Do Sports Bettors Need Consumer Protection? Evidence From a Field Experiment

Matthew Brown Nick Grasley Mariana Guido

Stanford University

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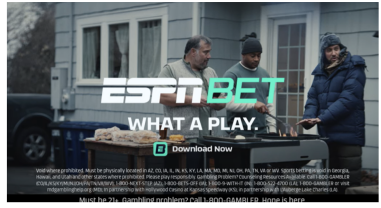
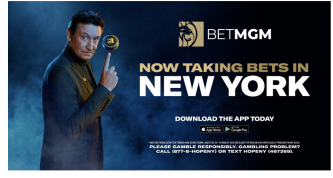
The U.S. sports betting boom



FANDUEL TV



2023: 38 states, $121 billion wagered

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- **Policy implications:** structural estimation & counterfactuals
  - Large average bias $\rightarrow$ optimal corrective tax more than twice as large as status quo
  - Heterogeneous bias $\rightarrow$ targeted interventions can do better

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  - Heterogeneous bias → targeted interventions can do better
    - Experimental evidence on a prominent targeted intervention: bias correction

Literature & contributions

- Primary contribution: gambling & welfare
  - Potenza et al. (2019) Lockwood et al. (2021) Chegere et al. (2022) Donkor et al. (2023) Snowberg and Wolfers (2010) Gerstein et al. (1999) Grinols and Mustard (2001) Grinols and Mustard (2006) Evans and Topoleski (2002) Kearney (2005) Guryan and Kearney (2008) Guryan and Kearney (2010) Akee et al. (2015) Baker et al. (2024) Hollenbeck et al. (2024) Matsuzawa and Arnesen (2024)
  - **Empirical evidence on bias + model $\rightarrow$ policy evaluation**

- Supplemental contributions
  - Nudges & welfare Camerer et al. (2003) Thaler and Sunstein (2003) Allcott et al. (2022) Ambuehl et al. (2022) List et al. (2023)
  - Misperceptions of risky prospects Kahneman and Tversky (1979) Snowberg and Wolfers (2010) Enke and Shubatt (2023)
  - Measuring overoptimism & self-control problems Malmendier and Tate (2005) Möbius et al. (2022) Gillen et al. (2019) Banerjee and Mullainathan (2010) DellaVigna and Malmendier (2006) Augenblick and Rabin (2019) Carrera et al. (2022) Laibson (2015)

Roadmap

Institutional details

Conceptual framework

Experimental evidence on bias
- Overview
- Overoptimism
- Self-control problems

Policy evaluation
- Structural estimation
- Counterfactual welfare analysis
- Targeted interventions

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Background on sports betting

- **How sports betting works:**
  - Private sportsbooks offer betting opportunites
  - Books make money when consumers lose: avg. loss of 9¢ per dollar wagered in 2023
  - Skill matters (unlike, e.g., lottery tickets)

- **Mobile platforms:** 94% of revenues from cell phones or computers

- **Demographics:** young, male, high-education & rich compared to U.S. pop

- **Fat right tail:** 5% highest volume bettors $\rightarrow$ 64% of revenues Forrest and McHale (2024)

▸ Betting over time ▸ Seasonality

Concerns about overoptimism & self-control problems

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The role of skill & overoptimism

Every sports fan thinks he has some proprietary edge or knowledge or insight.

Nate Silver, founder of *FiveThirtyEight* and former profesional gambler Cowen (2024)

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Cell phones & self-control problems

They have access to it 24/7 in the palm of their hands. The temptation is always there. You can stay away from casinos and racetracks but you can't stop using your phone.

Cindi M, Gamblers Anonymous Public Relations Chair Vice (2022)

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Unbiased reasons for sports betting

- **Choice object**
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  - Return distribution $F_i(a)$
  - Implicit price of betting $-E_{F_i}[a]$

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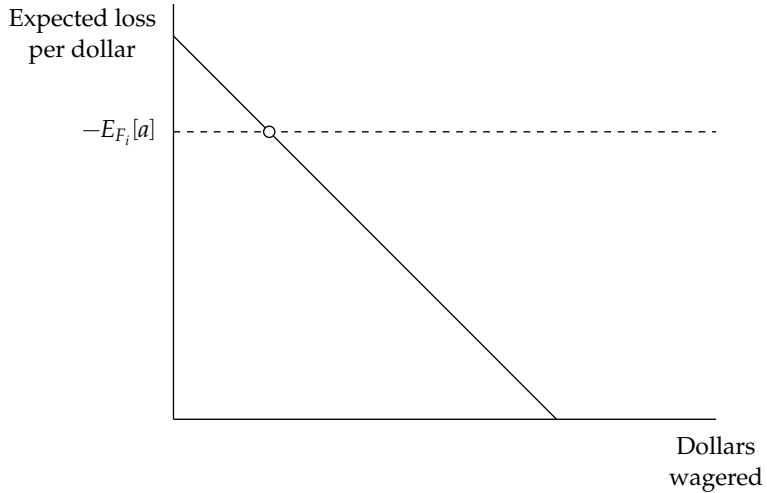
- **Nonfinancial value** (e.g., "entertainment")
  - Makes watching sports fun, enjoyment of planning, relieves stress... ‣ Survey evidence

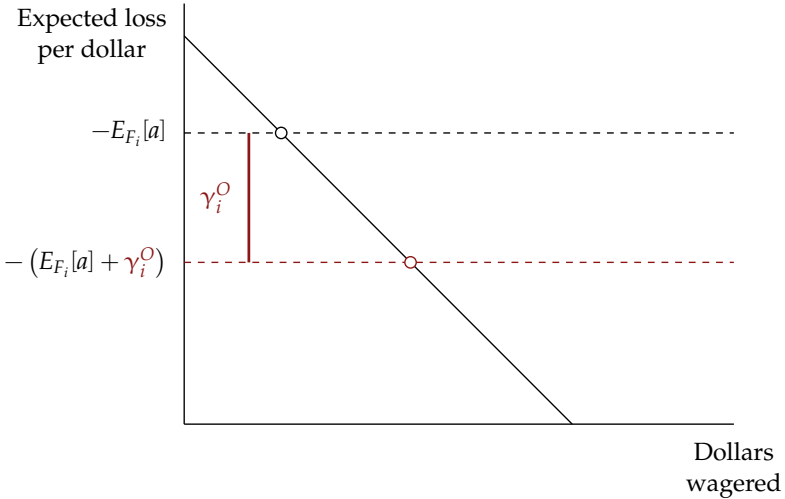
An unbiased demand curve for agent *i*



Overoptimism as a misperceived price

- True expected returns
  - $E_{F_i}[a]$
- Perceived expected returns
  - Perceptions $\tilde{F}_i$
  - Overoptimism $\gamma_i^O = E_{F_i}[a] - E_{\tilde{F}_i}[a]$

Illustrating overoptimism graphically

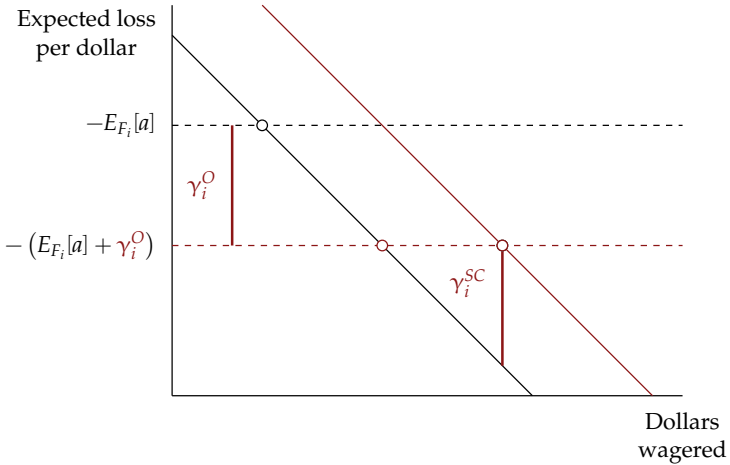


Self-control problems as in-the-moment temptation utility

- Distinguish between long-term demand and short-term demand
- In short-term, choose as if marginal utility of betting is γ_i^{SC} higher (Banerjee and Mullainathan, 2010)
- Intuition: people "wish they could stop self" from betting, but cannot (Potenza et al., 2019)

Illustrating self-control problems graphically

Distinguish between **long-term demand** and **short-term demand**



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Recruitment

- Pop. of interest: **high-volume bettors**
  - Targeted social media ads
  - Screen on self-reported volume

- Study requirements
  - Take three surveys over two months
  - Share data on sports betting activity

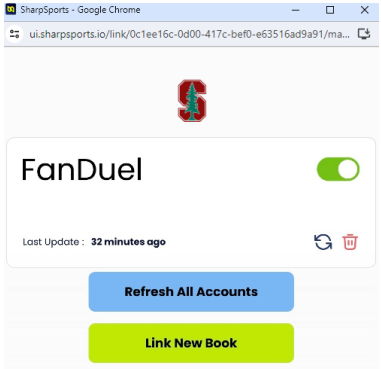
Collecting betting activity data

1) Elicit list of accounts

Which of the following mobile apps or websites have you used for **sports betting** (not casino games or Daily Fantasy Sports) in the past 30 days? Select all that apply.

- ☐ DraftKings
- ☐ FanDuel
- ☐ BetMGM
- ☐ Caesars
- ☐ ESPNBet
- ☐ Hard Rock Bet
- ☐ Other (please specify)

2) Sync accounts via online portal



Experimental sample

Phase	Date	Action	Sample Size
Recruitment and intake	March 13 - April 8	Viewed social media ads	545,197
		Clicked on ads	12,912
		Satisfied initial eligibility criteria	6,155
		Consented and provided contact info	2,062
		Synced at least one account	666
		Synced all accounts	555
Survey 1	April 9	**Completed survey 1**	**533**
Survey 2	May 10	Completed surveys 1 and 2	486
Survey 3	June 10	Completed surveys 1, 2, and 3	472
		Data through end of survey 3	**444**

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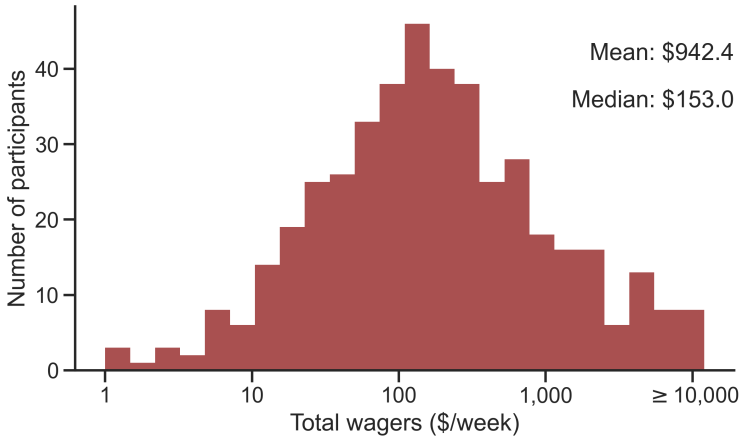
- **Representativeness** ▸ Table
  - **Less biased** on qualitative measures than comparison sample (Grubbs and Kraus, 2023)
  - Interpret bias estimates as **conservative** for population

Pre-study betting activity



- Number of bets
- Bet riskiness
- Sports
- Bets over time
- Sports over time

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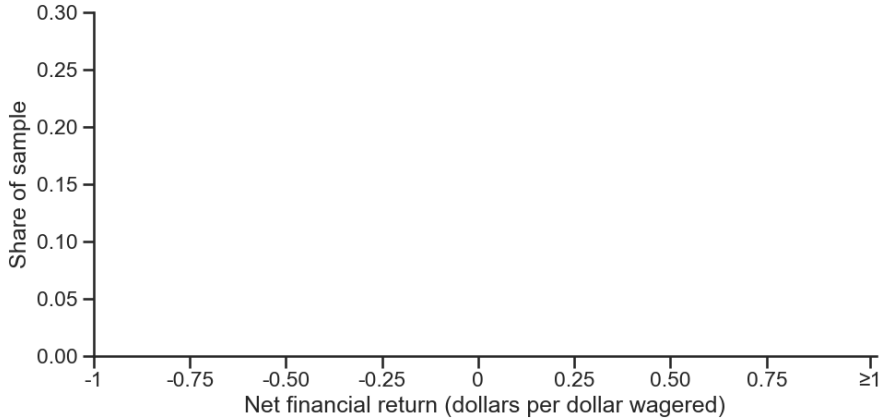
Do people overestimate future returns?

