



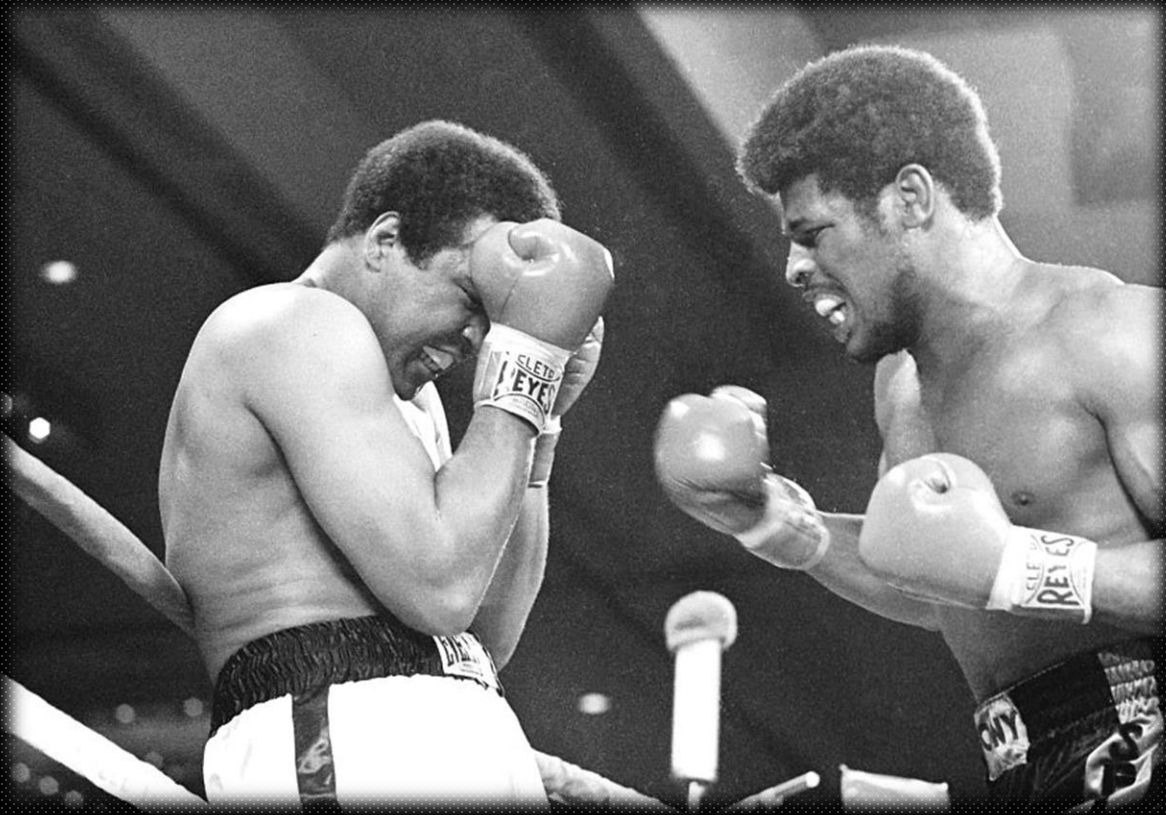
# Favorite-longshot bias

An insider's perspective



The night Ali screamed in pain

The miracle on ice (1,000/1)





# Leicester Longshot (5,000/1)



# Greece defy the odds (150/1)





# Betting Psychology

- We try to be rational, but our **instincts** most often get in the way.
- **Availability bias** - we have the tendency to attach greater significance to events that leave the strongest impression, or are easier to recall
- We **remember** things better when they come in a vivid **narrative**
- We misjudge the frequency and magnitude of **recent** events
- **Confirmation bias** - we love to agree with people (or data) who agree with us
- The **bandwagon effect**



# Why bookmakers care about biases

- There are three scenarios for an operator to making profits:
- (1) Balance the total amount of money across outcomes
- (2) Provide accurate probabilities estimations in order to achieve the long-term profit margin
- (3) Exploit bettors' biases in order to maximize profit
- In real world (1) is not workable without harming the turnover potential
- A combination of (2) and (3) is the best practice to optimizing the margin v turnover function



# “The fans make the odds”

“I personally think it should be a tossup, but Ali will be the choice at 1,40

The public likes Ali and will not make Spinks the favorite, even though he is the champion.

