

WAR Description

WAR is an acronym for Wins Above Replacement. It is an estimated value of a professional player's past performance. It is a statistical value to show how much affect the player has on the team's overall record. More specifically, it is a statistic to show how valuable the player is in the lineup or pitching rotation compared to a replacement level player (from minor leagues or the bench). Below is the Major League Baseball average WAR for different players performance.

Caliber	WAR
Replacement Level	0-1
Role Player	1-2
Solid Player	2-3
Good Player	3-4
All-Star	4-5
Super Star	5-6
MVP	6+

Fangraphs (Slowinski 2010)

Position players and pitchers have different formulas to calculating their WAR. Furthermore, there are several different ways to calculate WAR, but the numbers end up being the same. The formula below is from Fangraphs since I used Fangraphs WAR number in my project.

Position players WAR = (Batting runs + Base running runs + Fielding runs – Positional Adjustment – League Adjustment – Replacement Runs) / Runs Per Win

Position players WAR takes account for the production at the plate (batting runs), production on the bases (base running runs), production on the field as a field (fielding runs), difficulty of the position (positional adjustment), difficulty of the league by year (league adjustment), and the replacement player (replacement runs) divided by the total runs per win.

Pitcher WAR = [(((League "FIP" – "FIP") / Pitcher Specific Runs Per Win] + Replacement Level) * (IP/9)] * Leverage Multiplier for Relievers] + League Correction

Pitchers WAR takes account for events pitcher has the most control over (FIP), the role of the pitcher (leverage multiplier for relievers), replacement player (replacement level), difficulty of the league by year (league adjustment) and divide by the total runs given up per win by nine innings.