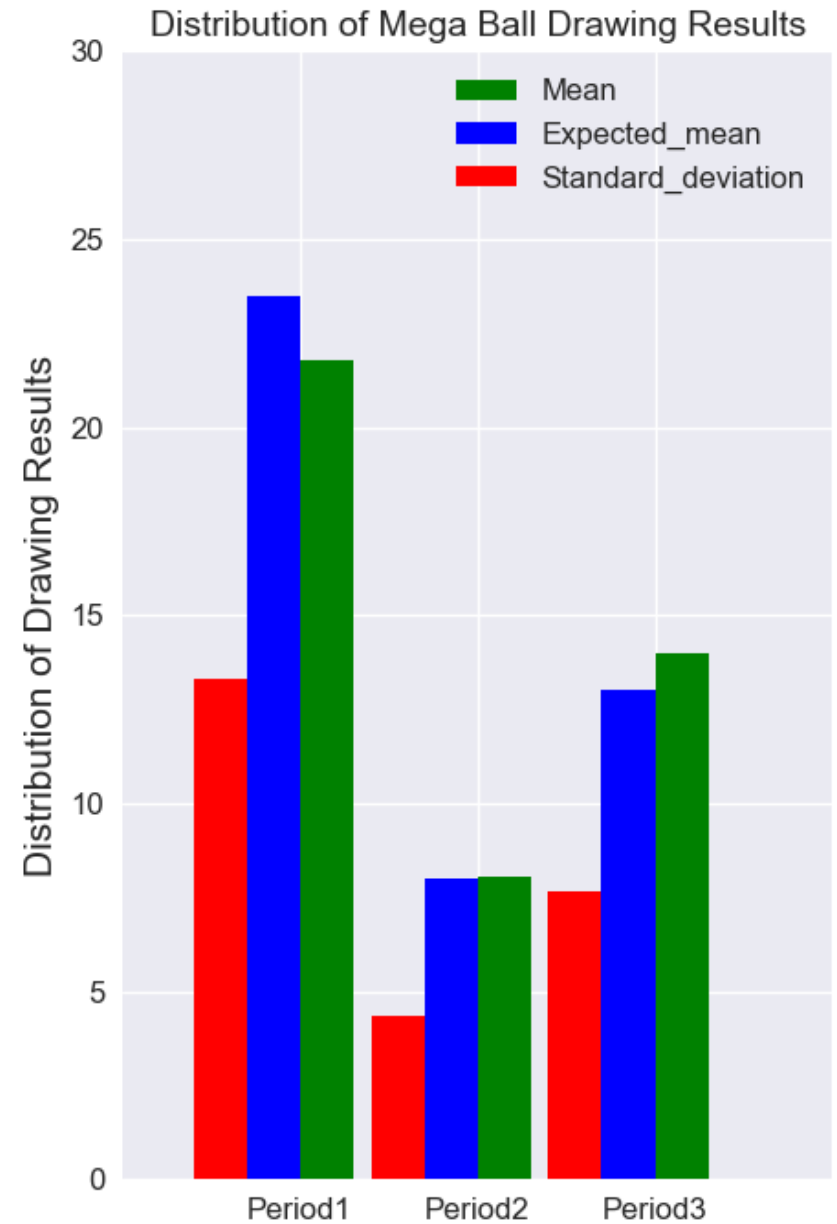
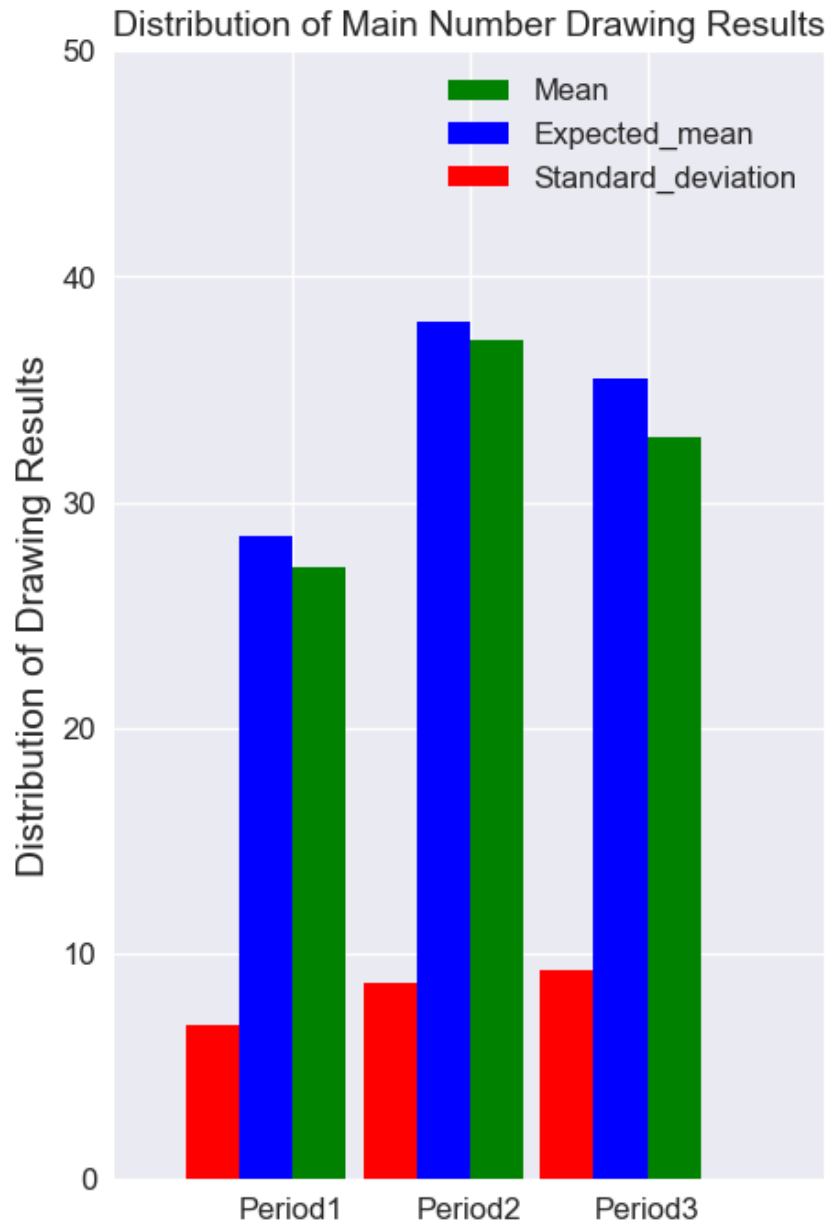


Mega Millions Jackpot – Lets Get Rich!!

- Web scraped www.usamega.com and gathered drawing results as well as winning results for Mega Millions and Powerball jackpots
 - Total data size of ~10k rows with average of 15 columns
- Questions to answer: What, When, and Where
 - What numbers should one choose
 - When is the best time to play
 - Where should one buy the ticket
- Mega Millions has changed the format of the game twice
 - Original: Main draw of 5 numbers (1 to 56) and Mega Ball (1 to 46/52)
 - Oct 2013: Main draw of 5 numbers (1 to 75) and Mega Ball (1 to 15)
 - Oct 2017: Main draw of 5 numbers (1 to 70) and Mega Ball (1 to 25)
- Odds of winning changed from 1 in 176 million (original) to 1 in 259 million (Oct 2013 – Oct 2017) and currently stand at 1 in 303 million