And the fans make the odds by much they bet on each fighter.”



# Favorite-longshot bias

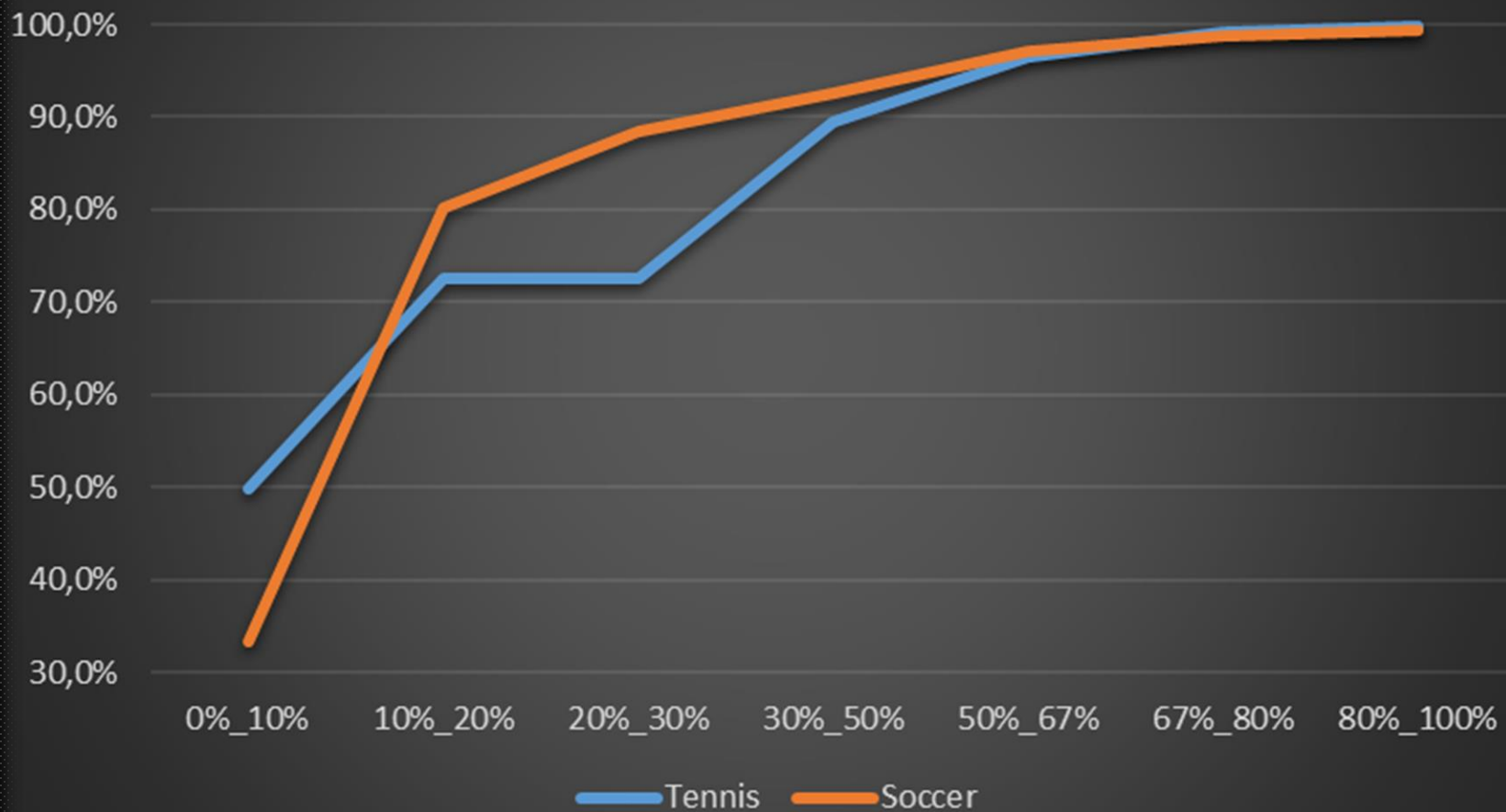
- Favorite-longshot bias is an observed phenomenon where on average, bettors tend to overvalue "long shots" and undervalue favorites
- Bookmakers are known to set prices on underdogs much lower than they realistically should be - "laying under the odds"
- Betting on the "long shot" is therefore a much worse proposition than betting on the favorite  $\Leftrightarrow$  losses backing favorites are significantly smaller compared to the losses backing longshots





