

Possession by Possession Fundamentalism: Offensive Conversion and the Distribution of Player Value

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Abstract

Possessions are a scarce, finite resource, and thus player value must be derived from the cumulative margin added within and across each possession played. This note measures the value of each of the eight additive components of Adjusted Regularized Contribution (ARC) across the distribution of NBA players from 2012–13 to 2025–26.

ARC			
Shot value		Possession value	
<i>Conversion</i>	<i>Selection</i>	<i>Generation</i>	<i>Retention</i>
Offensive conversion	Offensive shot selection	Offensive rebounds	Ball security
Defensive conversion	Defensive shot selection	Forced turnovers	Defensive rebounds

Offensive conversion is the cumulative, quantified impact a player has on how effectively their team converts its shots above their expected value, measured in points of team margin per 100 possessions relative to the league-average possession. This includes tangible effects, such as their own shot conversion, as well as more latent effects, such as spacing, playmaking, and screening.

It is, by a substantial margin, the single most impactful skill a player can have.

A 98th-percentile converter adds approximately 6 points per 100 possessions, more than double the peak value of any other quantified, decomposed skill.

A median converter would need to rank near the 90th percentile in all seven other parts to match the value of a 98th-percentile converter.

Table 1. Value of each ARC component by percentile (points per 100 possessions)

Component	50th	75th	90th	98th	90th to 98th	Equivalent offensive conversion percentile
Offensive conversion	+0.08	+1.33	+2.91	+5.75	+2.83	98th
Defensive conversion	+0.10	+0.83	+1.44	+2.32	+0.88	86th
Offensive shot selection	+0.03	+0.47	+0.95	+2.11	+1.16	84th
Offensive rebounds	−0.06	+0.32	+0.78	+1.51	+0.73	77th
Forced turnovers	−0.02	+0.42	+0.87	+1.40	+0.53	76th
Ball security	+0.02	+0.39	+0.82	+1.33	+0.51	75th
Defensive shot selection	+0.02	+0.30	+0.62	+1.16	+0.54	71st
Defensive rebounds	+0.00	+0.23	+0.47	+0.78	+0.31	64th
<i>Rim defense*</i>	<i>+0.01</i>	<i>+0.40</i>	<i>+0.77</i>	<i>+1.33</i>	<i>+0.56</i>	<i>75th</i>
ARC (sum of components)	+0.35	+2.17	+4.34	+9.01	+4.68	

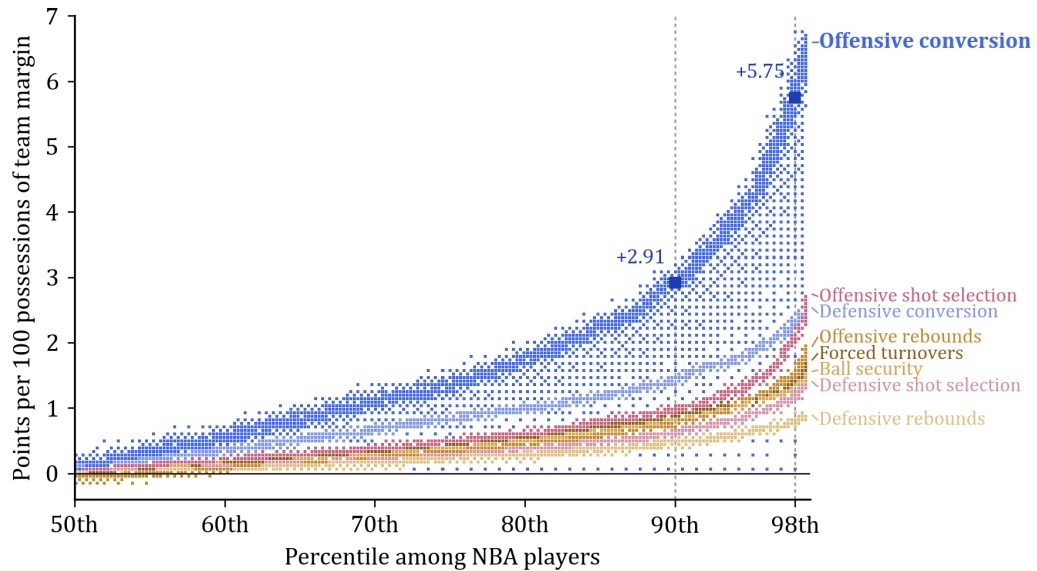
Two-year ARC windows, 2012-13 to 2025-26, players with at least 3,000 possessions (n = 2,108); the eight components sum to ARC. Final column: the offensive-conversion percentile equal in value to the component's 98th percentile. *Opponent rim-attempt rate and rim finishing on the floor; part of defensive conversion and shot selection, shown for reference.