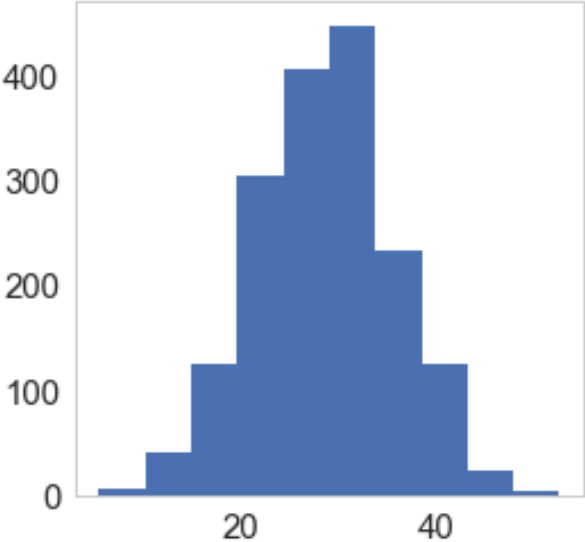
Summary Statistics of Drawing Results



Comparing Distribution of Mean Results: Actual vs. Random Sample

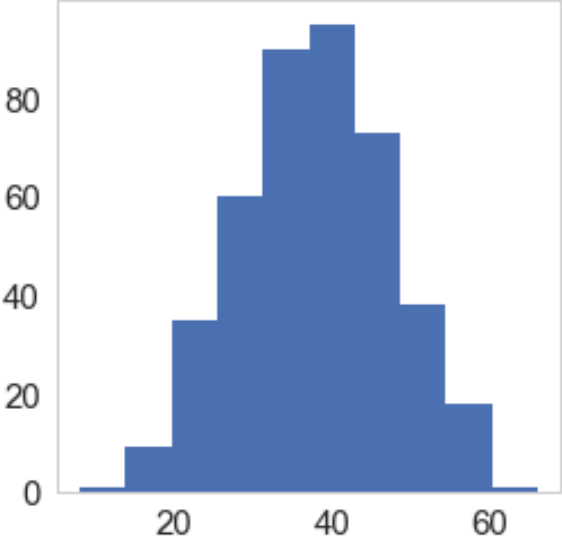
1713 Drawings

Period 1: Random Sample



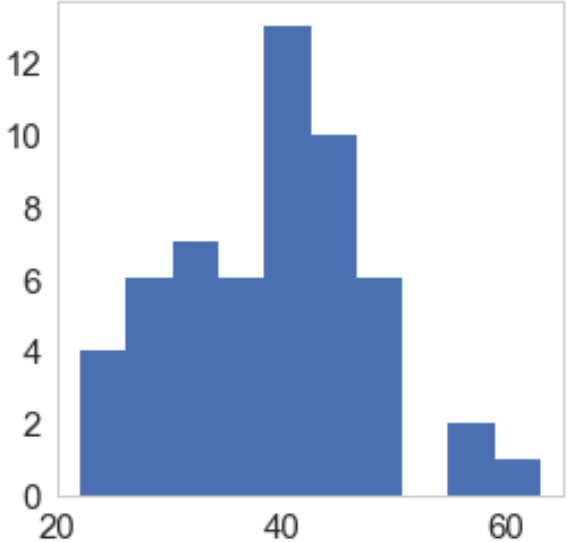
420 Drawings

Period 2: Random Sample

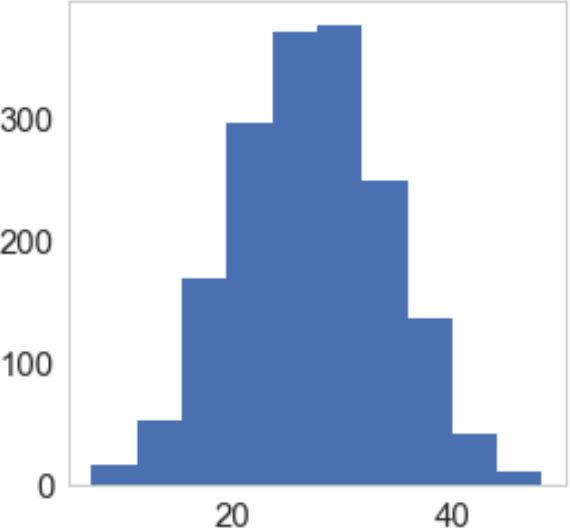


55 Drawings

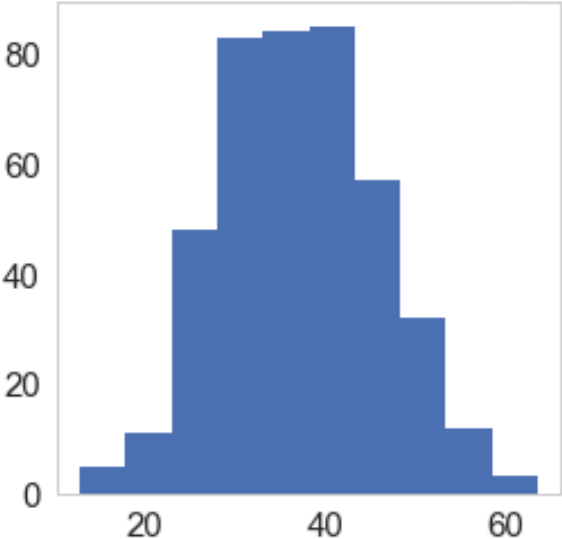
Period 3: Random Sample