# Favorite-longshot bias in 2019 season

## Favorite-Longshot Bias in Soccer & Tennis



Tennis - Singles - PreEvent		
Betting price	Number of Bets	Return
Odds ≤ 1.25	6,5%	99,9%
1.25 _ 1.50	10,8%	99,1%
1.50 _ 2.00	40,1%	96,5%
2.00 _ 3.25	22,6%	89,4%
3.25 _ 5.00	9,3%	72,6%
5.00 _ 10.00	5,7%	72,5%
Odds > 10.00	5,0%	49,8%
<b>All odds</b>	<b>100,0%</b>	<b>94,1%</b>

Soccer - Singles - PreEvent - Full Time Result		
Betting price	Number of Bets	Return
Odds ≤ 1.25	2,7%	99,3%
1.25 _ 1.50	8,8%	98,8%
1.50 _ 2.00	20,8%	97,2%
2.00 _ 3.25	36,7%	92,6%
3.25 _ 5.00	23,1%	88,5%
5.00 _ 10.00	5,9%	80,2%
Odds > 10.00	2,0%	33,3%
<b>All odds</b>	<b>100,0%</b>	<b>93,9%</b>



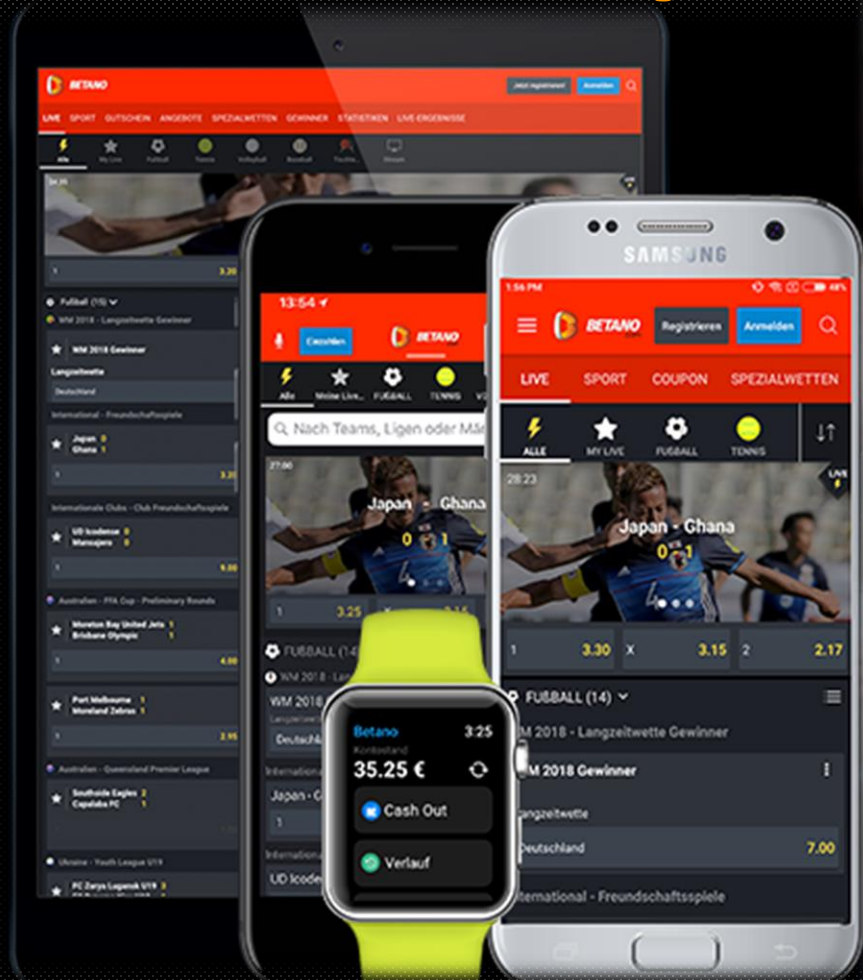


# Why does it exist and why is it so widespread?

- **FOB is not a lottery game promising 'life changing' payouts, thus recreational players could easily adopt a risk-seeking behavior**
- **Cash-out option encourages punters to seek higher returns**
- **Bookmakers respond to bettors' habits by laying under the odds**
- **Low calibre pricing on longshots increases bookmaker's percentage liability far more than it does for favorites while insider information can do more damage as well**
- **The larger the overround, the stronger the bias  $\Leftrightarrow$  the bookmaker builds most of the overround into the longer prices**



# In-Play Betting changed how we consume sport





# In-Play Betting changed how we consume Sport

- In-Play betting experience via mobile applications came up as the ultimate game changer
- In-Play consists of 75% of the industry; focalizing on fast markets and provoking higher frequency of placed bets
- Younger generations equate watching sport to betting on it
- In sports betting, gamblers are more risk averse after winning and more risk seeking after losing
- The near miss effect ↔ favoring long-shots



# The Punter Profile

- We can identify three main types of bettors
- (1) The Recreational Bettor  $\Leftrightarrow$  Risk loving (lottery style) - doesn't affect odds & lines