Your future sports bets on DraftKings

I will... Gain money on average | Break even | Lose money on average

On average, I will **gain** $ _____ for every $100 that I wager.

Do people overestimate future returns?



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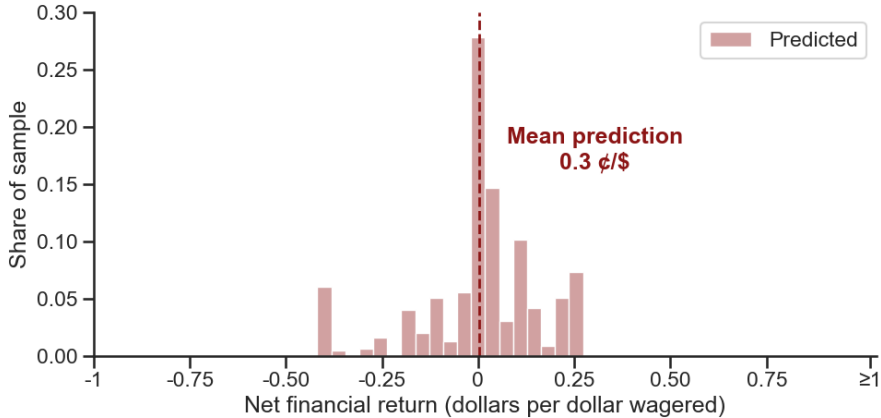

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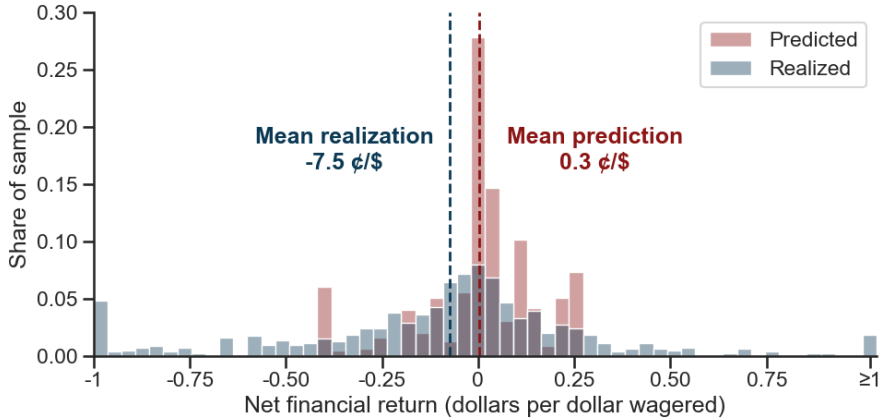

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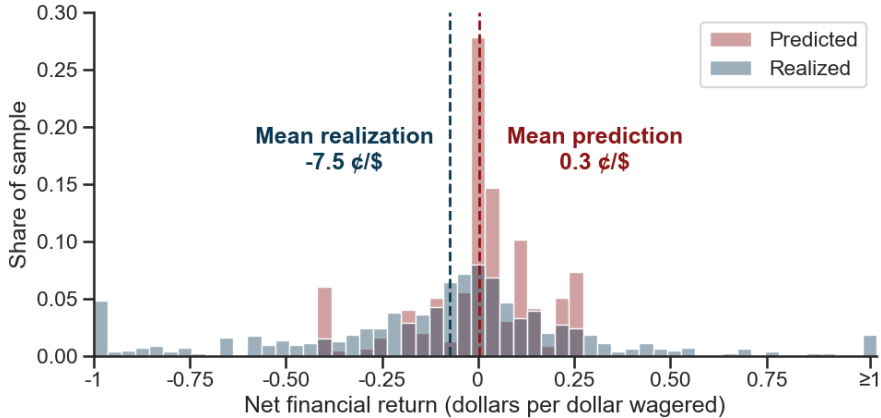

▸ Heterogeneity ▸ Binscatter ▸ Prediction test-retest ▸ Realization test-retest

Contextualizing this magnitude

- Sports betting is costly
  - Our sample: lose 7.5¢/$
  - American consumers in 2023: lose $11 bn (9¢/$) (American Gaming Association, 2024)

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On average, **none of the financial costs were internalized**

Suggestive evidence on mechanisms

Two exploratory results

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Two exploratory results

1. **Overoptimism is specific to predictions about own future returns**
   - People do not overestimate own past returns or others' returns ▸ Hist ▸ Binscatters ▸ Summary
   - Less consistent with selective memory (Bénabou and Tirole, 2002; Huffman et al., 2022)
   - More consistent with selective interpretation of signals (Thaler, 2024)
     - Possibly: *When I lose it is because I got unlucky, when I win it is because I am skilled*

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2. **Overoptimism is largest for those who bet on multi-leg *parlays***

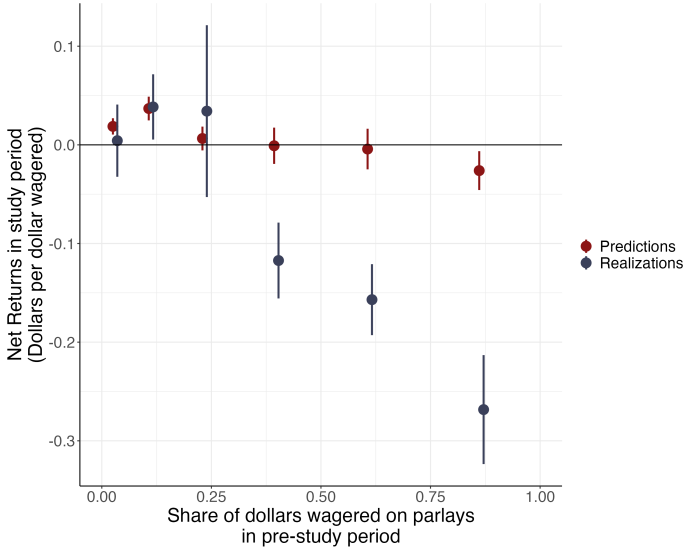
Background on parlays

The Washington Post
Democracy Dies In Darkness

Parlays are big business for sportsbooks — and big trouble for bettors

Many bettors get in trouble chasing big scores with multiple-legged parlays that often feel like a sure thing.
Washington Post (2022)

Parlay bettors are much more overoptimistic



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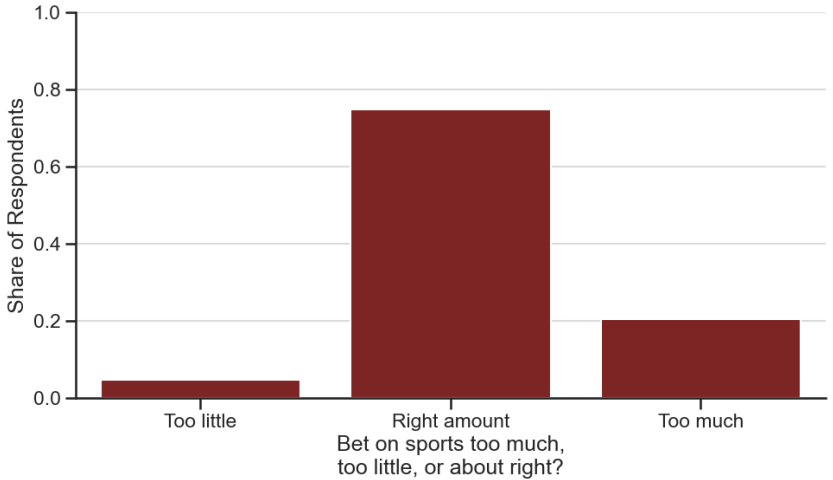
$$\underbrace{\overset{\gamma^{SC}}{\text{Self-control problems}}}_{\textbf{Target}} = \underbrace{\overset{\tilde{\gamma}^{SC}}{\text{Perceived self-control problems}} + \overset{\gamma^{SC}-\tilde{\gamma}^{SC}}{\text{Naivete}}}_{\textbf{Estimate in experiment}}$$

Wedge between LR & SR demand

Most people do not say they are betting too much



Do people want to bet less?

- Rate: **2¢ payment for every dollar** reduced below a personalized benchmark
  - Active for 30 days between surveys 1 and 2

Valuations of Bet Less Bonus identify perceived self-control problems

Intuition

- Perceived self-control problems $\rightarrow$ want Bonus more
  - Predict future self will overconsume
  - Would pay to bring future consumption more in line with optimum

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Empirical Implementation

- Elicit WTP for Bonus with incentivized MPL ▸ Choice 1 ▸ Choice 2

- WTP for Bonus + consumption predictions $\rightarrow$ perceived self-control problems $\tilde{\gamma}^{SC}$
  - Mechanics follow Carrera et al. (2022) ▸ Behavior Change Premium

Perceived self-control problems are smaller than overoptimism

- High average WTP for Bonus → people want to reduce future consumption ▸ Result
  - Estimate: Average perceived self-control problems $E[\tilde{\gamma}_i^{SC}] = 0.7¢/\$$
  - Validation: larger estimate for those who say "I am betting too much" ▸ Result

- **Overoptimism is an order of magnitude larger**
  - Average overestimation of financial returns → average overoptimism $E[\gamma_i^O] = 7.8¢/\$$

$$\underset{\text{Self-control problems}}{\gamma^{SC}} = \underset{0.7¢/\$}{\tilde{\gamma}^{SC}} + \underset{\text{Naivete}}{\gamma^{SC}-\tilde{\gamma}^{SC}}$$