Table 2. An elite converter against two broadly skilled players

Component	Stephen Curry	Ausar Thompson	Dyson Daniels
ARC	+5.79 98th	+3.82 95th	+4.94 97th
Offensive conversion	+6.67 100th	-1.02 37th	+1.18 83rd
Offensive shot selection	+0.57 89th	+0.57 89th	-0.14 40th
Offensive rebounds	-0.56 19th	+0.95 89th	-0.28 29th
Ball security	+0.34 79th	-0.24 43rd	+0.44 83rd
Defensive conversion	-1.09 16th	+1.36 89th	+1.39 91st
Defensive shot selection	-0.07 50th	+0.60 94th	+0.34 85th
Defensive rebounds	-0.12 38th	-0.07 42nd	+0.06 57th
Forced turnovers	+0.05 57th	+1.67 98th	+1.94 99th
Other seven components	-0.88 31st	+4.84 100th	+3.76 96th

Two-year ARC ending 2025-26, points per 100 possessions of team margin; percentiles in small type (the seven-component sum is ranked among the 262 players with at least 3,000 possessions). “Other seven components” is ARC minus offensive conversion.

Figure 1. Value of each ARC decomposition by percentile



Points per 100 possessions of team margin. Two-year ARC windows ending 2012-13 to 2025-26, players with at least 3,000 possessions (n = 2,108).

Table 3. Percentile a median converter must reach in all seven other components to equal an elite converter

Reference player	ARC	Required percentile, all seven other components
98th in offensive conversion, 50th in all others	+5.84	89th
98th in offensive conversion, 40th in all others	+4.82	85th
98th in offensive conversion, 20th in all others	+2.51	71st
90th in offensive conversion, 50th in all others	+3.00	75th

A median converter ranks at the 50th percentile in offensive conversion. Each row reports the single percentile such a player must reach in all seven remaining components simultaneously for their ARC to equal that of the reference player. Same sample as Table 1; the 98th percentile of offensive conversion is +5.75, against a maximum of +2.32 for any other component at the 98th percentile.

Table 4. Association between prior-season roster component value and team wins, 2005-06 to 2025-26

Component	Correlation with wins	Win difference, top versus bottom quintile
Offensive conversion	.55	+19.0
Defensive conversion	.36	+12.9
Ball security	.36	+12.2
Defensive shot selection	.38	+12.0
Forced turnovers	.32	+11.3
Offensive shot selection	.27	+8.0
Defensive rebounds	.03	+2.6
Offensive rebounds	-.17	-6.6

630 team-seasons. Each roster's component value is the possession-weighted sum of its players' one-year ARC values from the preceding season, weighted by possessions in the season observed; players without a preceding season enter at zero. Quintiles rank team-seasons on that roster value. The negative estimate for offensive rebounds is consistent with a profile effect: rosters that recover more of their own misses also tend to miss more.

Table 5. The singular offensive conversion archetype, by level, 2025–26

Level	Player	Offensive conversion	Other seven components	Shot-load share	ARC
Tier 1	Stephen Curry	+6.67 100th	−0.88 31st	30%	+5.79 98th
	Kevin Durant	+6.30 99th	−2.36 11th	27%	+3.94 95th
Tier 2	Jamal Murray	+4.46 98th	−2.17 11th	26%	+2.29 87th
	Devin Booker	+4.21 98th	−0.10 47th	30%	+4.11 95th
	Jalen Brunson	+3.49 97th	−2.16 12th	30%	+1.33 79th
	Anthony Edwards	+3.47 97th	−0.12 46th	31%	+3.35 92nd
	DeMar DeRozan	+3.30 96th	−3.34 4th	25%	−0.04 59th
Tier 3	Kon Knueppel	+3.23 96th	−0.36 42nd	22%	+2.87 90th
	Karl-Anthony Towns	+3.10 95th	+0.31 54th	26%	+3.41 93rd
	LaMelo Ball	+3.10 95th	−0.54 36th	33%	+2.56 88th
	Tyler Herro	+3.10 95th	−2.98 6th	27%	+0.12 63rd

Two-year ARC ending 2025–26, players with at least 3,000 possessions (n = 262): offensive conversion at the 95th percentile or higher, the other seven components combined at or below the 60th percentile, and at least 22% of their team’s shot load while on the floor (2024–25 and 2025–26, possession-weighted). Tier 1: 99th–100th percentile in offensive conversion; Tier 2: 97th–98th; Tier 3: 95th–96th.

