

“The Four Factors behind a good offensive rating”

Euromillions Basketball League *Pascal Meurs* *1/3/2017*

This report handles another¹ closer look on the Belgian League from a coach’s point of view. More specifically, I want to use advanced basketball stats to find the crucial factors behind the best and worst offensive teams in the League. All calculations are based on the traditional stats of the Euromillions Basketball League website.

Here’s the official overall ranking (after 21 of 36 rounds played):

Rank	TEAM	PTS	ORtg	DRtg	NetRtg
1	OOS	38	117,1	103,2	13,9
2	ANT	35	111,6	105,1	6,5
3	AAL	32	113,5	109,6	3,9
	LIM	32	110,0	107,7	2,3
	CHA	32	109,5	109,3	0,2
	WIL	32	112,7	112,5	0,2
	BXL	32	109,7	109,5	0,1
8	MON	29	105,5	108,7	-3,2
9	LEU	27	101,1	112,8	-11,7
10	LIE	26	97,6	108,4	-10,8

Offensive Rating
(ORtg) = points scored per 100 possessions

Defensive Rating
(DRtg) = points allowed per 100 possessions

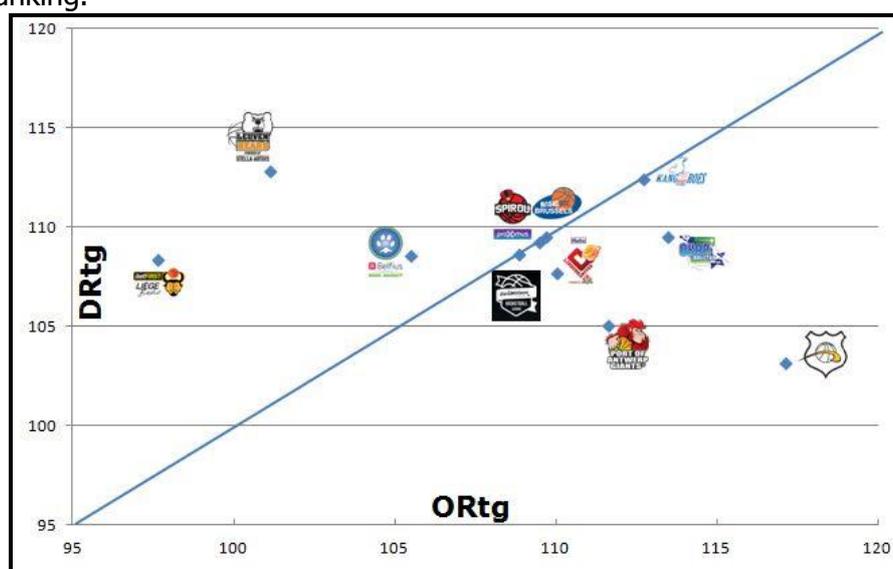
Net Rating (NetRtg) =
ORtg - DRtg

Ranking of the Euromillions Basketball League on 1/3/2017

The ranking can be divided into three groups:

Oostende and Antwerp on top, followed by *Aalstar, Limburg, Charleroi, Willebroek and Brussels* all tied on the 3rd spot, and *Mons, Leuven and Liege* at the bottom of the ranking at this point.

These colors will be used consistently throughout this text to indicate a team’s position in this early ranking.



¹ [“Analysis of the first part of the Euromillions Basketball League”](#) – Nov 2016, P. Meurs

To break down the performances of all teams on the offensive and defensive end, I calculated the so-called *Offensive Rating* (ORtg = points scored on 100 possessions) and *Defensive Rating* (DRtg = points allowed on 100 possessions). The *Net Rating* (NetRtg) is the difference between ORtg and DRtg.

These ratings are far more correct numbers to analyze rather than just to look at the points scored and points allowed since it levels out the pace of the game. Some teams play a significantly faster pace than others, which results in more *points made* and more *points allowed*, but this does not mean that they attack better or defend worse than slow playing teams.

These ratings for all teams of the Euromillions League after 21 (out of 36) rounds can be found on page 1 in a table or in the graphics. It may not surprise that Oostende has the best offense and defense of the League. Together with Antwerp they can present a net rating of 6 points or more over 100 possessions. The exceptional situation where 5 teams (out of 10) are all tied at the 3rd spot of the general standings is reflected in a net rating for all 5 teams between 0 and 4. The three remaining teams Mons, Leuven (worst defense of the league) and Liege (only team with an ORtg below 100) are the only teams with a negative net rating.

The graphics on page 1 show clearly where every team creates its edge, in defense rather than in offense. For example, Willebroek is a team with a high ORtg (3rd), but this is countered by the second worst DRtg of the League. Antwerp is ranked 4th in offense, but has the 2nd best defense of the championship.

In the remainder of this analysis, I will focus on the **secrets behind the offensive ratings**. Having a better "offensive system", what does it mean? How can you recognize it? Too often, verbals like a "*solid offensive system*" are very trendy to use, but where should you focus on as a coach? I will discuss the four crucial parameters behind a solid offense and compare the performances of all teams in those aspects to the general standings.

1. Free throw factor

Rank	TEAM	FT/FGA
1	OOS	0,41
2	ANT	0,39
3	CHA	0,31
4	LIM	0,30
5	AAL	0,29
6	LIE	0,28
7	WIL	0,27
	BXL	0,27
	LEU	0,27
10	MON	0,26

Except for an open lay-up, a free throw is the highest percentage shot in a basketball game. Besides this fact, the number of free throws provoked by a team, says a lot about the playing style. For example, a team with a bad shot selection that gambles too easily on contested three point shots, will create very little opportunities at the charity stripe. Although some fans will certainly see a conspiracy theory in it, the number of free throws tells a lot about the aggressivity in offense.