▸ To naivete result

Underestimation of future consumption identifies naivete

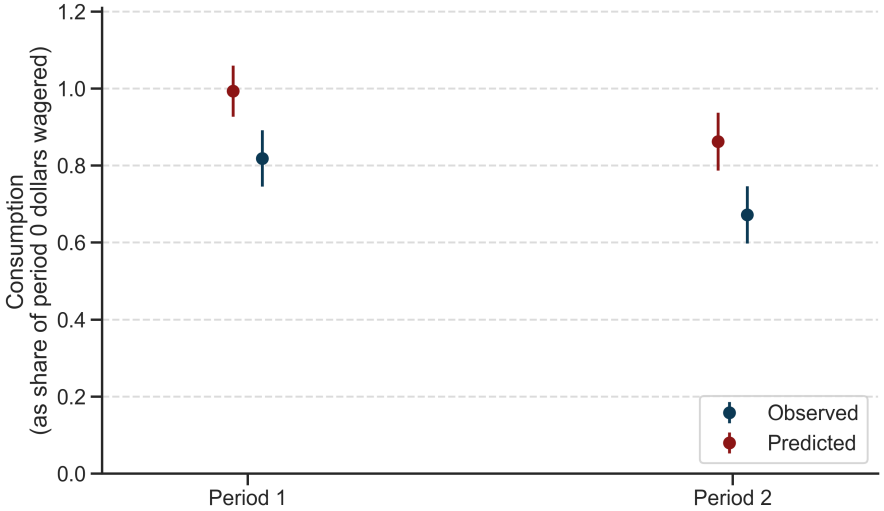
Intuition:

- Naive agents don't realize their future self will be tempted
- So they'll underestimate future consumption

Empirical Implementation (Augenblick and Rabin, 2019):

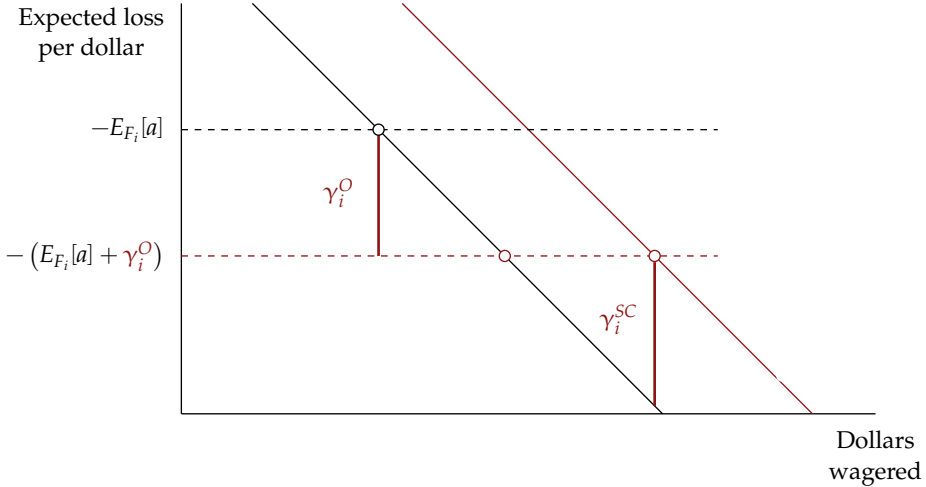
- Elicit predicted future consumption in Surveys 1 & 2

People do not underestimate future consumption



$$\underset{0.7¢/\$}{\gamma^{SC}}\ \text{Self-control problems} = \text{Perceived self-control problems} + \underset{0¢/\$}{\gamma^{SC}-\tilde{\gamma}^{SC}}\ \text{Naivete}$$
$$\underset{0.7¢/\$}{\tilde{\gamma}^{SC}}$$

Taking stock



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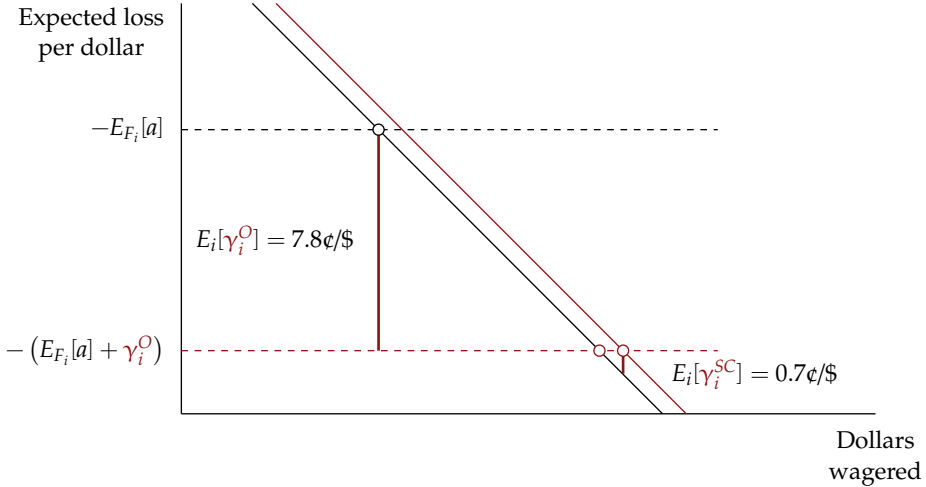

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  - Estimation involves two key extensions beyond the results so far
  - How would policies affect [consumption, welfare]? $\rightarrow$ demand slopes ‣ All demand estimates
  - How do policy impacts vary across individuals? $\rightarrow$ heterogeneous bias ‣ γ_i^O

Estimation details

Model + functional form asstn. $\rightarrow$ constant semielasticity of demand for indiv i, period t:

▸ Microfoundation

$$E[x_{it}^{choice}(\tau)] = \exp\left(\underbrace{\xi_i + \delta_t}_{\text{Normative taste for betting}} + \underbrace{\eta_i}_{\text{Semielasticity}} \cdot \left(\underbrace{\tau}_{\text{Tax (¢/\$)}} - \underbrace{(\gamma_i^O + \gamma_i^{SC})}_{\text{Bias (¢/\$)}} \right) \right)$$

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  - **Overoptimism:** shrinkage to deal with noise → individual-specific estimates ▸ Details ▸ Estimates
  - **Self-control problems:** estimate separately according to "betting too much?" response ▸ Estimates
  - **Price-sensitivity:** multiple estimates (Bonus TE, pred. effect of natural price changes) ▸ Substitution to other gambling ▸ Curvature
    - Average: 1¢/\$ price increase → consumption ↓ by [10%, 21%] ▸ All estimates ▸ Heterogeneity
    - Preferred estimate: consumption ↓ by 11%

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Counterfactual details

- **Welfare criterion:**

$$\sum_i (\Delta CS_{it}) + \lambda \Delta G_t$$

  - Weight λ on government revenue vs. bettor consumer surplus
  - Benchmark: $\lambda = 1$

- **Assumption:** Taxes pass through one-to-one to perceived prices
  - 1% tax $\uparrow \rightarrow$ 1% house cut $\uparrow$ (simplified supply side)
  - Consumers perceive changes in house cut (rules out imperf. salience (Chetty et al., 2009))

- **Status quo**
  - $\tau_0 = 2.02\%$ of dollars wagered (average combined state + federal rate, 2023)
  - Use $t = -1$ demand (Feb 8 to March 9)

Policies

- **First-best benchmark**

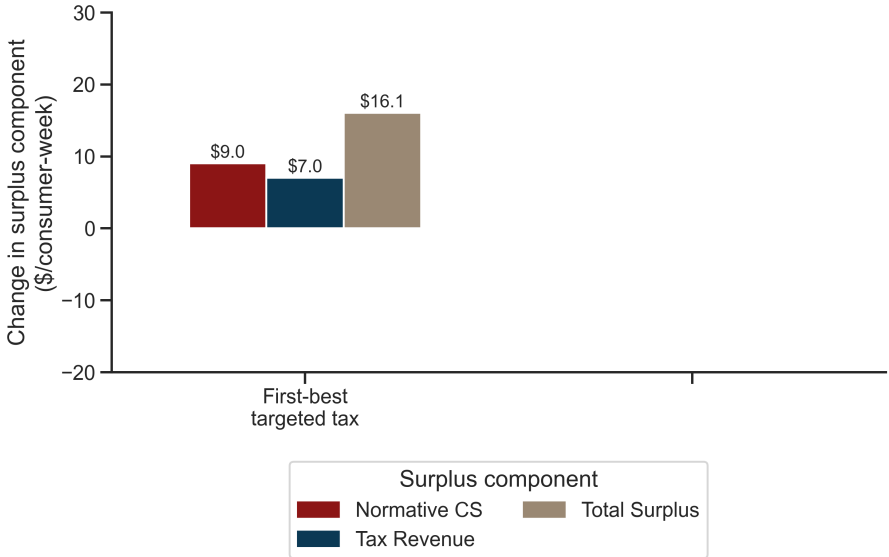
- **Uniform tax**

- **Targeted interventions**

Policies

- **First-best benchmark**
  - Personalized tax $\tau_i^* = \gamma_i^O + \gamma_i^{SC}$
  - All costs internalized $\rightarrow$ first-best consumption
- **Uniform tax**
- **Targeted interventions**

First best benchmark



Computing the optimal uniform tax rate

- **Optimal rate:** weighted avg. of bias (Diamond, 1973; Allcott and Taubinsky, 2015)

$$\tau^* = E_i[w_i \cdot (\gamma_i^O + \gamma_i^{SC})]$$

- **Interpretation:**
  - $w_i \propto$ slope of demand curve
  - Average bias for consumption that is marginal to a price change

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- **Interpretation:**
  - $w_i \propto$ slope of demand curve
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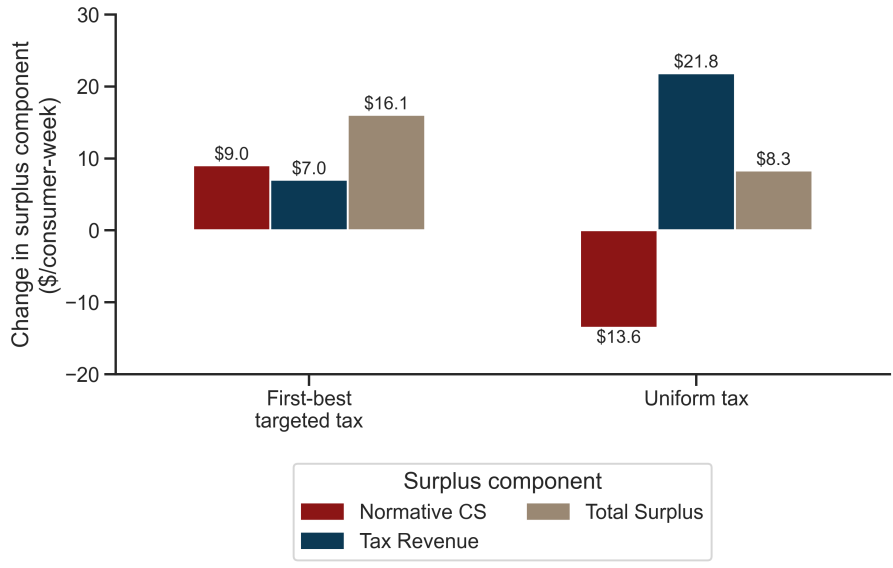
- **Result:** Optimal rate $\tau^* = 5.17\%$ ‣ Alternate weights on G
  - Much larger than status quo rate (2.02%)
  - Smaller than unweighted average
    - High volume $\rightarrow$ larger demand response $\rightarrow$ higher weight
    - High volume $\rightarrow$ less overoptimistic ‣ Result

Uniform taxes leave surplus gains on the table

Outright bans



Roadmap

Institutional details

Conceptual framework

Experimental evidence on bias
- Overview
- Overoptimism
- Self-control problems

Policy evaluation
- Structural estimation
- Counterfactual welfare analysis
- Targeted interventions

Bias correction as a targeted intervention

- **Politically feasible**
  - Public commitments to "responsible gaming" (RG)
  - Some regulators require RG efforts for licensing
- **Theoretically appealing**
  - Well-targeted *by design*
  - Central to case for behavioral interventions across contexts (Camerer et al., 2003; Thaler and Sunstein, 2003; Allcott et al., 2022; List et al., 2023)
- But **challenging in practice** to remove bias

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How well do sportsbooks' bias correction interventions work in practice?

