# Quantifying How NBA Playoff Format Impacts Playoff Excitement

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**Abbreviated abstract:** The National Basketball Association has predominantly kept its same basic playoff format since 1984. Here, we explore two alternative playoff formats and quantify the expected excitement in game play across the playoffs. We consider format changes to include each conference's top 8 teams and playing a conference-less tournament, as well as, taking the top 16 teams in the NBA and playing a conference-less tournament. Using simulation, we found small to no differences in excitement between the three formats but continue to endorse the top 16 team system due its advantage in fairness to all teams.

#### **Related publications:**

- Tokarz D. How We Make the YUSAG Power Rankings. R: NBA Power Rankings. 2018 Mar 20.



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## **Motivation**

Deserving teams are often left out of postseason due to conference strength differences.

> Seeding Differences between Current and Top 16 Format



Would changing the playoff format result in a drastically **more or less** exciting postseason?

### Possible playoff formats

Current play: conference who's in: Top 8 West, Top 8 East

8W8E play: overall seeding who's in: Top 8 West, Top 8 East

**16TOT** play: overall seeding who's in: Top 16 NBA

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## Methods

#### 1) Model win probability for each game

- Using 2016/17 and 2017/18 game data and linear model, estimate expected point differential for an arbitrary matchup
- Model probability of a win based on expected point differential using logistic function

### 2) Simulate playoffs under different formats

• Generate 10,000 Monte Carlo simulations for each format for 2017/18 postseason

Metric	Description
Probability of game upset	Lower seed defeats higher seed
High likelihood of overtime	Win probability (.48, .52)
Probability of long series	Series goes to Game 6 or 7

#### 3) Quantify "excitement" under each format



# **Results and Conclusions**:



- Playoff format affects championship win probabilities
- No clear change in excitement across formats
- Slight changes to high overtime probability
- To improve fairness and remove imbalances in conference strength, **16TOT is recommended**





#### Limitations:

- Point differential ignores previous game results
- Few changes to the playoffs any given year under these formats

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