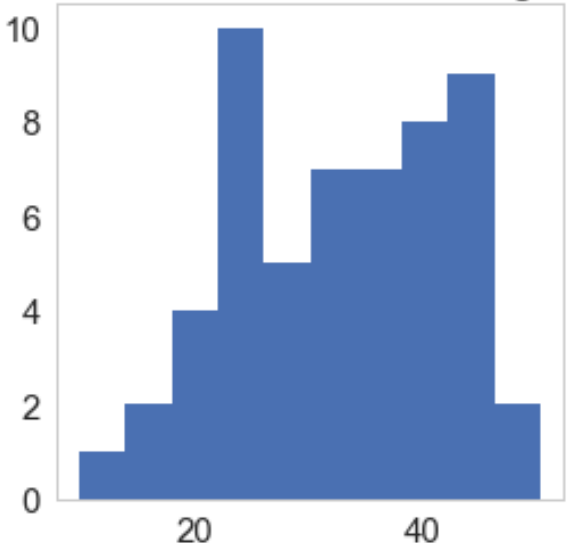
Period 1: Actual Drawing



Period 2: Actual Drawing



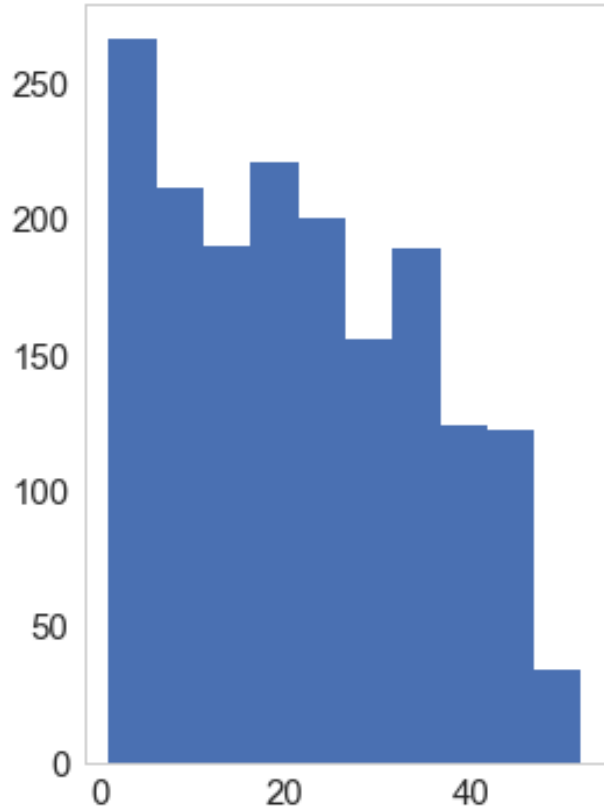
Period 3: Actual Drawing



Distribution of Mega Ball Results

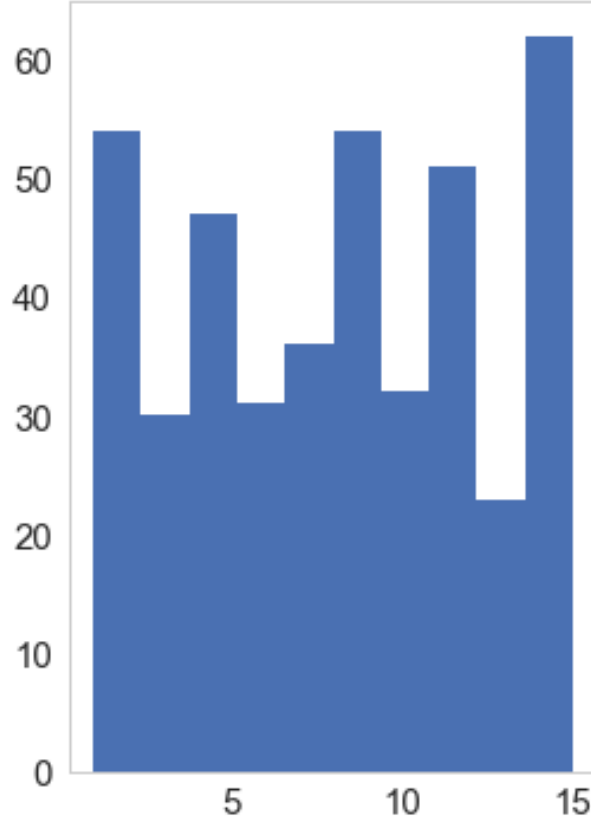
1713 Drawings

Period 1: Actual Mega Ball



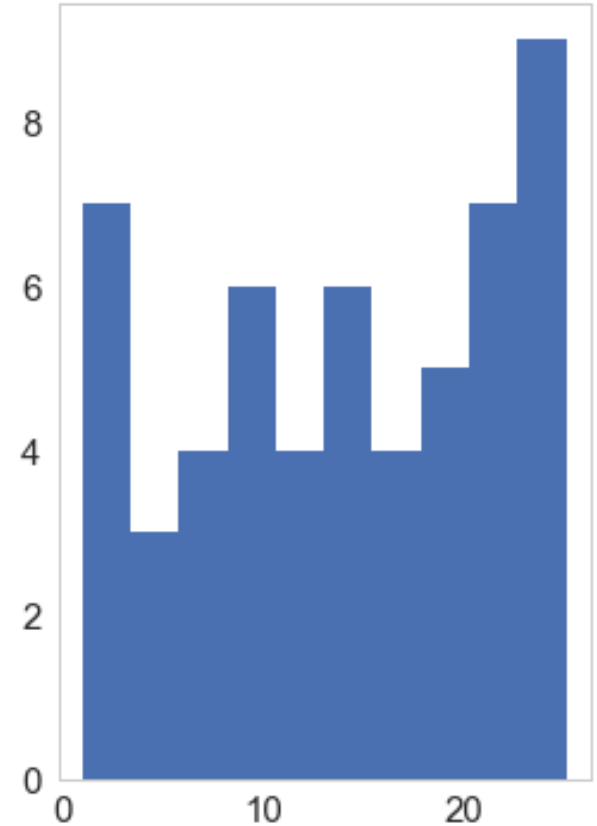
420 Drawings

Period 2: Actual Megal Ball



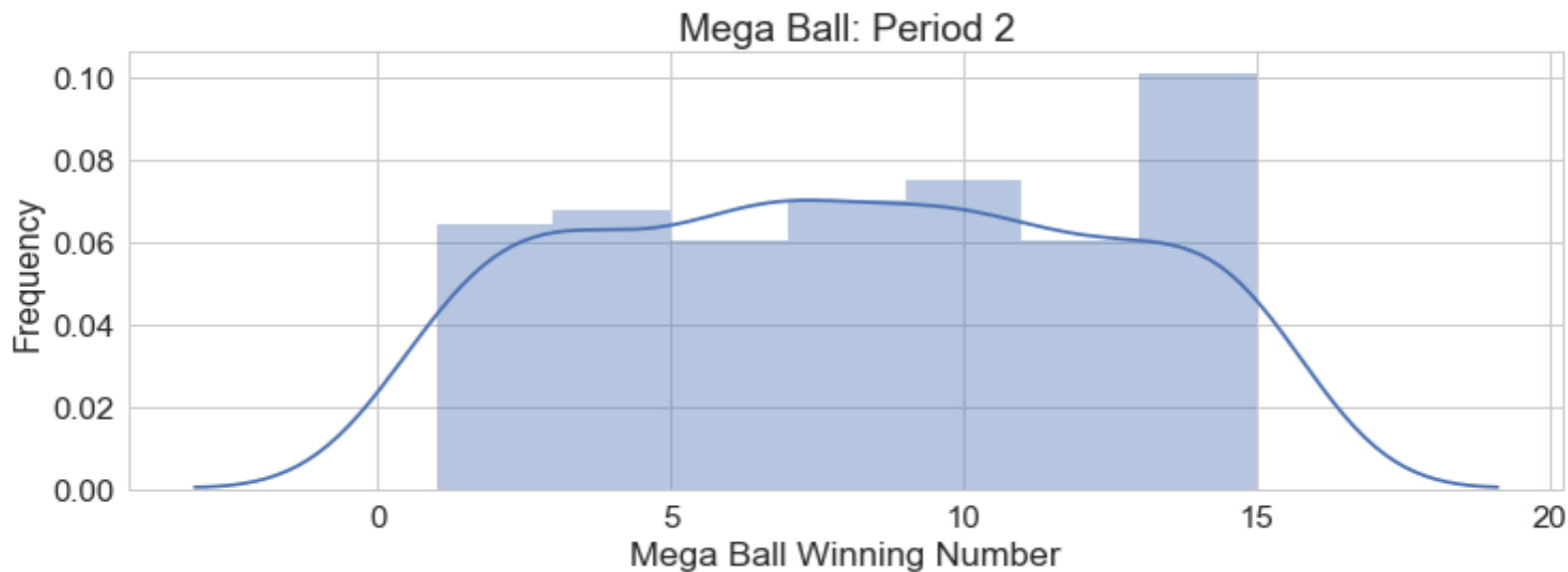
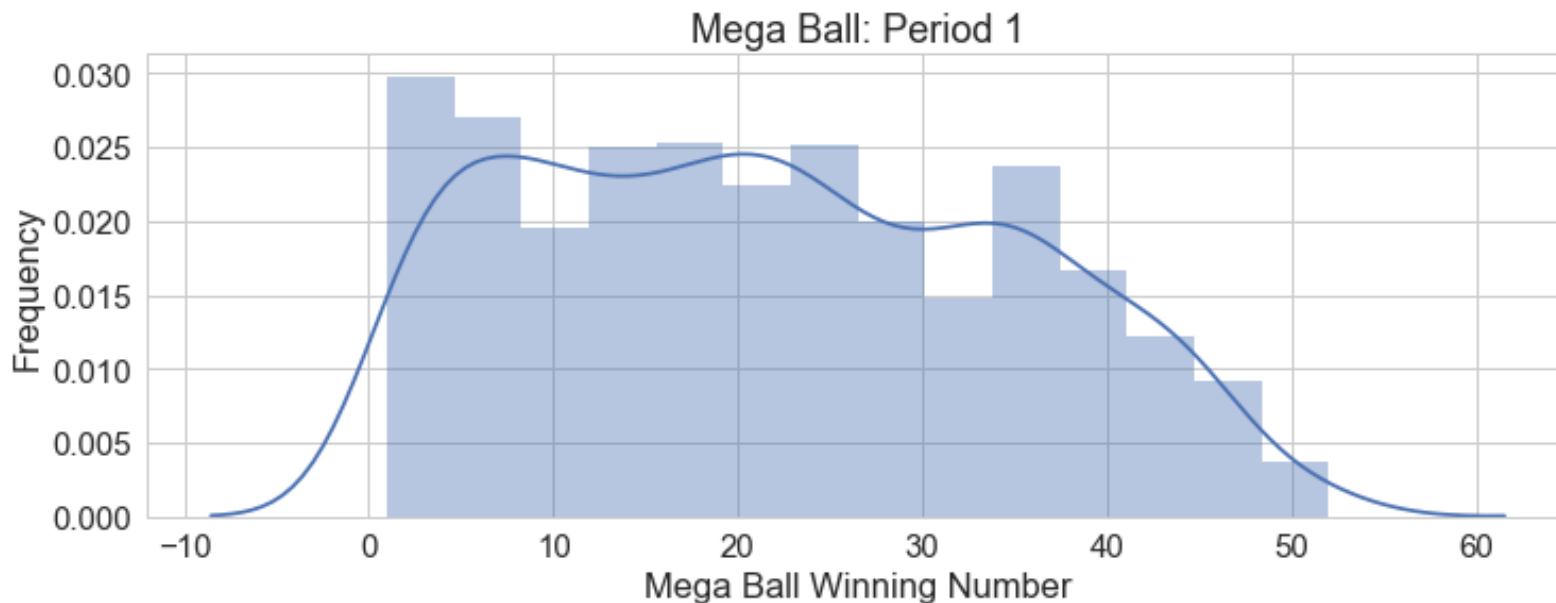
55 Drawings