To compare all the teams, I've calculated the number of free throws provoked for every field goal attempt (FT/FGA):

FT/FGA = Number of free throws provoked for every field goal attempt

It is clear that the two top teams, Oostende and Antwerp, create an edge here over all other teams. We can generally say that these two teams create up to 30% more free throws than their opponents, which is certainly one of the keys to their succes!

2. Offensive rebound percentage ORB%

It is well-known that rebounding is a crucial part of the game of basketball, which heavily weighs on the results of a team. However, I will not focus on the absolute number of rebounds. *If we watch a game between two teams with a big difference between the field goals percentage, one of both teams has a lot more opportunities to take a defensive rebound.* Therefore, we will calculate the percentage of rebounds a team took out of all missed field goals.

Since we're focusing on the offensive rating, I've calculated the percentage of rebounds every team took on the offensive end out of their missed shots:

Rank	TEAM	ORB%
1	OOS	31,1
2	LEU	29,6
3	WIL	29,1
4	ANT	27,0
5	LIM	26,6
6	CHA	26,4
7	BXL	25,8
8	MON	25,1
9	AAL	24,0
10	LIE	23,5

ORB% = *Offensive rebound percentage is the percentage of available offensive rebounds a team grabbed*

Not only creates an offensive rebound an extra possession, very often it creates a high percentage field goal and it takes away a transition play for the other team. It may not be a surprise that the leader (Oostende) and the red lantern (Liege) are also first and last in this aspect of the game, which underlines its importance. Remarkable is the high ranking for Leuven (while their rebounding on the defensive end is far from the same level, which I discussed earlier) and the opposite goes for Aalstar.

3. (Effective) Field Goal percentage eFG%

The teams with the best offensive rating make their shots at a higher percentage than other teams, right? Of course, but it is a bad idea just to compare the overall field goal percentage between teams. For a shot behind the arc, you get rewarded with one extra point compared to a closer shot. So a team that relies heavily on three point shots, may have a lower field goal percentage, but still be more effective!

When discussing *in-game shots* of a team over the long run, a field goal percentage says a lot more about decision making than about the fact that better players have a better shooting technique and make more shots. Good teams that are well coached create from their playbook high percentage opportunities and share the ball till they find the open player! I've calculated that in the League, thus far, all teams combine for *1,09 points per possession (PPP)*. On average, a team scores 1,09 points from every possession. Therefore, we can say that a shot from behind the arc is a good decision whenever you make it against at least 36,3%. A two-point opportunity is an *above-average field goal* when you make it at 54,5%.

This simple calculus is the foundation of the modern playing style in which teams explicitly look for lay-ups in the paint OR three point shots. Everything in between (mid-range) has to be avoided because it is a low-percentage shot. The Houston Rockets in the NBA are currently the exponent of this playing style.

To take into account the difference between a three-point and a two-point shot, we can compare the decision making on the offensive end by calculating the Effective Field Goal Percentage eFG%:

Rank	TEAM	eFG%
1	WIL	55,6%
2	OOS	55,5%
3	AAL	55,0%
4	LIM	54,8%
5	ANT	54,4%
6	CHA	53,9%
7	BXL	52,3%
8	MON	50,4%
9	LEU	50,2%
10	LIE	48,5%

$$eFG\% = (2PM + 1,5\ 3PM) / (2PA + 3PA)$$

Here we see that the top 5 teams all have an eFG% within 1%. More clearly, we see that the three weakest teams in the standings have an eFG% which is significantly lower than all other teams. Bad decision making and not being able to develop their offensive game against the pressure of better teams are certainly important factors.

4. Turnover percentage TOV%

Rank	TEAM	TOV%
1	BXL	13
2	AAL	14
3	WIL	14
4	MON	14
5	OOS	15
6	CHA	15
7	ANT	16
8	LIE	16
9	LIM	17
10	LEU	17

The last crucial parameter to a good offensive rating is the number of turnovers. Whenever a team loses the ball, they don't even have a field goal attempt that possession, but also, they create a very high percentage possession for the other team since it often results in a fastbreak situation.

Instead of looking at the committed turnovers as an absolute number, I've calculated for every team how many times they lose the ball in 100 possessions:

$$TOV\% = \text{number of turnovers per 100 possessions}$$

Generally spoken, the difference between the teams isn't that big. Best student of the class is Brussels with 13 turnovers every 100 possessions, while Limburg and Leuven lose the ball 17 times. Teams that perform well in this aspect of the game (for example Brussels) have good point-guards (Peciukevicius-Loubry) and a mix of experienced players who understand very well their role on the team and don't do risky things (Muya, Ubel, Lichodzijewski).



Author

Pascal Meurs is holder of the FIBA Europe Coaching Certificate. He has been coaching at the highest level in The Netherlands (BSW Weert), Luxemburg (Musel Pikes), France (Arras women) and Belgium (DBC Houthalen women). As a FIBA-instructor, he shared his knowledge in Qatar, Tunisia, Albania and spent two months in the coaching staff of NCAA1 St-Joseph's Hawks. Currently, he also works as a TV analyst for Eleven Sports Network.

www.pascalmeurs.com