Transparency treatment

Transparency treatment

DraftKings Launches "My Stat Sheet" – A New Tool to Promote Responsible Gaming

Designed to *"help customers evaluate their play and make informed choices"*
Jennifer Aguiar, DraftKings Chief Compliance Officer (2024)

Transparency treatment

DraftKings Launches “My Stat Sheet” – A New Tool to Promote Responsible Gaming

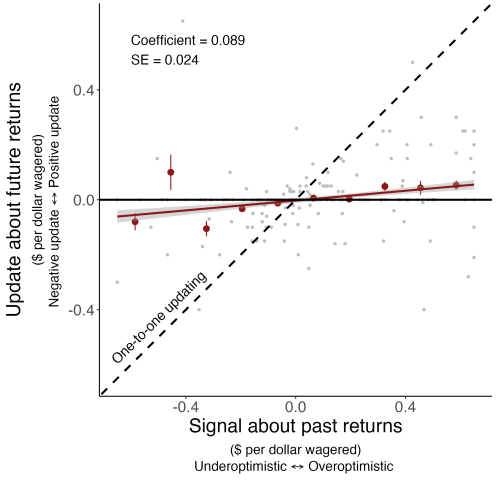
You said you **won $4** for every $100 that you wagered.

In fact, you **lost $2** for every $100 that you wagered.

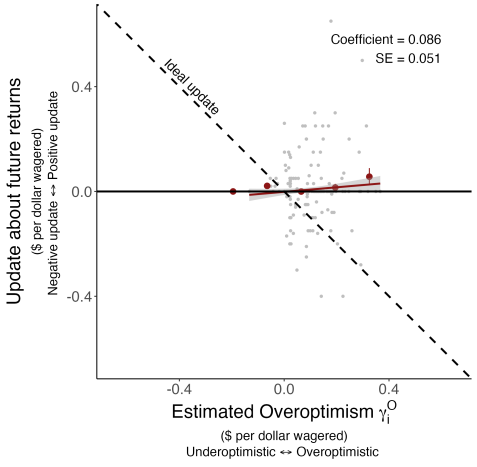
This calculation used data from 236 bets on DraftKings and BetMGM in 2024.

Designed to *“help customers evaluate their play and make informed choices”*
Jennifer Aguiar, DraftKings Chief Compliance Officer (2024)

Information about past returns impacts beliefs



Information about past returns does not reduce bias



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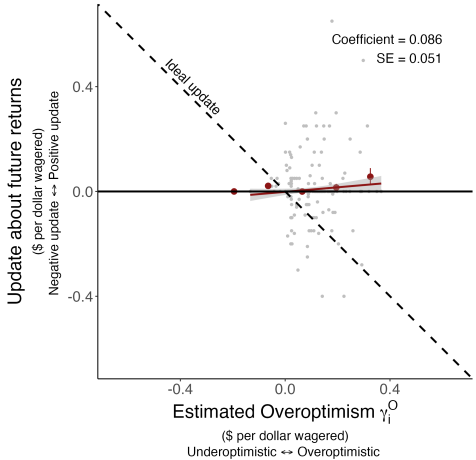

1. On average, people do not overestimate past returns (avg. TE ≈ 0).
2. Mistakes about **past** returns $\perp$ mistakes about **future** returns (poor targeting).

Takeaways on bias correction & targeting

▸ Limits treatment ▸ Outright bans

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Takeaways on bias correction & targeting

Limits treatment | Outright bans

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- Still want efficency gains from targeting. What could we do instead?
  - Can we design better bias correction interventions?
    - Focus on appropriate mechanisms: help people *interpret* their histories
  - Regulate products where bias is concentrated (parlays) Background | Result
    - Higher taxes, restrictions on advertising, etc.

Conclusion

- **Novel evidence on biases among high-volume sports bettors**
  - Average participant predicts they will break even; in fact loses 7.5¢ on the dollar
  - Participants would pay small premia to reduce future betting

- **Policy evaluation**
  - Large average bias $\implies$ optimally do more to reduce consumption (e.g., higher taxes)
  - Heterogeneous bias $\implies$ efficiency gains from targeted instruments
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    - One alternative: differentially regulate parlays

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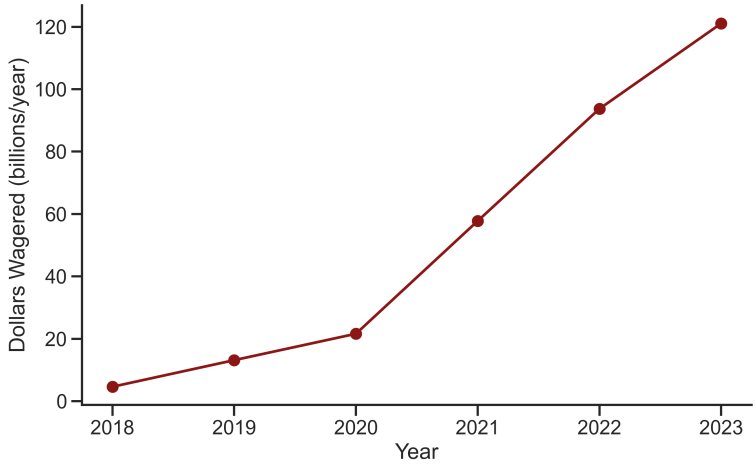
Thank you!

mbrown35@stanford.edu

Legal sports betting has been rapidly increasing since 2018

Back

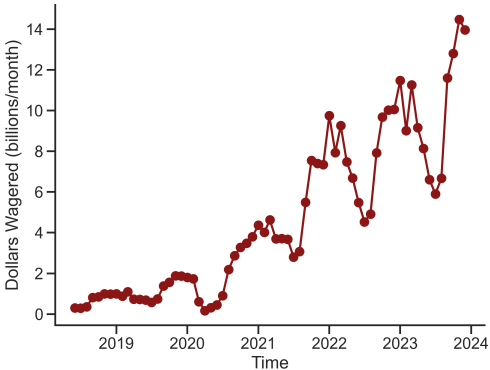


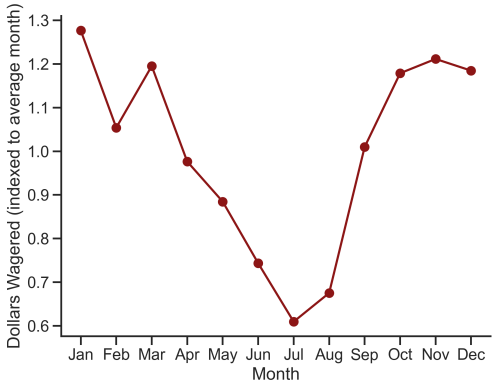
Source: Legal Sports Report Revenue & Handle Tracker

Seasonality

Sports betting consumption peaks in the winter

Back

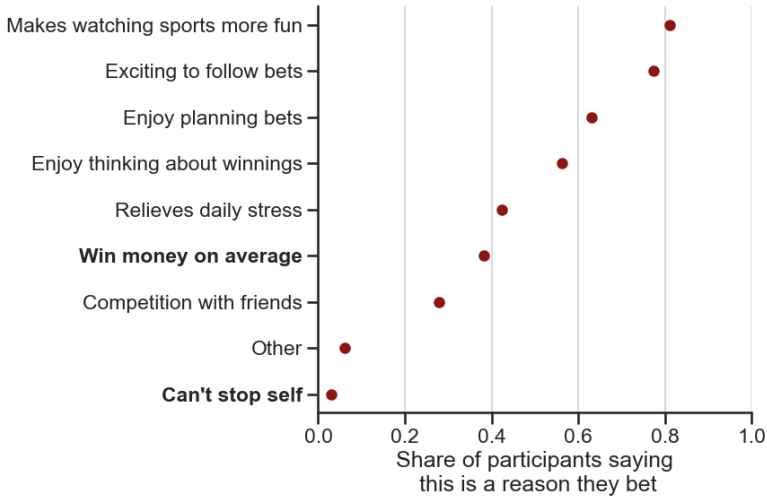




NFL playoffs (Jan) through March Madness

Stated reasons for betting

Back



Comparing to an external representative sample

Back

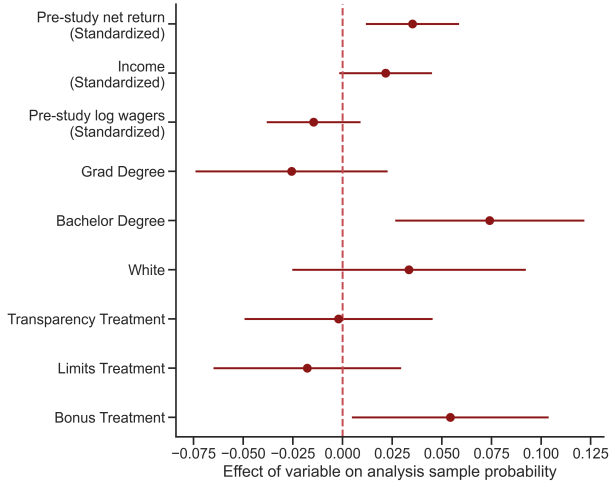
Variable	Weekly Sports Bettors	Analysis Sample
N	517	444
Demographics		
Age	41.47	39.92
White	0.59	0.81
Male	0.69	0.96
Bachelor's degree or higher	0.50	0.82
Graduate degree	0.19	0.39
Household income ($000s)	101 (84)	156 (116)
Qualitative bias measures		
Gambling Literacy Index	1.53 (3.03)	3.55 (2.05)
Problem Gambling Severity Index	6.77 (5.06)	2.89 (2.85)

The table presents variable means (SDs). "Weekly Sports Bettors" are from Grubbs and Kraus (2022)

Other subsamples

Attrition Tests

Back



$$AnalysisSample_i = \alpha + \beta x_i + \varepsilon_i \quad \text{for participants who completed Survey 1}$$