Period 3: Actual Drawing



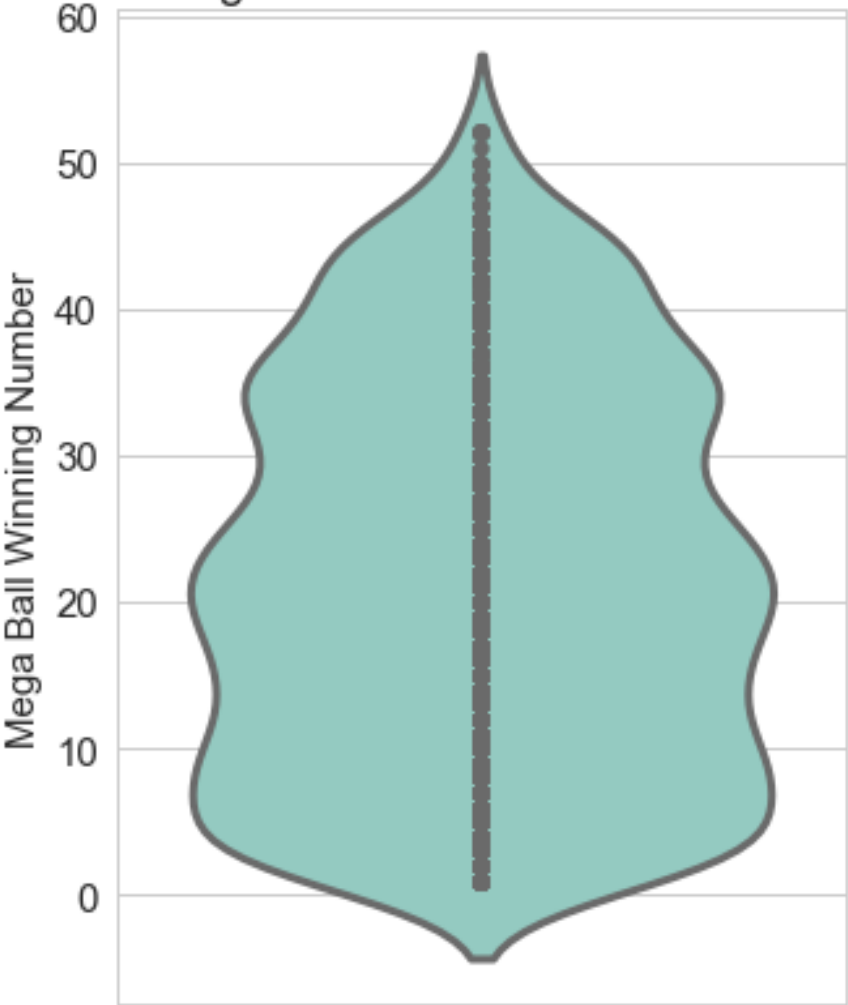
Mega Ball distribution is Period 1 is not uniform as would be expected.