- (2) The Casual Bettor  $\Leftrightarrow$  Multiples - doesn't affect odds & lines
- (3) The Regular Bettor – Singles oriented - Information, seeking for value (even “odds against”)
- (4) The Sharp Bettor/Arbitrageur
- The market is sensitive on type (3) and even over-reacting on type (4)





# The Reverse Favorite-Longshot Bias in Pregame

- Most global sportsbooks are mostly offering the same product BUT
- Multiples yet dominate Pregame on 'Mediterranean' temper or/and 'immature' markets
- Why do people keep betting on accumulators ?
- The higher caliber an event, the most punters have an 'expected' price on their mind ⇔ missing favorite singles turnover
- Typical pattern: the recreational punter would prefer to place a treble bet on three favorites of 1.60 instead of picking an outsider on 5.00 ⇔ preferring the most likely outcome



# The 0% Margin paradox

- Basketball is a key product in Greece
- From Sep-2016, we offered more than 500 matches with zero over-round
- Attracting over a million single betting lines
- While delivering an expected small deficit on singles
- But according to the native bettors, behavioral patterns
- Favoring multiple bets and thus establishing theoretical margin
- Eventually delivered a slight surplus on total 0% margin business





# The American Roulette Paradox

Year	Roulette	Slot Machines
2008	18,2%	28,1%
2009	18,7%	24,1%
2010	18,5%	20,1%
2011	18,4%	18,5%
2012	17,4%	16,8%
2013	18,7%	16,7%
2014	17,7%	16,3%
2015	17,4%	16,1%
2016	18,5%	15,6%
2017	17,3%	15,1%
<b>Total</b>	<b>18,2%</b>	<b>19,2%</b>



# The American Roulette Paradox

- Roulette tables deliver 18.2% margin while theoretical is only 5.26%
- Cognitive biases affecting actual vs theoretical margin deviation
- Overestimation of low odds
- The gambler's fallacy
- Superstitious behavior
- Roulette is pure chance, but FOB may involve real skills





# The Legend of the Man in the Green Bathrobe



Mary and Johnny were on their honeymoon in Vegas **when** Johnny discovered a last \$5 chip left on the dresser...