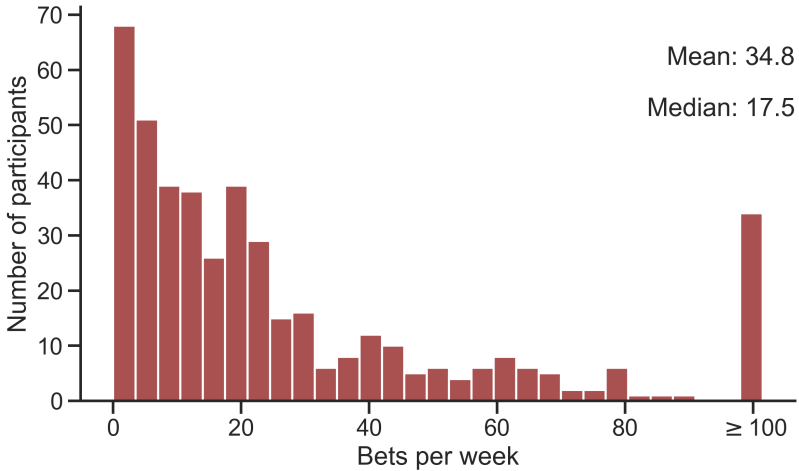
Demographics and qualitative measures by subsample

Back

	Grubbs and Krauss			Brown, Grasley, and Guido	
Variable	**Census Matched**	**Weekly Lottery**	**Weekly Sports**	**Unweighted**	**Weighted**
N	2806	406	517	444	444
Demographics					
Age	51.59	55.21	41.47	39.92	38.35
White	0.66	0.62	0.59	0.81	0.75
Male	0.46	0.53	0.69	0.96	0.92
Bachelor's degree or higher	0.34	0.25	0.50	0.82	0.55
Graduate degree	0.13	0.08	0.19	0.39	0.21
Household income ($000s)	68 (62)	67 (57)	101 (84)	156 (116)	111 (95)
Qualitative bias measures					
Gambling Literacy Index	4.00 (2.30)	3.12 (2.74)	1.53 (3.03)	3.55 (2.05)	1.73 (2.30)
Problem Gambling Severity Index	0.99 (2.69)	2.83 (4.21)	6.77 (5.06)	2.89 (2.85)	6.15 (3.97)

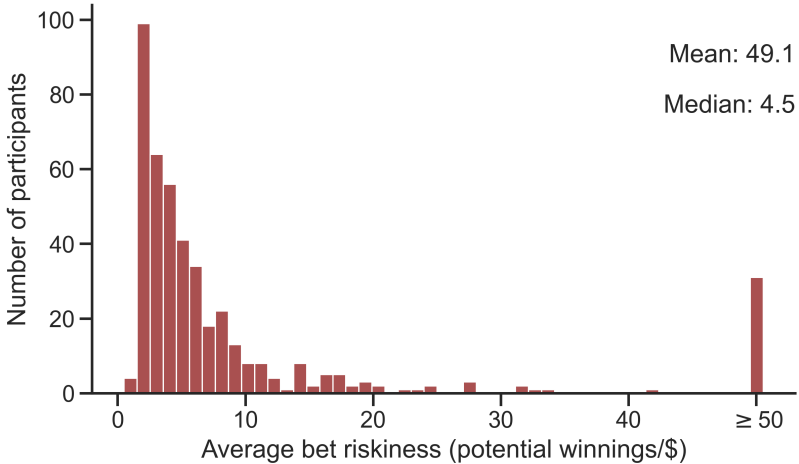
Number of bets

Back



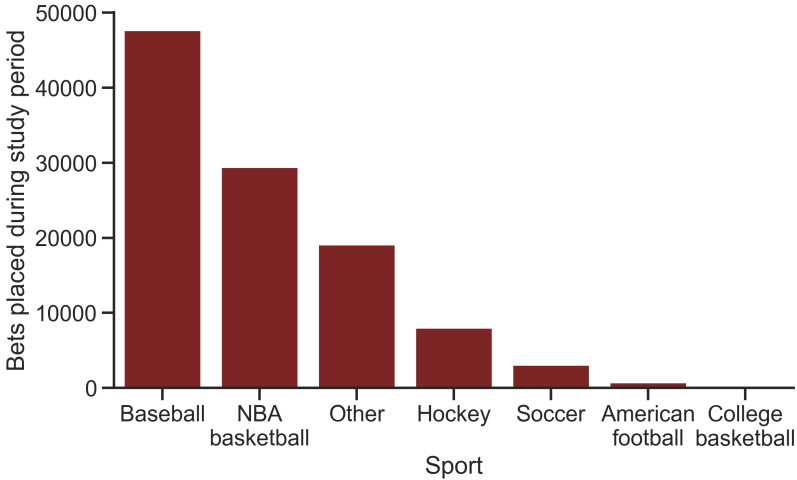
Bet riskiness

Back



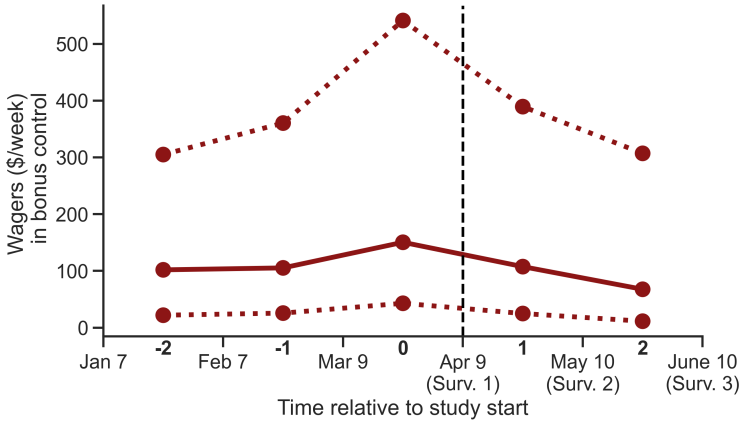
Sports

Back


Bets placed during study period
50000
40000
30000
20000
10000
0
Baseball
NBA basketball
Other
Hockey
Soccer
American football
College basketball
Sport

Bets over time

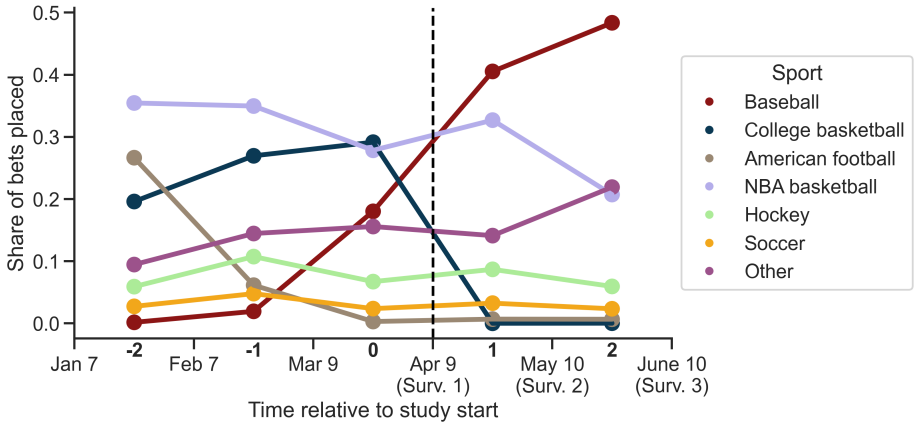
Back



Note: solid lines represent the median, dashed lines represent 25th and 75th percentiles

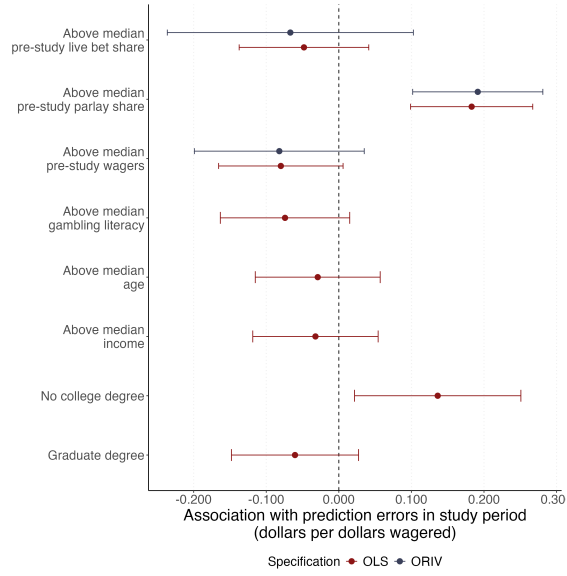
Sports over time

Back



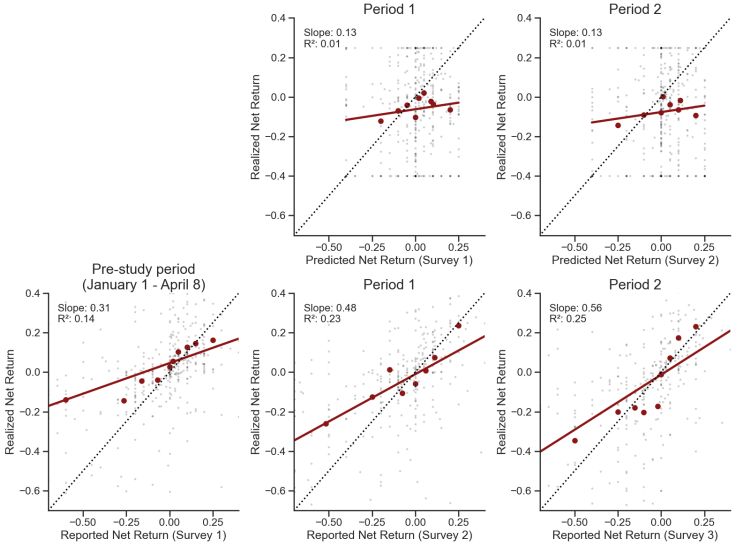
Heterogeneous overestimation

Back to misprediction Back to corrective tax



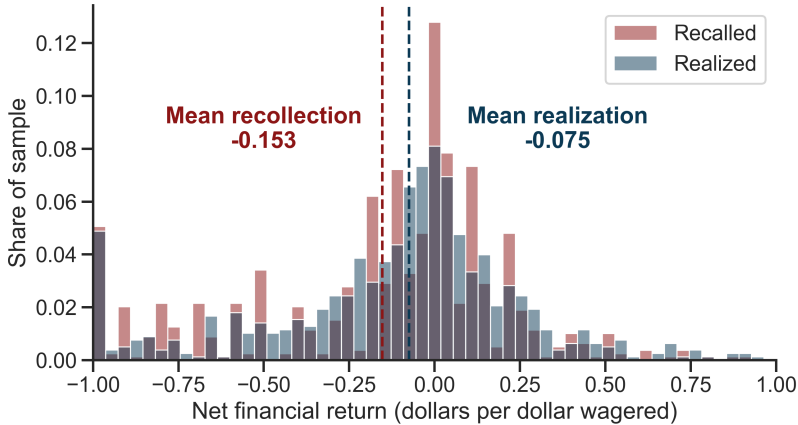
Binscatters: predictions & recollections vs. realizations