Period 1 : Mega Ball Skewed to Lower Numbers

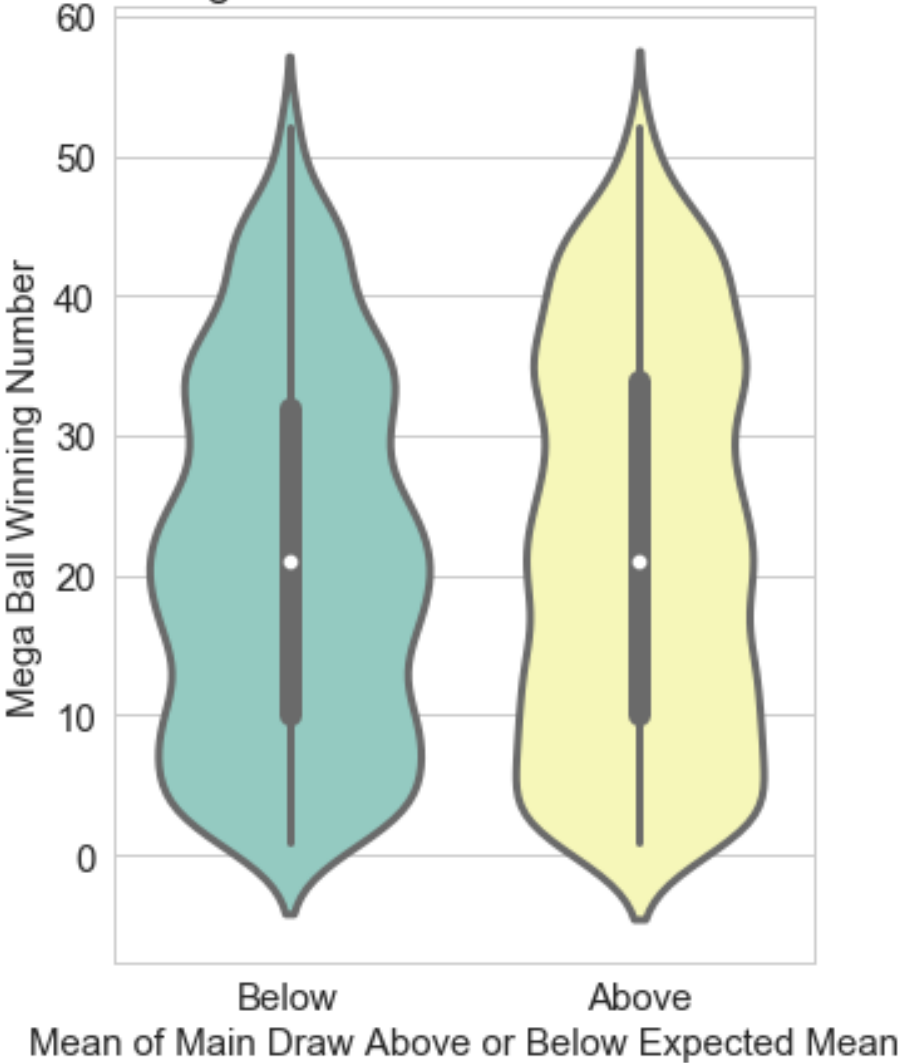


Period 1: Mega Ball Skewed to Lower Numbers

Mega Ball Violin Chart:Period 1

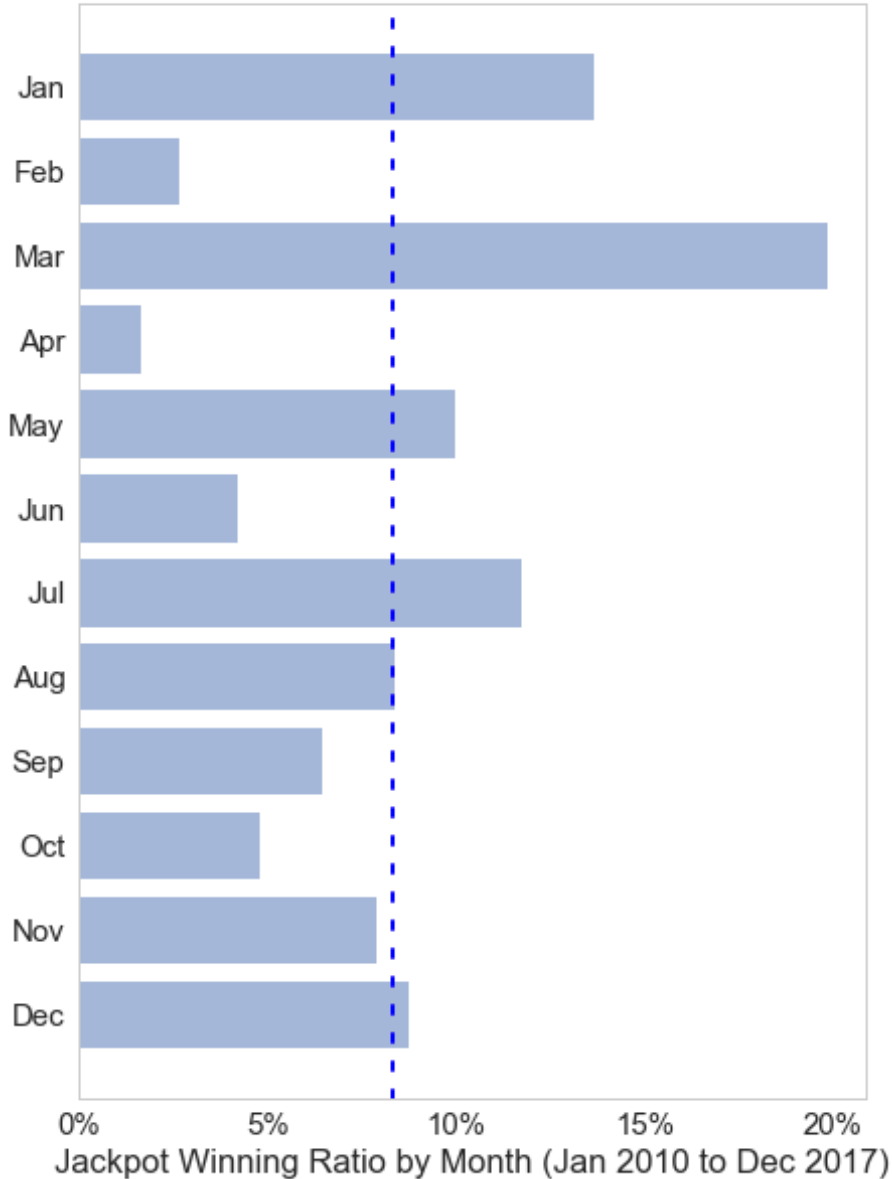


Mega Ball Violin Chart: Period 1

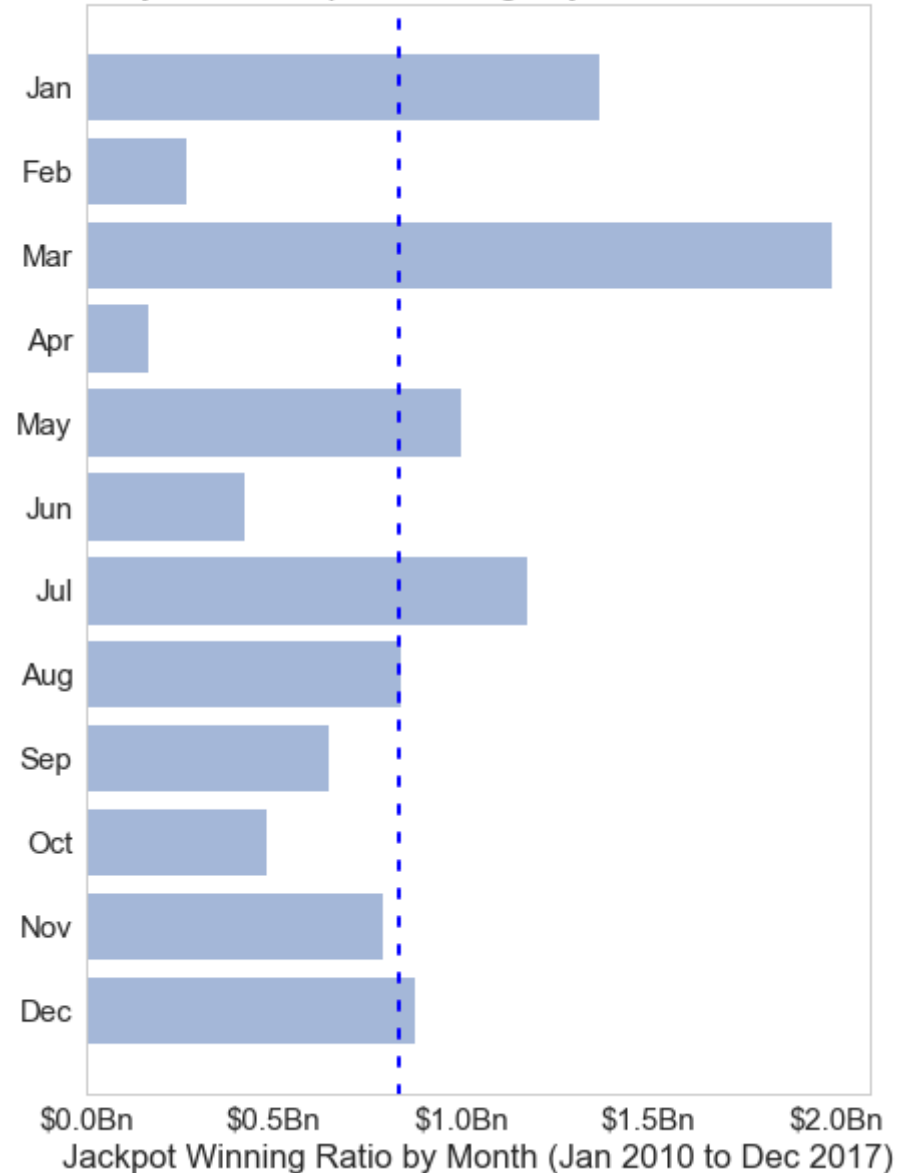


Jackpot Winnings by Month: 2010 to 2017

Analysis of Jackpot Winnings by Month Since 2010

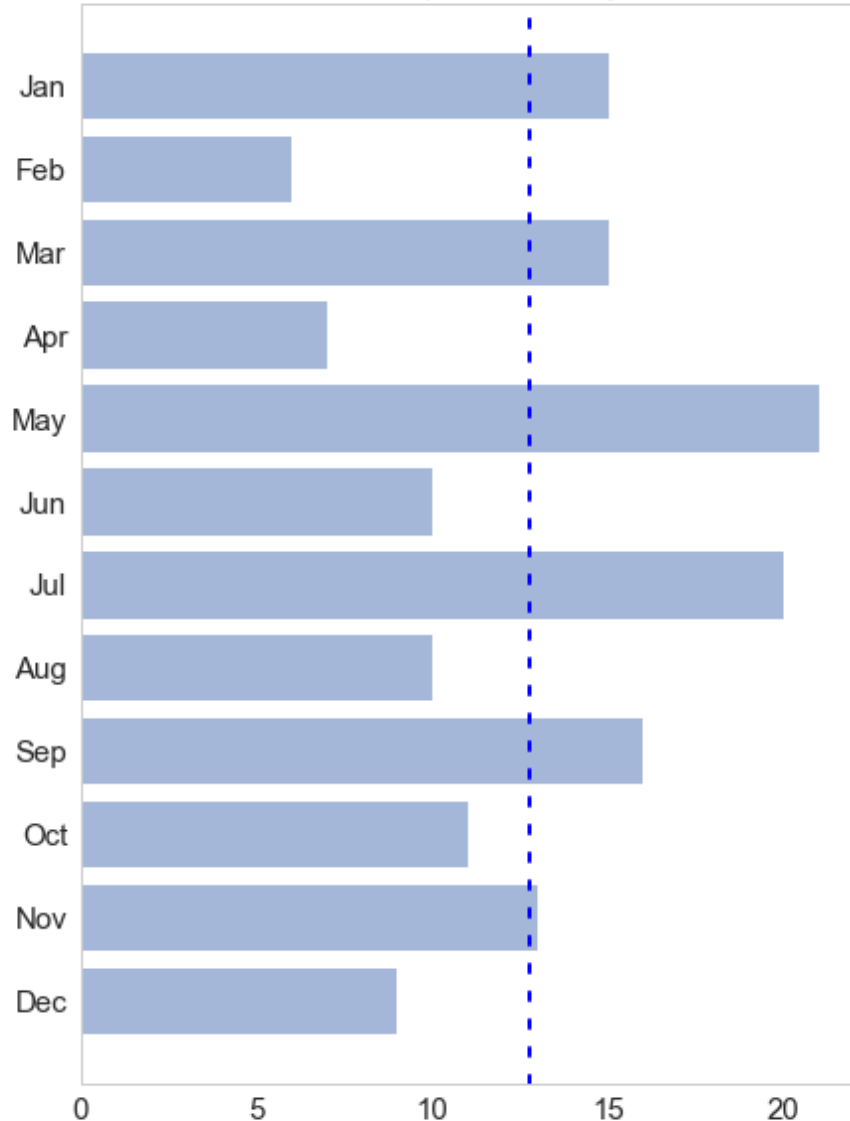


