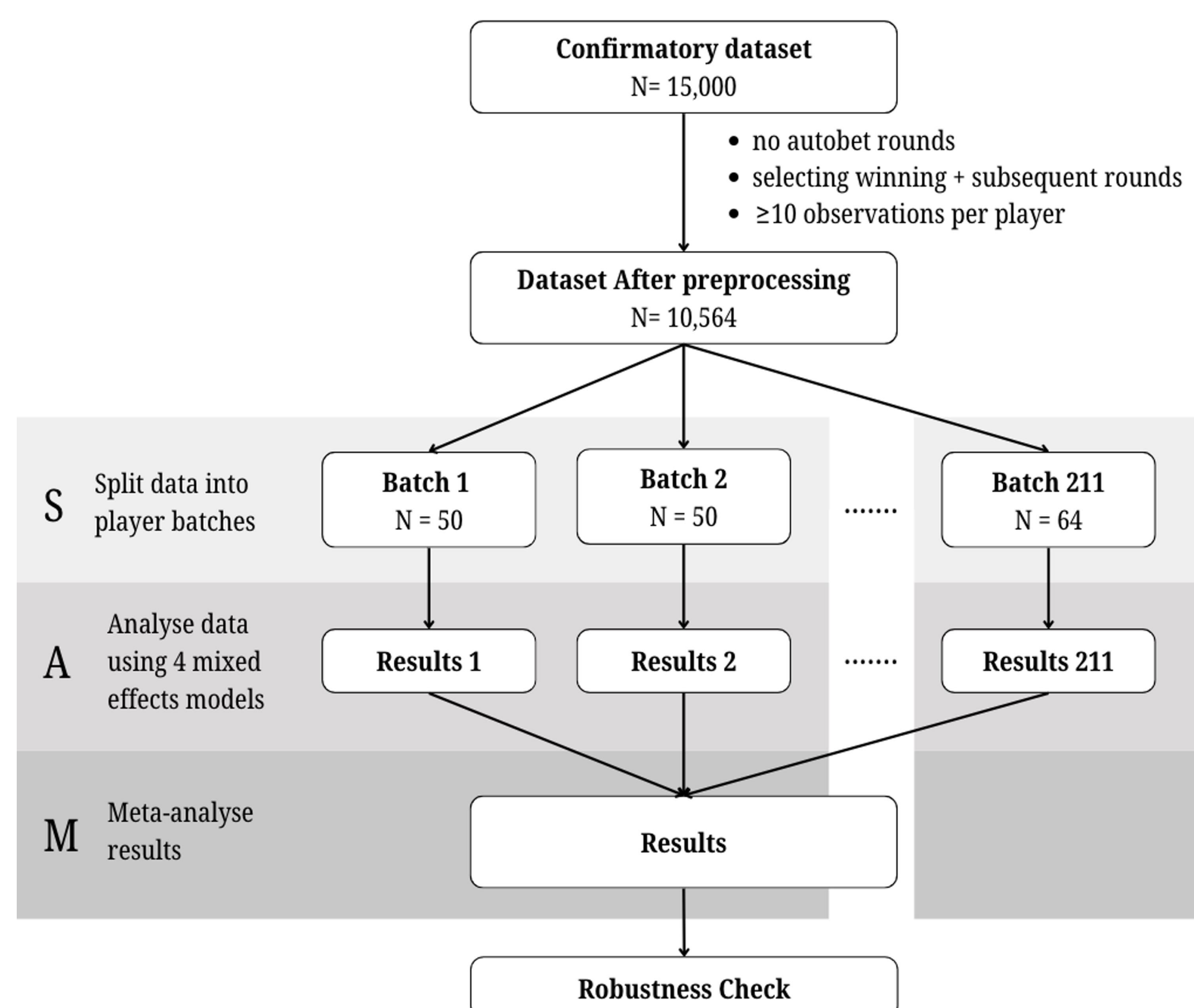
- **Missed-opportunity wins (MOW):** When players win but could have won more (see figure).

Missed opportunity wins may trigger counterfactuals, possibly affecting risk-taking in the next round.

**RQ:** To what extent do **missed-opportunity wins** (calculated as MOW in the figure) in the previous round predict (1) changes in **wager** and (2) the **likelihood of being busted**?