Back



Recollections of own past returns

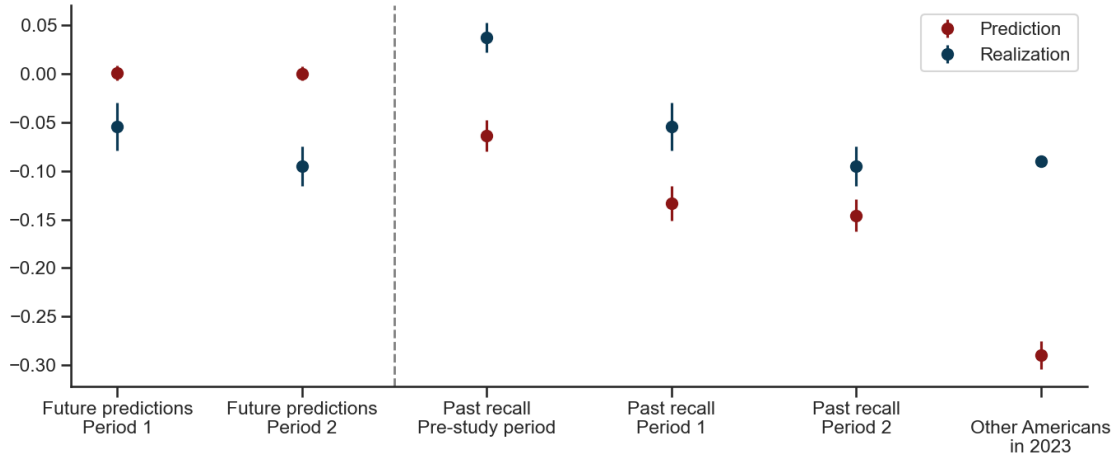
Back



Recollections from surveys 2 & 3

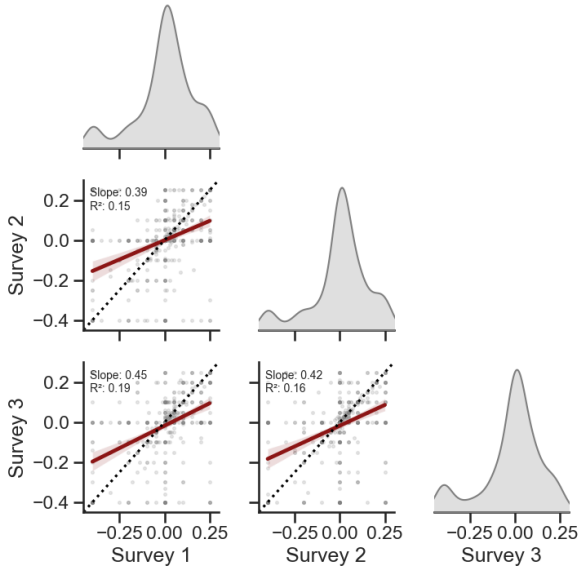
Summary of return mispredictions

Back



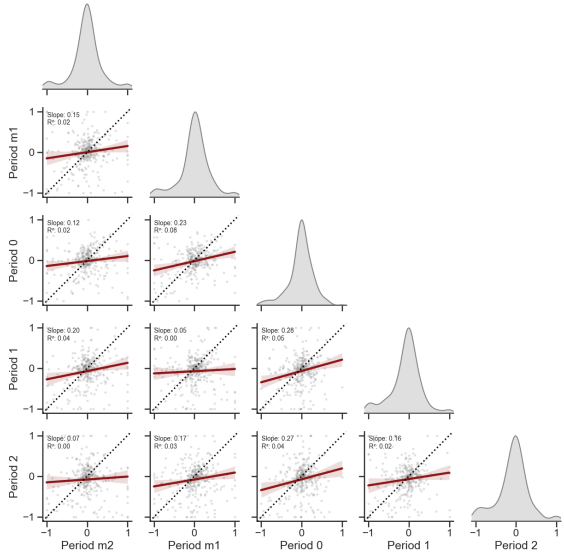
Correlation of predictions over time

Back



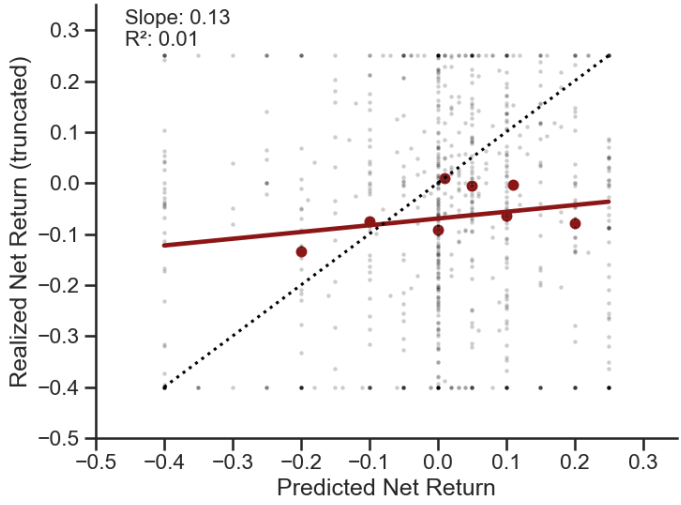
Correlation of returns over time

Back



Predictions predict future returns

Back

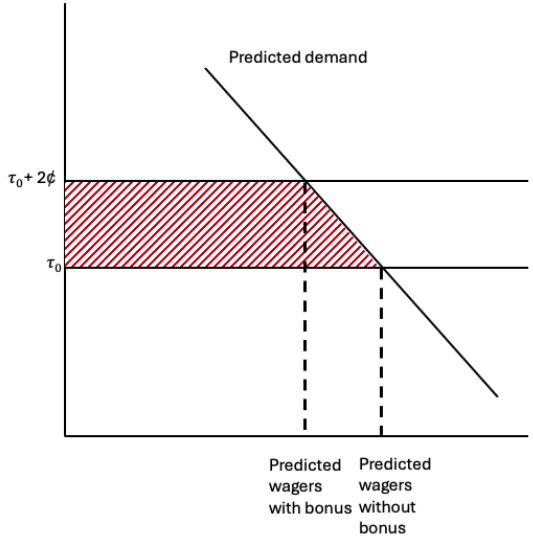


Time-consistent bonus valuations

Back

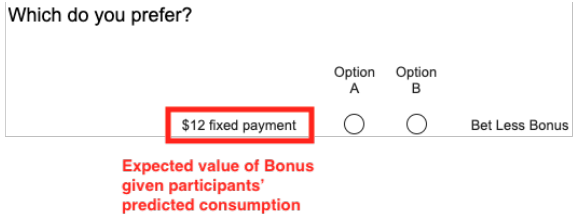
Value of Bet Less Bonus =
Unconditional Transfer -
CS Loss from $\tau \uparrow$

- Unconditional Transfer: maximum bonus value
- CS Loss from $\tau \uparrow$: area under demand curve given pred. demand response
- Assumes risk-neutral, $\approx$ linear demand



Eliciting Bonus Valuations: Binary Choice

Back



How might you decide?

- You might prefer $12 instead of the Bet Less Bonus if you don't want any pressure to bet less.
- You might prefer the Bet Less Bonus instead of $12 if you want to give yourself extra incentive to bet less.

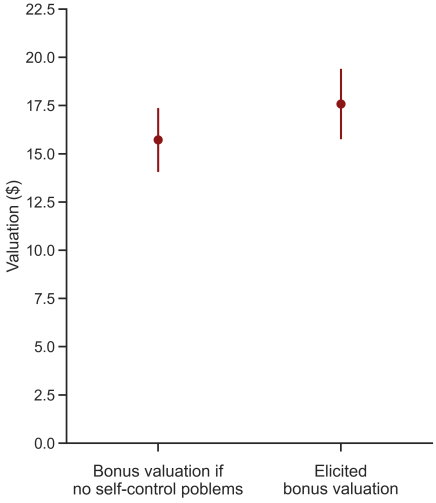
Eliciting Bonus Valuations: Multiple Price List

Back

	Option A	Option B	
Fixed payment of $35	○	○	Bet Less Bonus
Fixed payment of $24	○	○	Bet Less Bonus
Fixed payment of $19	○	○	Bet Less Bonus
Fixed payment of $13	○	○	Bet Less Bonus
Fixed payment of $12	○	○	Bet Less Bonus
Fixed payment of $11	○	○	Bet Less Bonus
Fixed payment of $6	○	○	Bet Less Bonus
Fixed payment of $0	○	○	Bet Less Bonus

People are willing to pay to reduce future betting

Back



- Study the **Behavior Change Premium** (Carrera et al., 2022)
- Definition: Excess valuation of Bonus
- Interpretation: WTP for reduction in betting
- Measure of perceived self-control problems

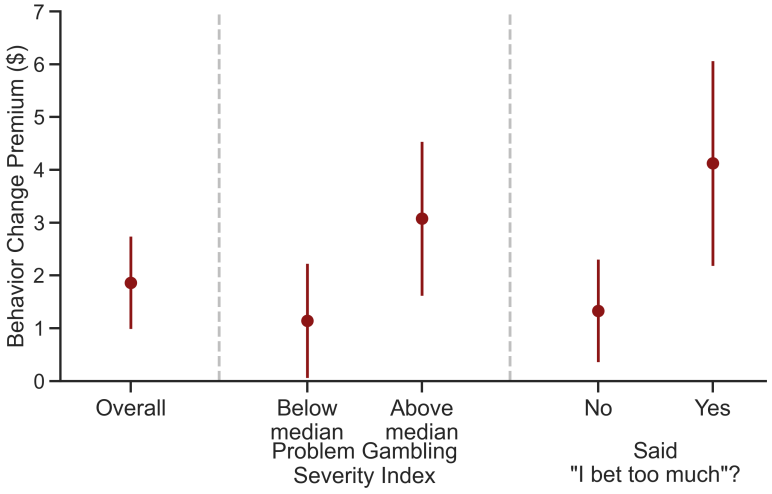
Corr with qualitative measures

Constructing no self-control problems valuation

Behavior Change Premium correlates with qualitative measures

Back

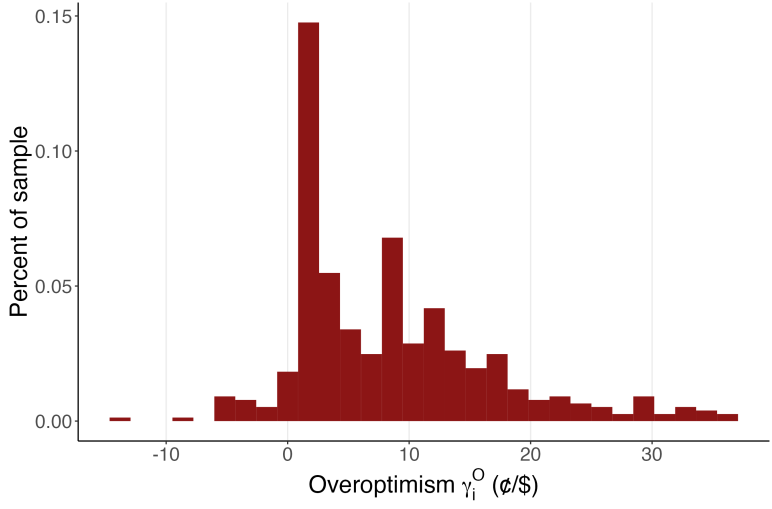
Back to main



Dispersion in overoptimism estimates after shrinkage

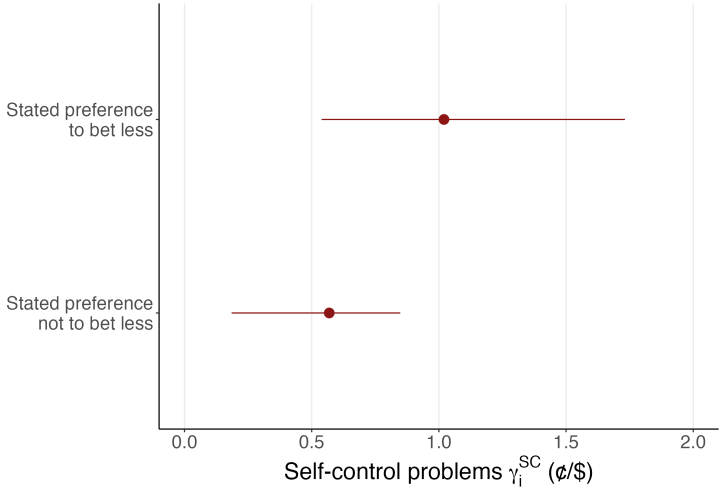
Back to estimation

Back to summary



Heterogeneity in self-control problems

Back



Microfoundation of demand curve

Back

- **Quasilinear utility**

$$u_i(x) = \overbrace{y_i + \underbrace{E_{\tilde{F}_i}[a] \cdot x}_{\text{Financial value of gambling}}}^{\text{Utility from numeraire consumption}} + \underbrace{z_i(x; \tilde{F}_i) + \gamma_i^{SC} x}_{\text{Nonfinancial value of gambling}}$$