Table 6. Possession maxers and ancillary warriors, 2025–26

Type	Player	Other seven components	Possession value	Offensive conversion	ARC
Possession maxer	Ausar Thompson	+4.84 100th	+2.31 97th	−1.02 37th	+3.82 95th
Possession maxer	Alex Caruso	+4.65 99th	+2.13 97th	−1.38 26th	+3.27 92nd
Ancillary warrior	Amen Thompson	+4.07 98th	+1.93 95th	+0.73 77th	+4.80 97th
Ancillary warrior	Lauri Markkanen	+3.81 97th	+1.55 91st	+1.21 84th	+5.02 97th
Ancillary warrior	Dyson Daniels	+3.76 96th	+2.16 97th	+1.18 83rd	+4.94 97th
Possession maxer	Moussa Diabaté	+3.60 95th	+3.90 100th	−0.01 63rd	+3.59 93rd
Possession maxer	Clint Capela	+3.58 95th	+1.95 96th	−2.23 11th	+1.35 80th
Ancillary warrior	Miles McBride	+3.53 94th	+2.41 98th	−1.17 33rd	+2.36 88th
Ancillary warrior	Tyrese Maxey	+3.35 94th	+1.74 94th	+0.94 79th	+4.29 96th
Ancillary warrior	Marcus Smart	+3.33 94th	+1.23 85th	−0.26 58th	+3.07 91st
Possession maxer	Bam Adebayo	+3.16 92nd	+2.95 99th	+1.31 85th	+4.47 97th
Ancillary warrior	Scottie Barnes	+3.07 92nd	+1.45 90th	−0.47 54th	+2.60 88th

Same sample and units as Table 5: offensive conversion below the 90th percentile, the other seven components combined at the 90th percentile or higher, ordered by that sum. Players whose value is mostly defensive conversion and defensive shot selection (more than 60% of their positive value; e.g. Rudy Gobert, Jaren Jackson Jr.) are a singular defensive type and are excluded. Possession maxer: 95th percentile or higher in possession generation (offensive rebounds and forced turnovers) or 99th or higher in possession value; ancillary warrior: the rest.

Table 7. The ten best offensive converters, 2025–26

Player	Offensive conversion	Other seven components	ARC
1. Shai Gilgeous-Alexander	+8.86 100th	+4.05 97th	+12.91 100th
2. Nikola Jokić	+7.99 100th	+4.06 97th	+12.05 100th
3. Stephen Curry	+6.67 100th	−0.88 31st	+5.79 98th
4. Kawhi Leonard	+6.39 99th	+4.47 99th	+10.86 100th
5. Kevin Durant	+6.30 99th	−2.36 11th	+3.94 95th
6. Giannis Antetokounmpo	+6.03 99th	+4.17 98th	+10.20 99th
7. Luka Dončić	+5.89 99th	+2.11 85th	+8.00 99th
8. Jamal Murray	+4.46 98th	−2.17 11th	+2.29 87th
9. Devin Booker	+4.21 98th	−0.10 47th	+4.11 95th
10. Donovan Mitchell	+4.16 98th	+1.69 79th	+5.85 98th

Two-year ARC ending 2025–26, players with at least 3,000 possessions (n = 262); points per 100 possessions of team margin. Percentiles in small type: league percentile for offensive conversion and ARC; for the seven-component sum, percentile among the same sample.