Analysis of Jackpot Winnings by Month Since 2010



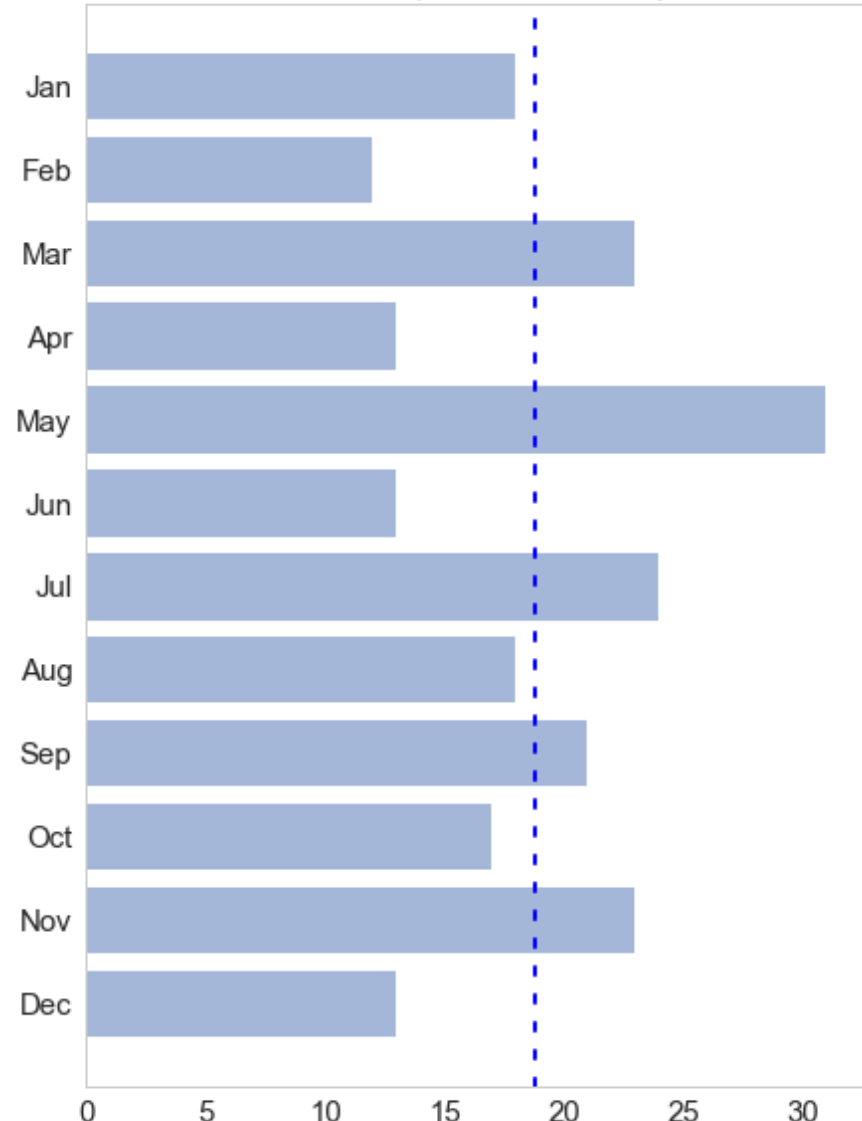
Jackpot Winnings by Month

Count of Jackpots Won by Month

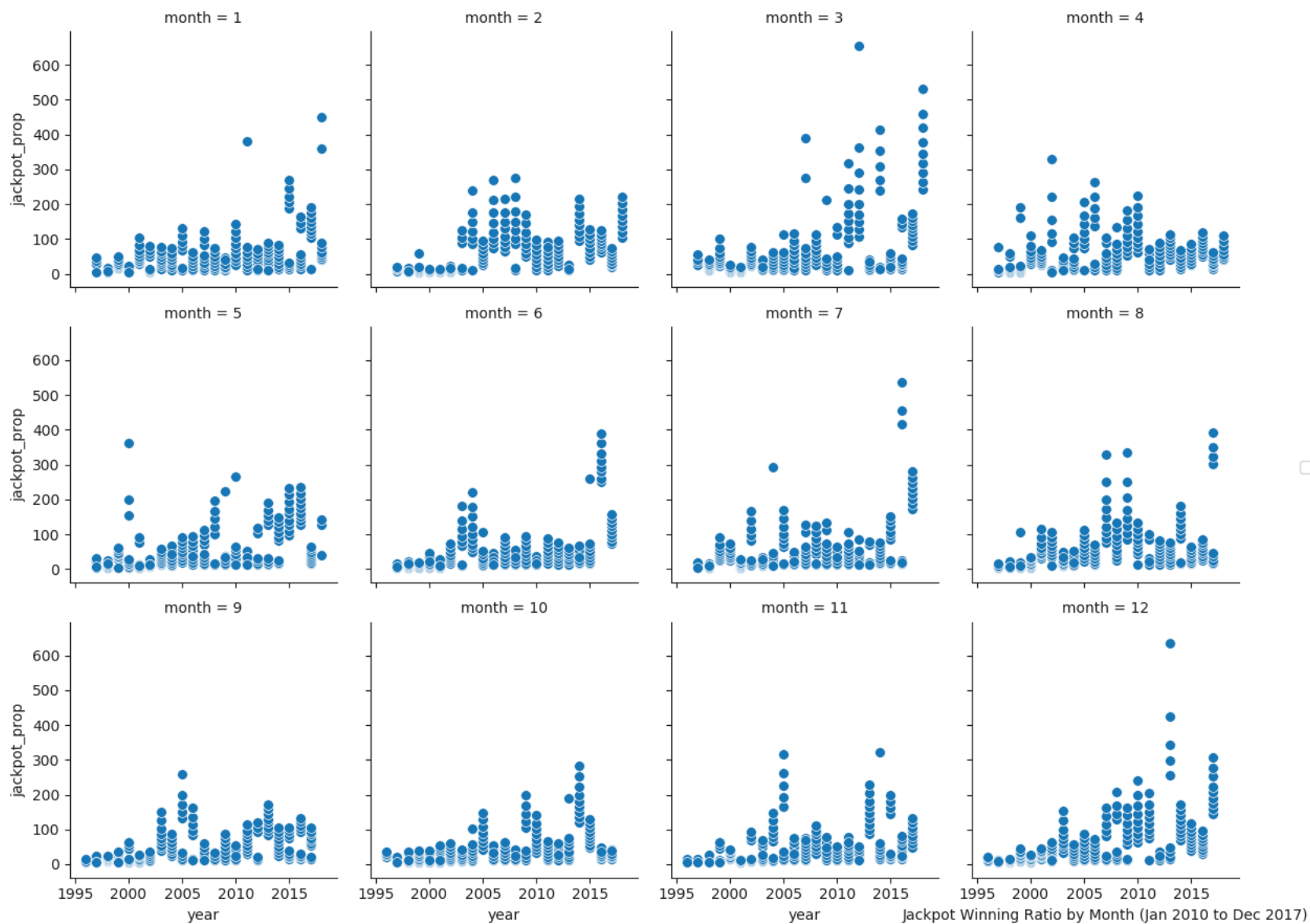


Count of Jackpots Won (excludes impact of multiple winning tickets)

Number of Jackpots Winners by Month

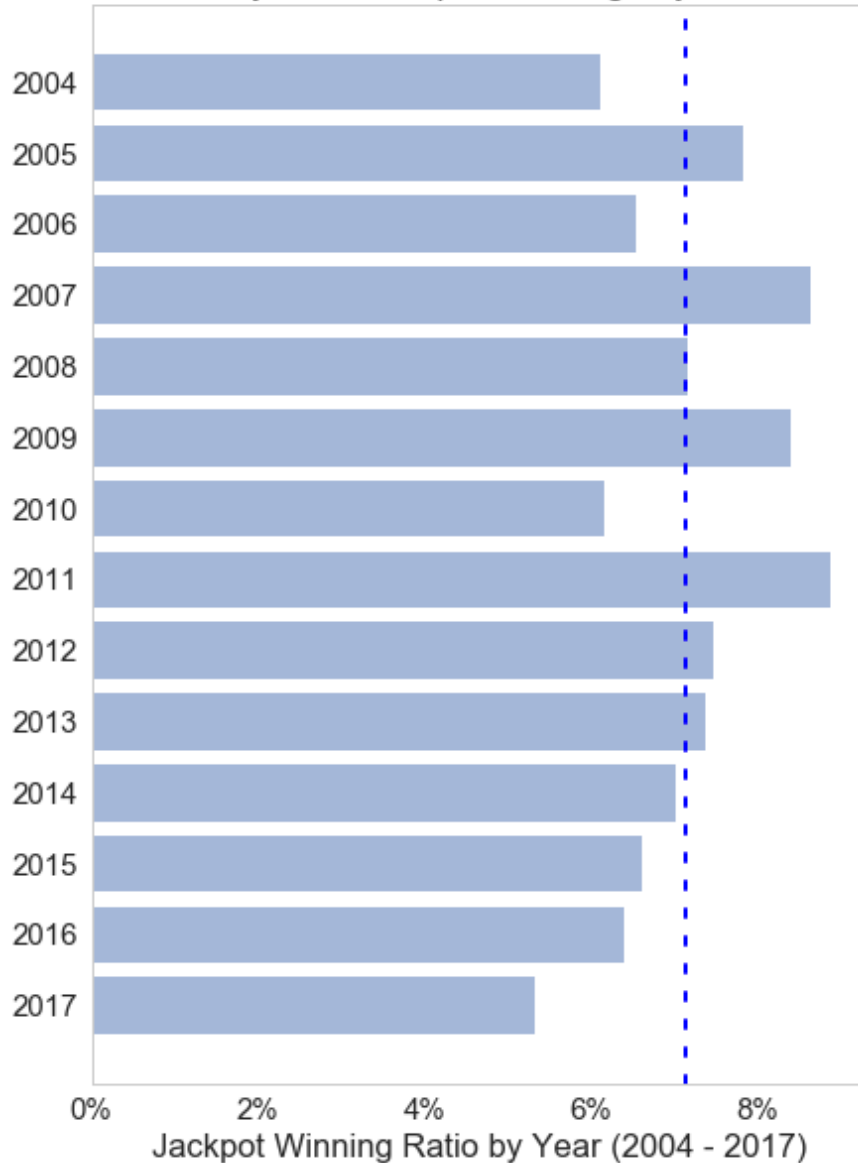


Number of Jackpot Winners (# of Winning Tickets)