- **Functional from of nonfinancial utility**

$$z_i(x) = z_{1i} \log(x) + z_{2i} x + g_i(\tilde{F}) x + h_i(\tilde{F})$$

- FOC with respect to x yields constant semielasticity of demand

Price-sensitivity ▸ Back

- **Multiple independent sources of evidence** on semielasticities η_i
  - Randomized TE of Bet Less Bonus ▸ Substitution patterns
  - Predicted effect of (hypothetical) price changes (e.g., changes in house cut)
    ▸ Validating predictions ▸ Varying payment rates

Price-sensitivity

Back

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- **Results**
  - Semielasticity estimate range: $E_i[\eta_i] = [-0.21, -0.10]$ All estimates Heterogeneity
    - 1¢ price $\uparrow \implies$ [21%, 10%] consumption $\downarrow$

Price-sensitivity ‣ Back

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Price-sensitivity ‣ Back

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- **Robustness:** conduct simulations for multiple estimates
  - Optimal corrective tax rate similar across estimates
  - Preferred estimate (from predictions): $E[\eta_i] = -0.11$
  - Use small estimate $\rightarrow$ reported welfare effects conservative (Harberger, 1964)

Overestimation = Overoptimism + Noise

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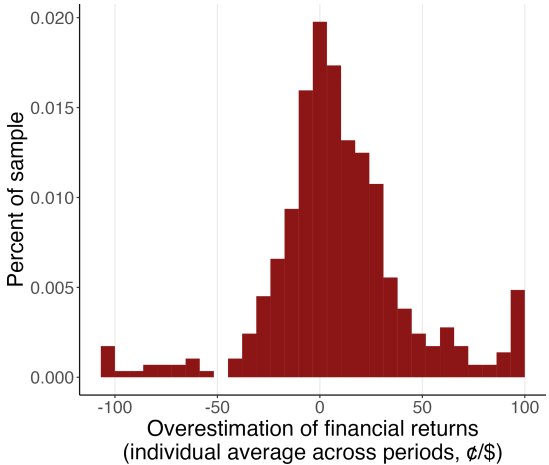

Sources of noise

- Returns intrinsically random
- Noisy belief elicitation

$$\implies Var(\text{Overestimation}) > Var(\gamma_i^O)$$

Overestimation = Overoptimism + Noise

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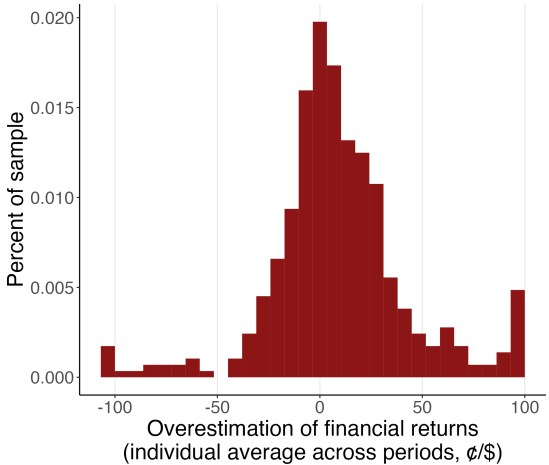

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- Noisy belief elicitation

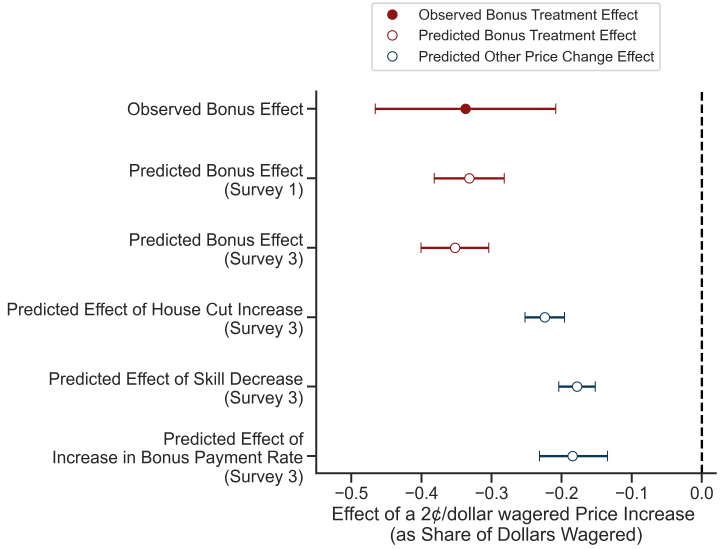
$$\implies Var(\text{Overestimation}) > Var(\gamma_i^O)$$

Solution: measure noise & apply shrinkage (Chen, 2024) Estimates

- Bet microdata → return noise
- Multiple surveys → elicit. noise

Alternative price response estimates

Back to details | Back to main | Back to summary



Predicted response to Bonus rate changes

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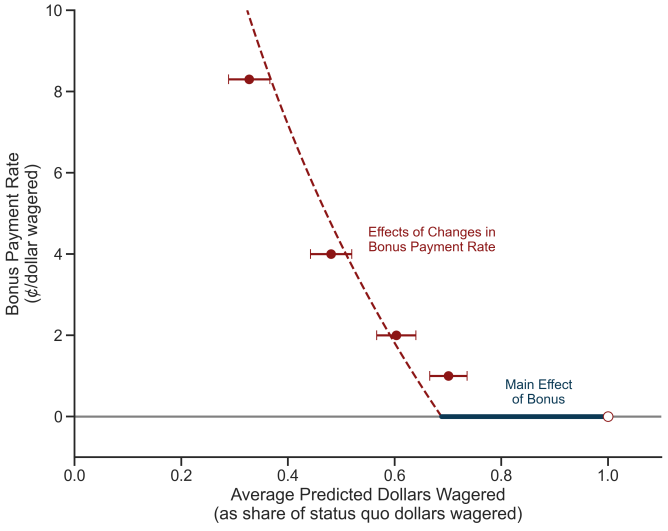

Heterogeneous price responses for all estimates

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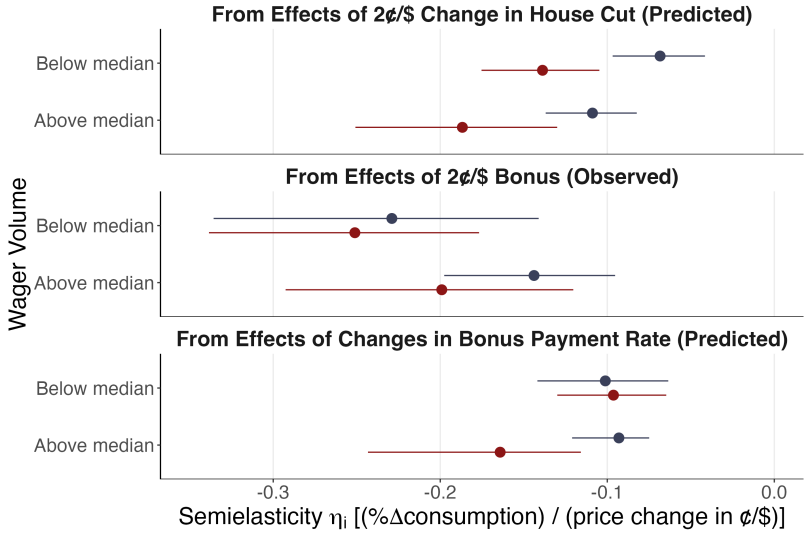

Qualitative evidence on Bonus main effects

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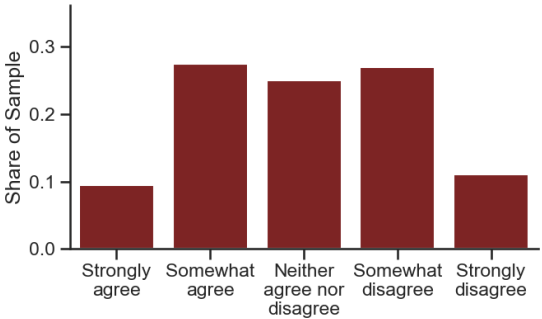
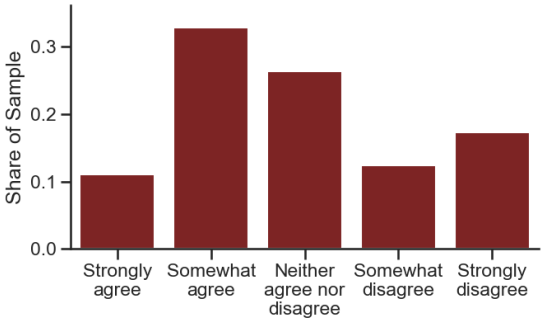


On Survey 1, I didn't think much about the size of the Bet Less Bonus. If, instead of a $6 payment for every $10 that I reduced my average daily betting, I had been offered a $3 or $10 payment instead, I probably would have reduced my betting by about the same amount.



If am chosen for the Bet Less Bonus, I will assume that the researchers want me to reduce my betting. Therefore, I will feel extra pressure to do that.