Table 8. The ten best players in the seven components other than offensive conversion, 2025–26

Player	Offensive conversion	Other seven components	ARC
1. Victor Wembanyama	+3.62 97th	+6.72 100th	+10.34 99th
2. Ausar Thompson	−1.02 37th	+4.84 100th	+3.82 95th
3. Alex Caruso	−1.38 26th	+4.65 99th	+3.27 92nd
4. Kawhi Leonard	+6.39 99th	+4.47 99th	+10.86 100th
5. Rudy Gobert	−2.62 7th	+4.17 98th	+1.55 83rd
6. Giannis Antetokounmpo	+6.03 99th	+4.17 98th	+10.20 99th
7. Amen Thompson	+0.73 77th	+4.07 98th	+4.80 97th
8. Nikola Jokić	+7.99 100th	+4.06 97th	+12.05 100th
9. Shai Gilgeous-Alexander	+8.86 100th	+4.05 97th	+12.91 100th
10. Lauri Markkanen	+1.21 84th	+3.81 97th	+5.02 97th

Same sample and units as Table 7. The seven components are offensive shot selection, offensive rebounds, ball security, defensive conversion, defensive shot selection, defensive rebounds and forced turnovers, summed.

Table 9. A conversion-dependent scorer against the league’s leading possession gainer

Component	Kevin Durant	Moussa Diabaté
ARC	+3.94 95th	+3.59 93rd
Offensive conversion	+6.30 99th	−0.01 63rd
Offensive shot selection	−0.60 11th	−0.20 35th
Offensive rebounds	−1.06 4th	+2.72 100th
Ball security	−0.33 35th	−0.09 53rd
Defensive conversion	−0.27 42nd	+0.40 65th
Defensive shot selection	−0.10 46th	−0.50 9th
Defensive rebounds	+0.52 91st	+0.24 72nd
Forced turnovers	−0.51 23rd	+1.04 93rd
Other seven components	−2.36 11th	+3.60 95th

Two-year ARC ending 2025–26, points per 100 possessions of team margin; percentiles in small type (the seven-component sum is ranked among the 262 players with at least 3,000 possessions). “Other seven components” is ARC minus offensive conversion.

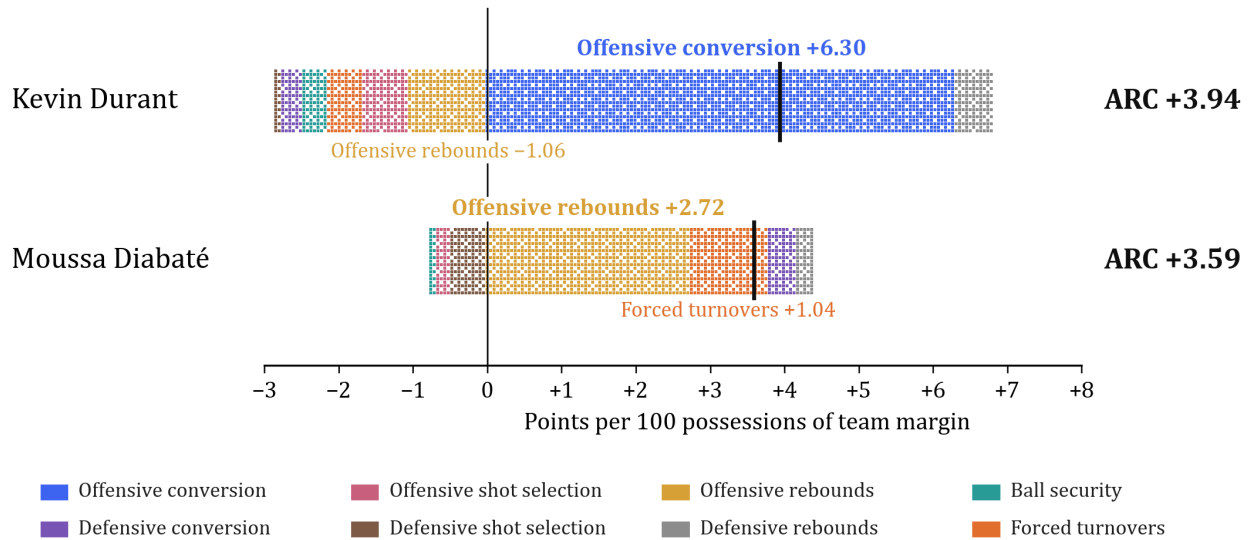


Figure 2. ARC by component for Kevin Durant and Moussa Diabaté, two-year ARC ending 2025–26, in points per 100 possessions of team margin. Components right of zero add to ARC and components left of zero subtract from it; the black mark is ARC. Values for every component are reported in Table 9.