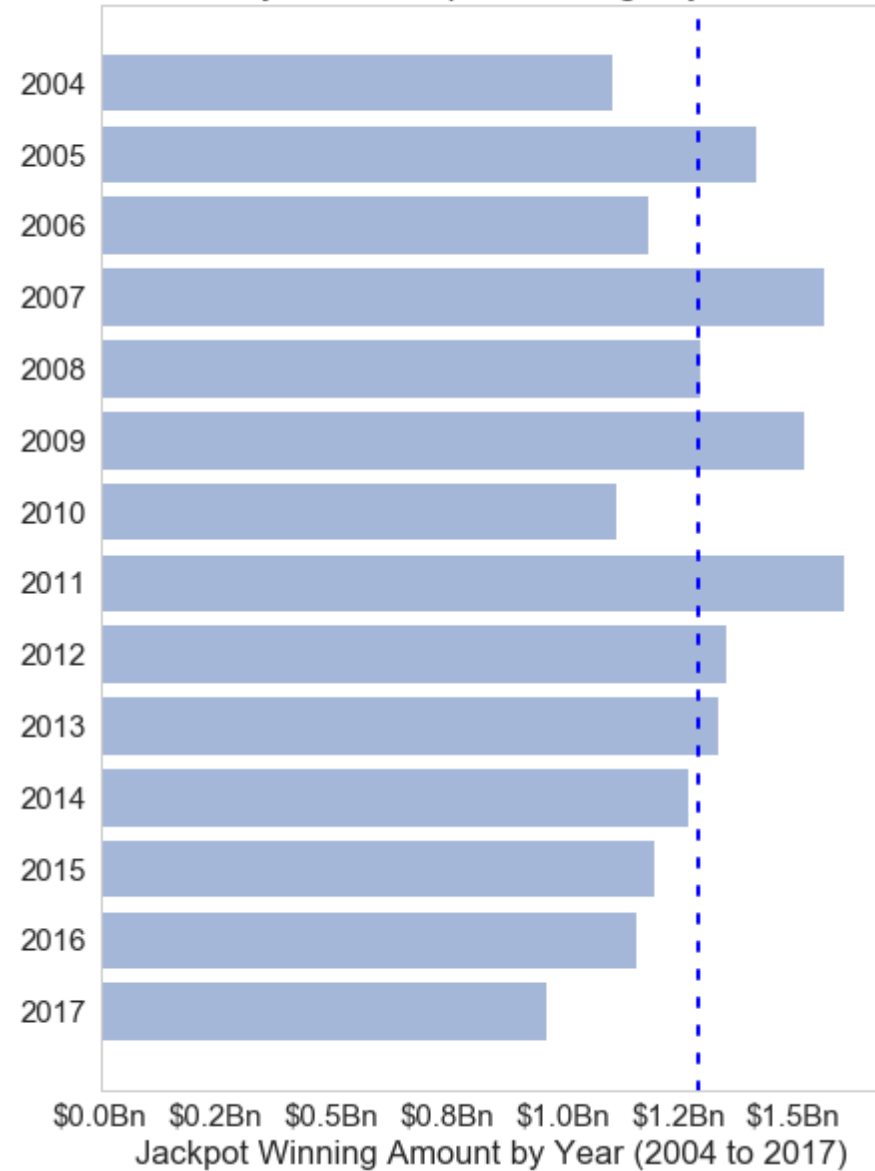


Jackpot Winnings by Year: 2004 to 2017

Analysis of Jackpot Winnings by Year

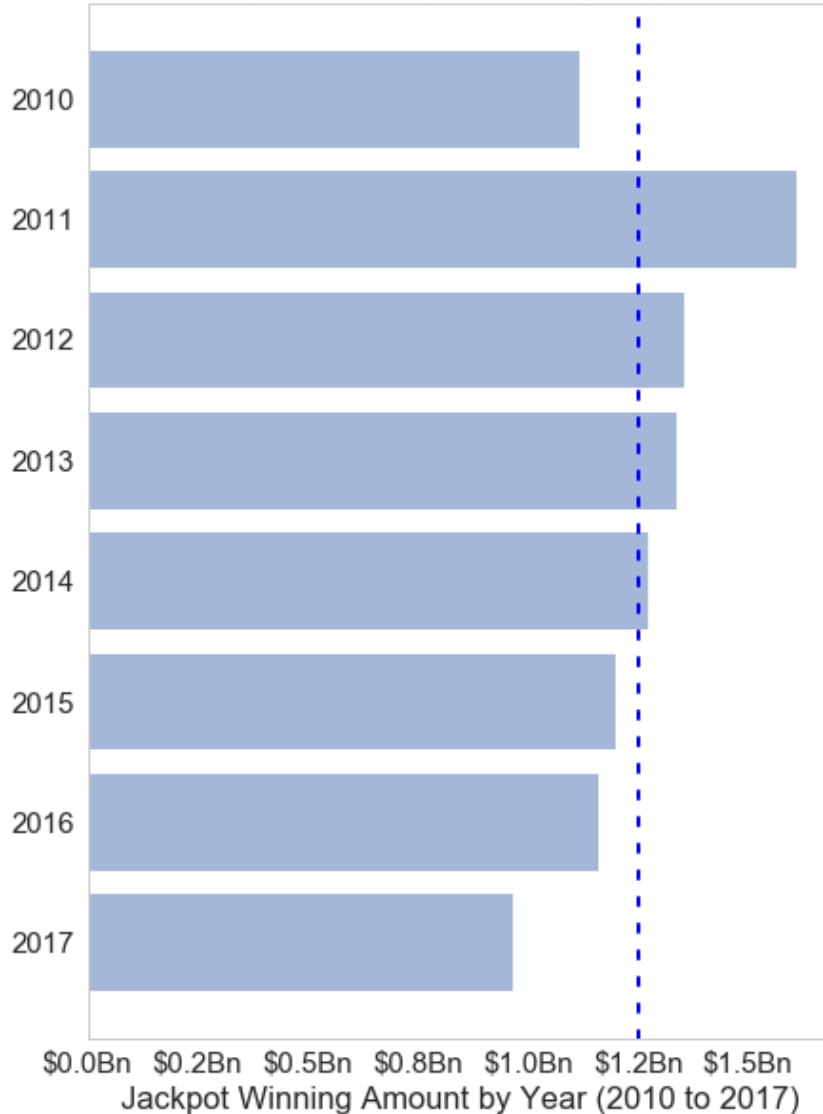


Analysis of Jackpot Winnings by Year

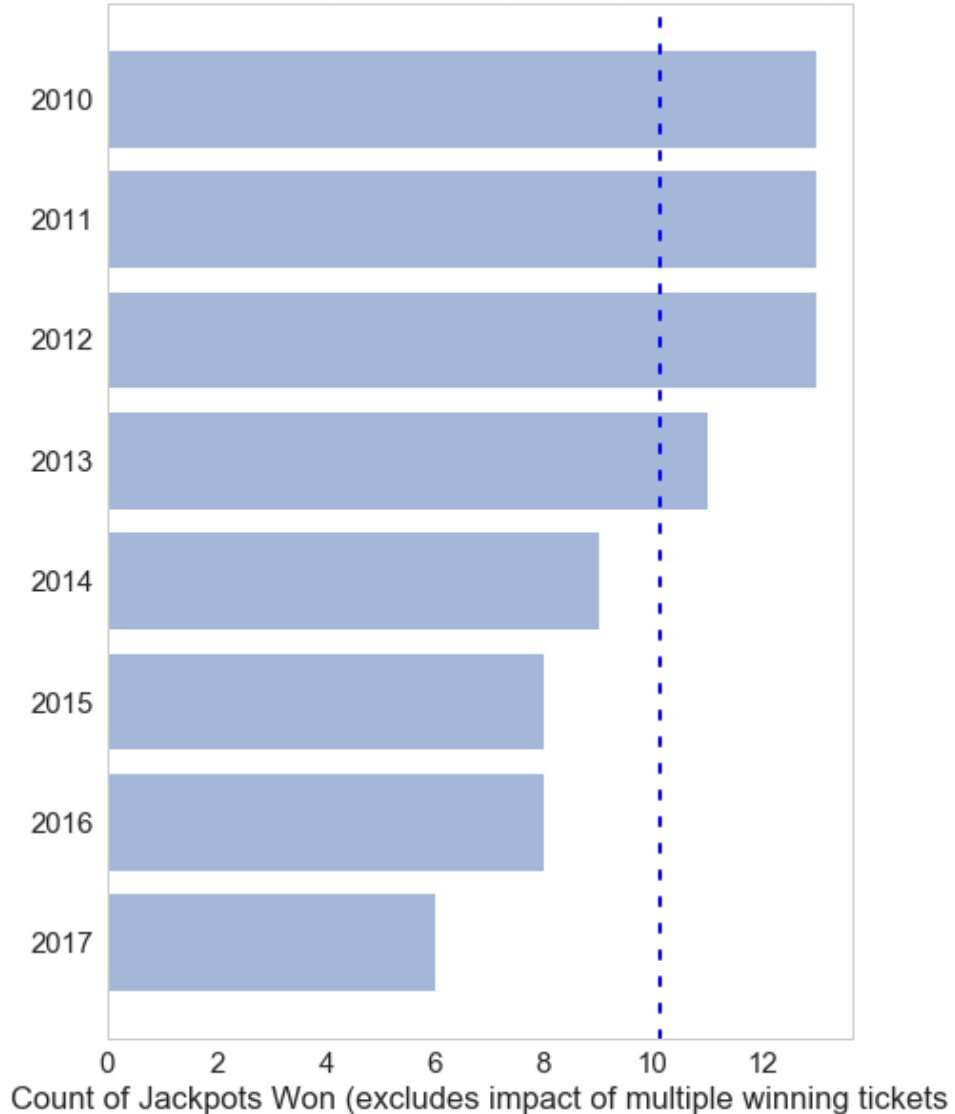


Jackpot Winnings by Year: 2010 to 2017