Evidence on validity of prediction data

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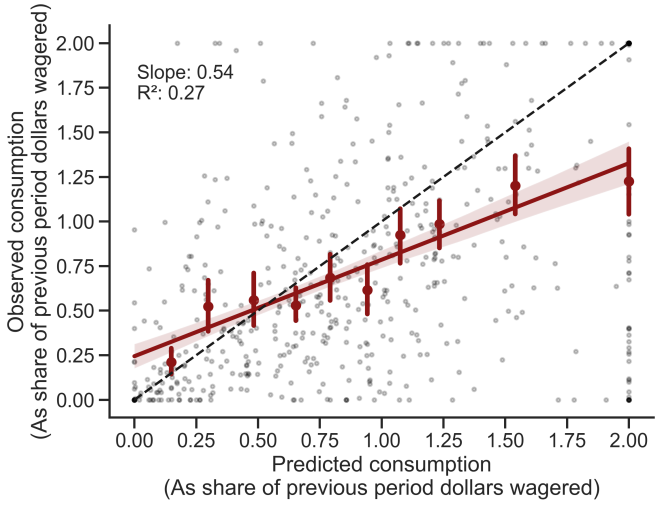

Optimal uniform taxes as a function of weight on revenue

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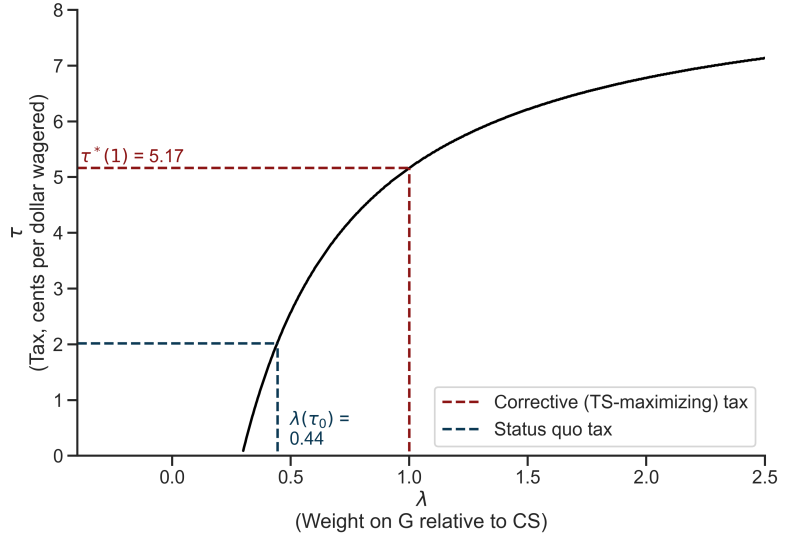

Limits treatment

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Edit Weekly Wagering Limit

Set how much you can wager on Sportsbook and Casino per week.

Wager Amount

$

Progress towards limit resets at 12am UTC every Sunday (7/8 pm EST/EDT)

Note: You can make your limit more restrictive at any time. When making a limit less restrictive, you must confirm the new limit after the current limit expires.

Save

Remove

Limits treatment

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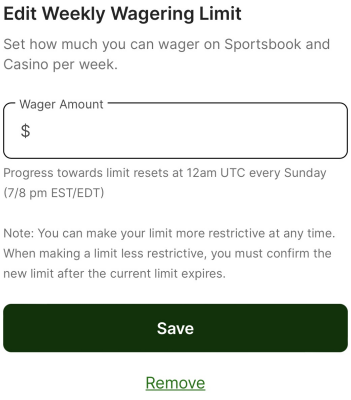

1. Elicit ideal wagers in typical week
2. Explain in-app limits
3. Prompt active choice

You must choose some weekly limit. You may choose a very small limit (like $1), a very large limit (like $9,999,999), or anything in between.

DraftKings weekly limit	$
BetMGM weekly limit	$
Total weekly limit:	$
Ideal total weekly wagers:	$125 **Elicited ideal**

People choose more flexible limits than ideal

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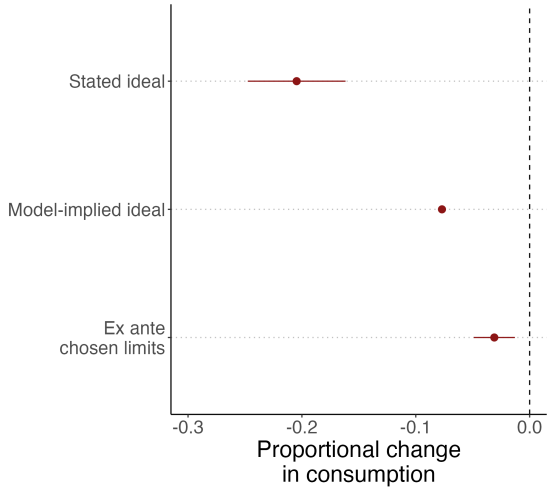

Limits are well-targeted

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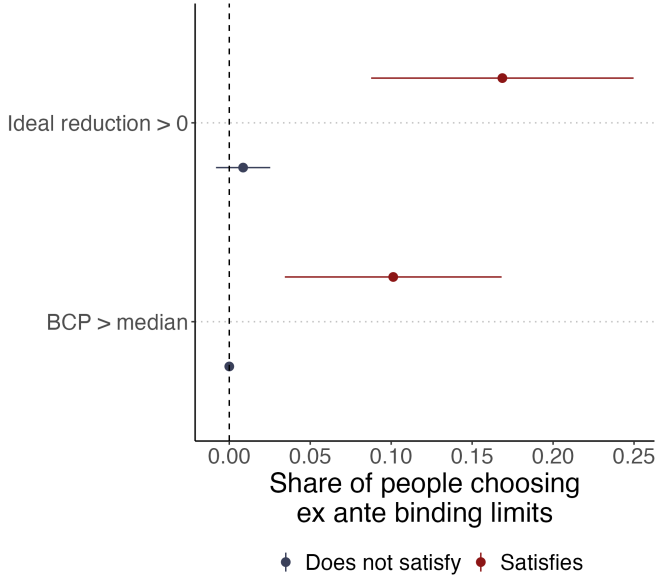

WTA to stop betting: alternative elicitations

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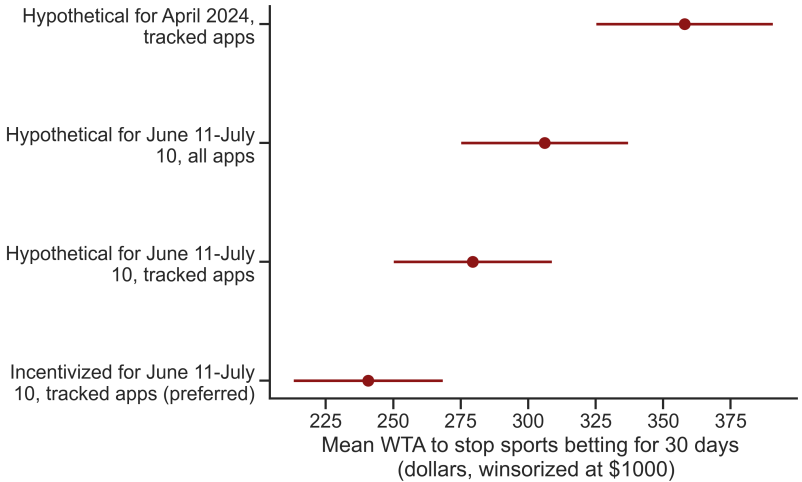


Analysis of bans requires new evidence

- Do bans enhance welfare? $\leftrightarrow$ Is normative CS positive?

$$\text{Normative CS} = \text{Perceived Net Benefits} + \text{Uninternalized Costs}$$

- Results so far: costs $>$ benefits for *marginal wagers*
- Need to compare *total* perceived benefits to *total* costs

Analysis of bans requires new evidence

- Do bans enhance welfare? $\leftrightarrow$ Is normative CS positive?

$$\text{Normative CS} = \text{Perceived Net Benefits} + \text{Uninternalized Costs}$$

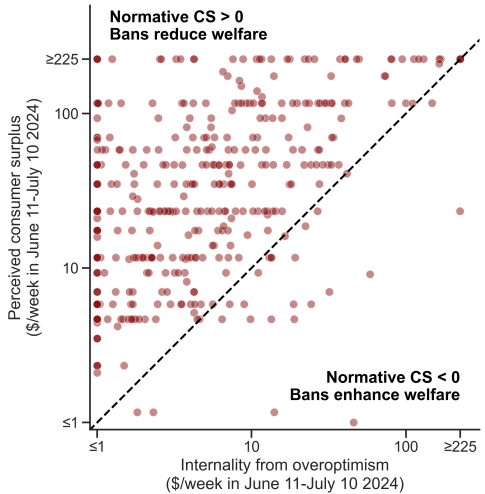
- Results so far: costs $>$ benefits for *marginal wagers*

- Need to compare *total* perceived benefits to *total* costs
  - Use WTA to stop betting for a 30-day period
  - Incentivized BDM elicitation
  - No naivete $\rightarrow$ self-control problems are internalized in elicited WTA
    - Only uninternalized cost is from overoptimism

High perceived benefits $\Longrightarrow$ bans do not enhance welfare

Back to tax

Back to targeting



Caveat: such WTAs known to be sensitive to experimental procedures (Allcott et al., 2020)

Targeting shifts tradeoff between restrictiveness & total surplus

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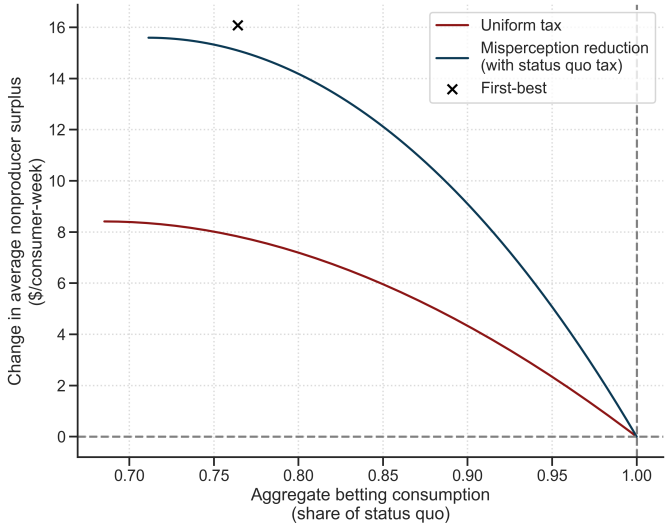

Substitution from tracked sportsbooks to other kinds of betting

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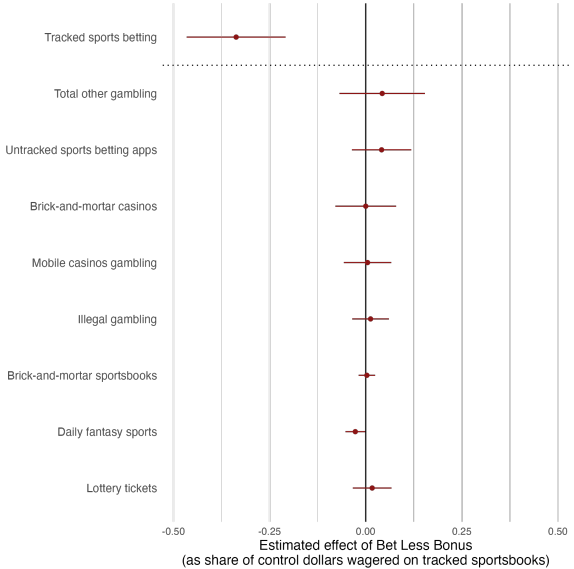

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