

# Baseball Sabermetrics Guide

## OPS (On-base Plus Slugging)

Definition: The sum of a player's On-Base Percentage (OBP) and Slugging Percentage (SLG).

Formula:  $OPS = OBP + SLG$

Interpretation:

- Below .700: Below Average
- .700 - .800: Average
- .800 - .900: Above Average
- .900+: All-Star Level
- 1.000+: MVP Level

OPS is a quick and easy way to measure a hitter's overall offensive production.

## ERA (Earned Run Average)

Definition: The average number of earned runs a pitcher gives up for every 9 innings pitched.

Formula:  $ERA = (Earned\ Runs / Innings\ Pitched) * 9$

Interpretation:

- Under 3.00: Excellent
- 3.00 - 4.00: Good to Average
- 4.00 - 5.00: Below Average
- Over 5.00: Poor

ERA is the standard measure of a pitcher's effectiveness, though it can be influenced by defense.

## FIP (Fielding Independent Pitching)

Definition: A metric that estimates a pitcher's ERA based only on events they control: strikeouts, walks

Formula:  $FIP = ((13*HR + 3*(BB+HBP) - 2*K) / IP) + Constant$

Interpretation: FIP is on the same scale as ERA.

- If  $FIP < ERA$ : The pitcher has been unlucky or has bad defense behind them.
- If  $FIP > ERA$ : The pitcher has been lucky or has great defense helping them.

FIP is often considered a better predictor of future performance than ERA.

## wRC+ (Weighted Runs Created Plus)

Definition: A comprehensive offensive statistic that measures runs created, adjusted for league and position.

Scale: 100 is always league average.

Interpretation:

- 100: League Average
- 80: 20% worse than average
- 120: 20% better than average
- 150: All-Star / MVP Candidate

wRC+ is widely regarded as the single best statistic for measuring a hitter's pure offensive value.

## WAR (Wins Above Replacement)

Definition: A summary statistic that attempts to calculate a player's total value to their team in terms of wins.

Interpretation (for a full season):

- 0-2 WAR: Reserve / Bench player
- 2-4 WAR: Solid Starter
- 4-6 WAR: All-Star
- 6+ WAR: MVP Candidate

WAR accounts for batting, fielding, and baserunning (for position players) or pitching (for pitchers).