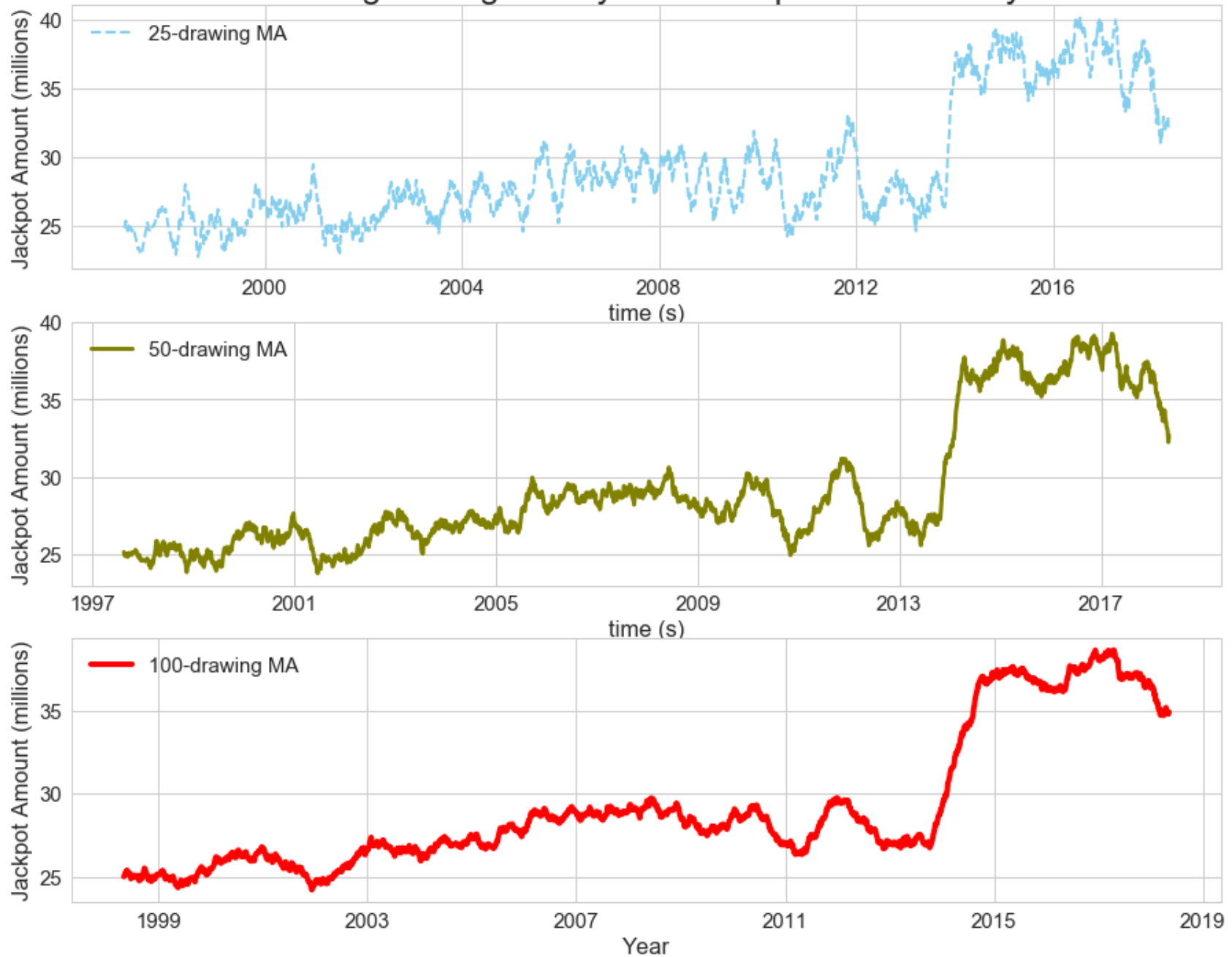
Analysis of Jackpot Winnings by Year



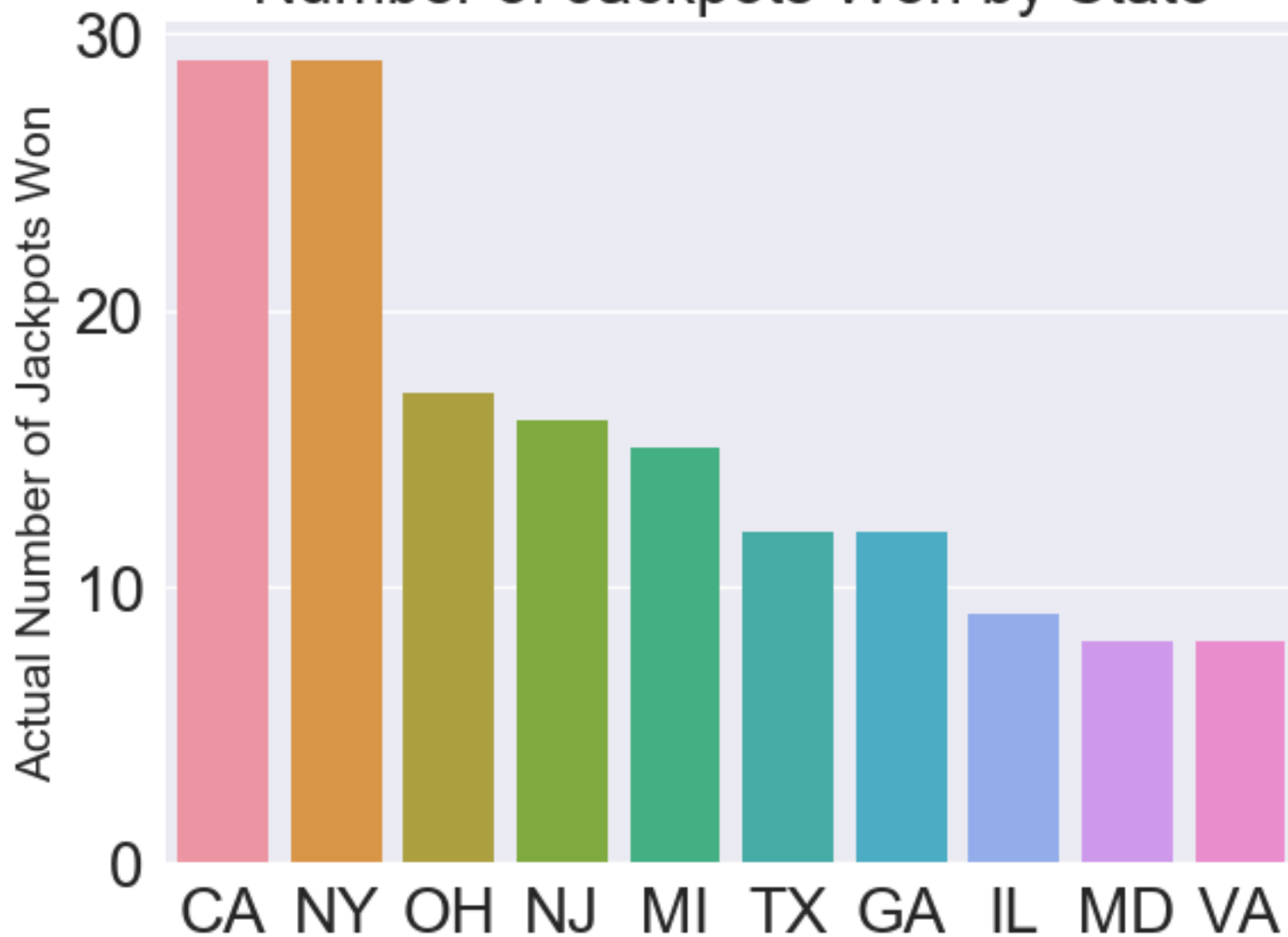
Count of Jackpots Won by Year (2010 to 2017)



Moving Average Analysis of Jackpot Prize Money



Number of Jackpots Won by State



Jackpot Win Count by State: Actual versus Expected