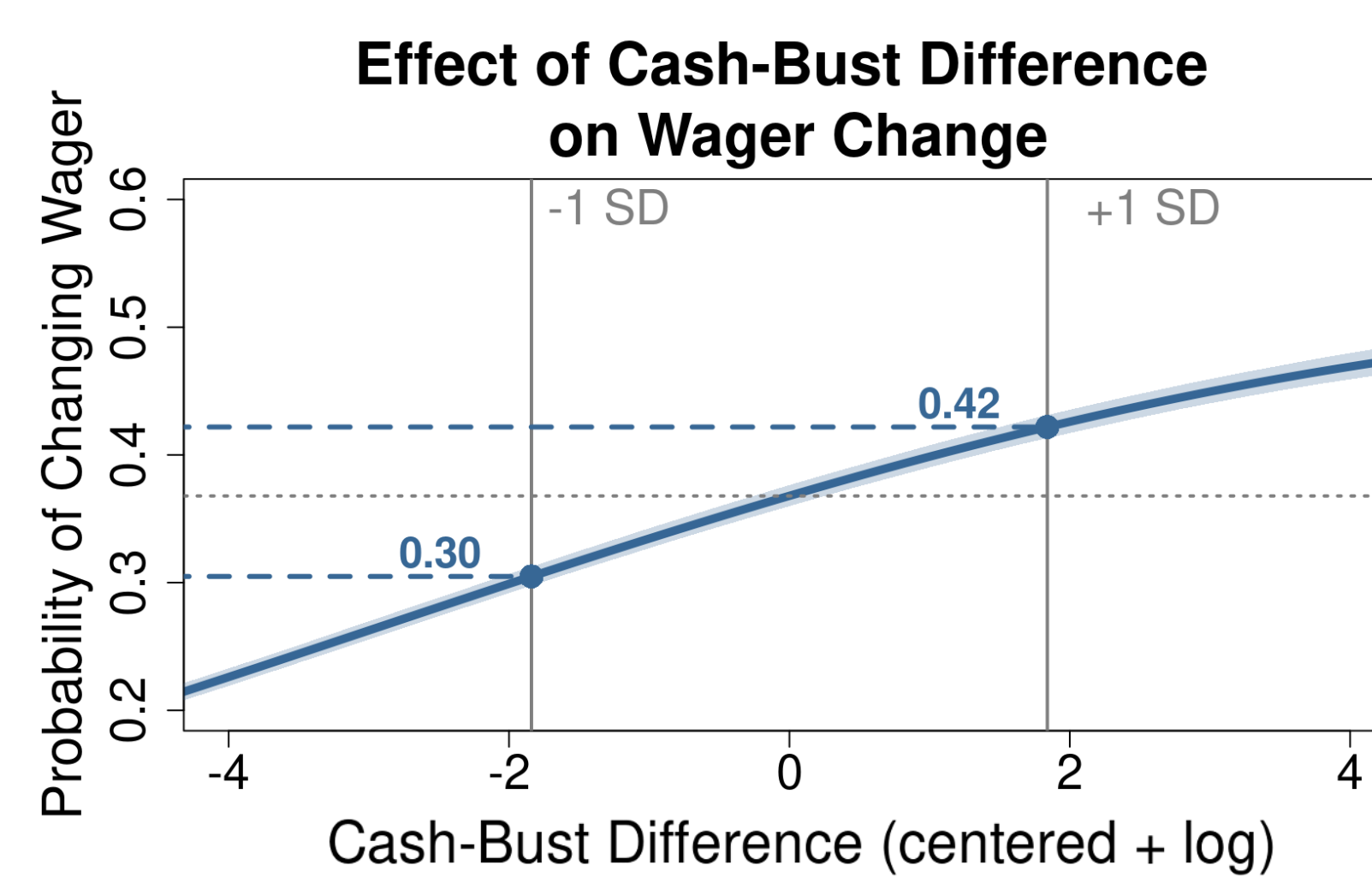
## Methods

- Real-world data **15,000 players, >50 million bets**
- Exploratory phase followed by confirmatory analysis:

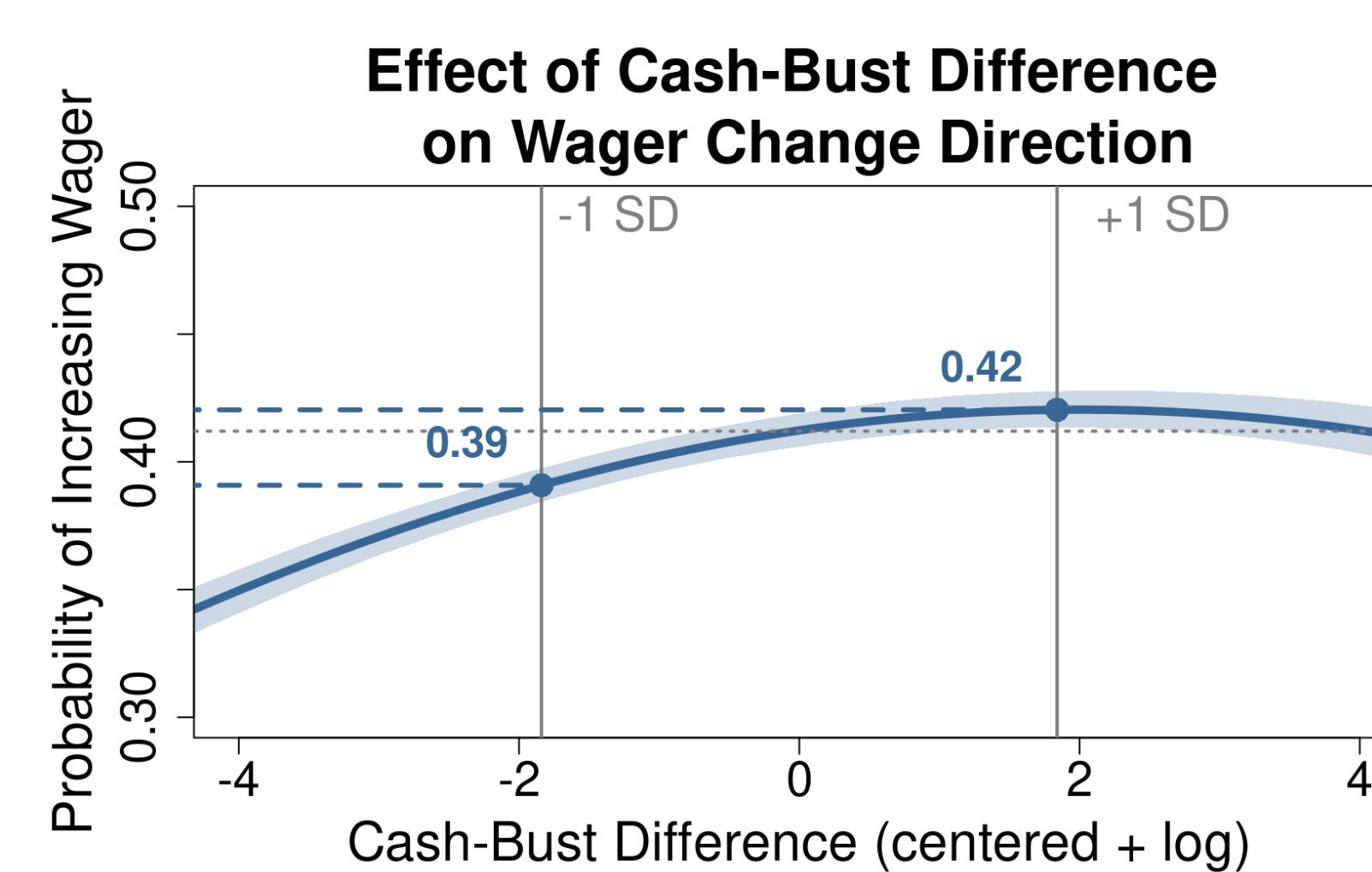


- Predicting binary outcomes

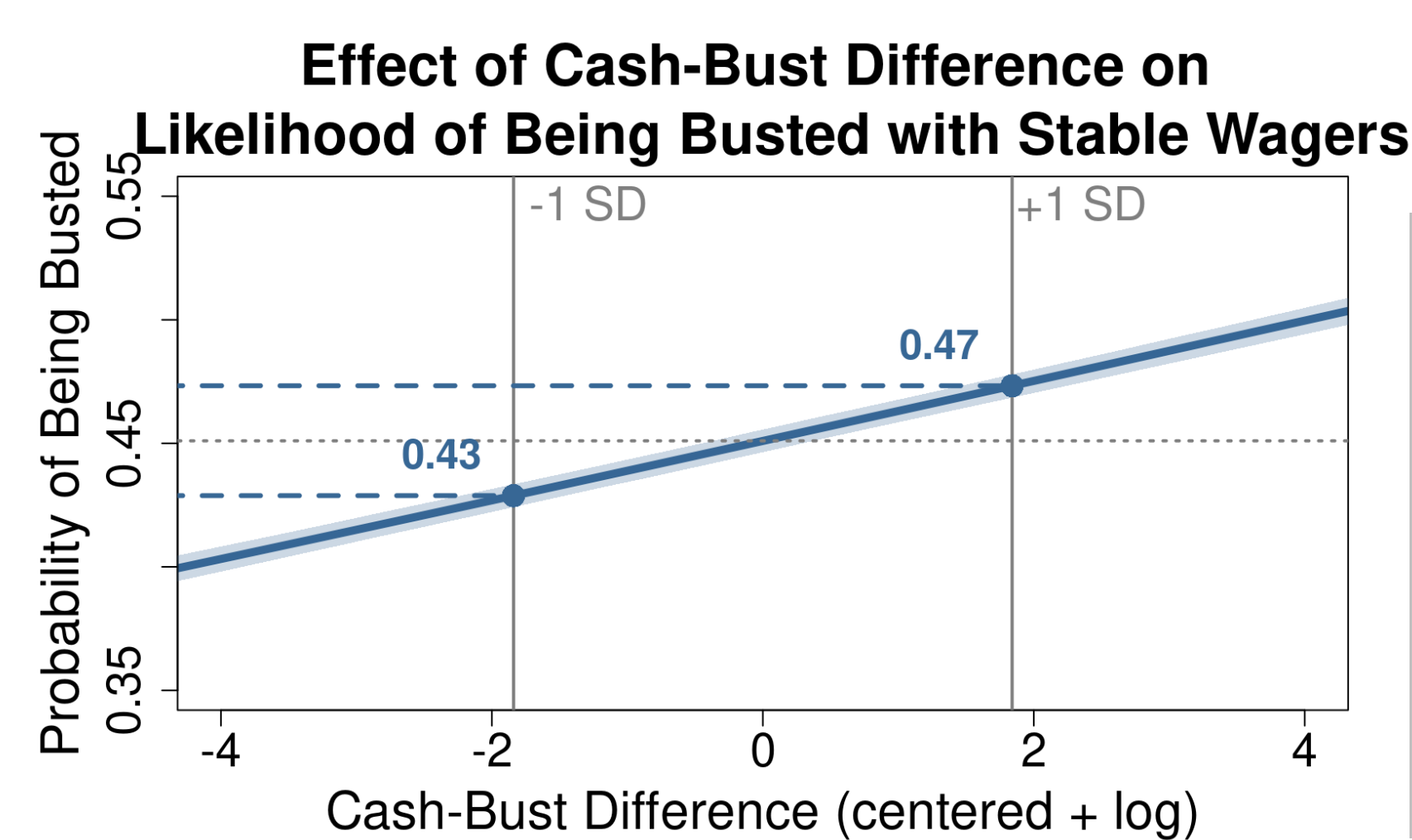
## Main findings



A larger missed win in the previous round was associated with a **higher likelihood of changing one's wager**



A larger missed win in the previous round was associated with **higher likelihood to increase wager**



A larger missed win in the previous round was associated with **higher likelihood of being busted**

## Discussion

Larger missed-opportunity wins lead to **increased risk taking** in the next round.

- Counterfactuals: “I could have won more.”
- Risk increase to avoid regret
- Acts as a prediction error signal

Relevance:

- Design similar to Balloon Analog Risk Task & (hot) Columbia Card Task
- Missed wins nudge risk-taking, this amplifies outcome variability, and exploits sensitivity to unpredictable rewards, boosting addictive potential

This study is an initial step toward understanding crash gambling's unique features and the effects of missed-opportunity wins.



**Attachments and online version!**