

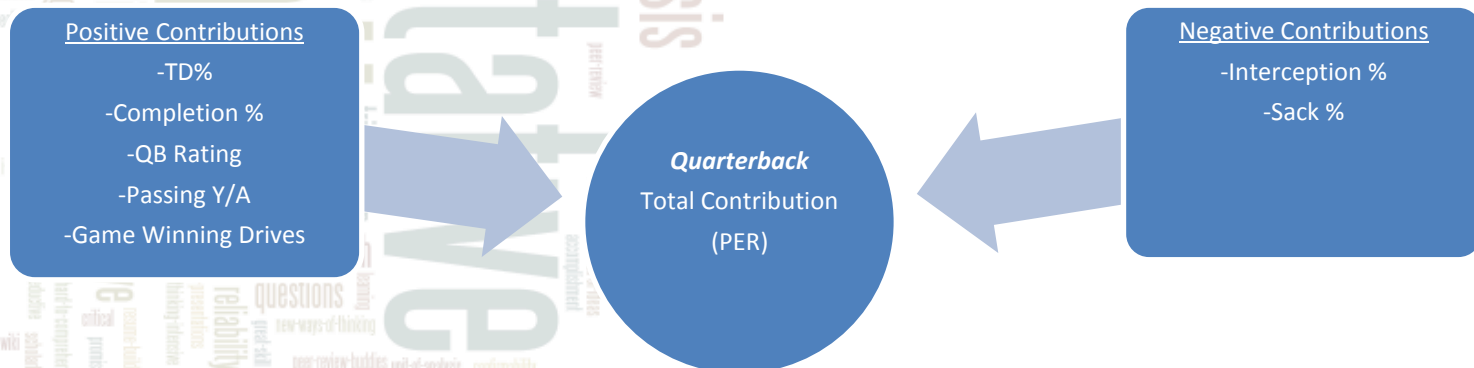
Elitics Model

NFL Player Efficiency Rating (PER) Model

by Tyler Oberly

Player Efficiency Rating (PER)

- Similar to John Hollinger's PER for the NBA, the goal of the Elitic (PER) Model is to provide **ONE** metric in reviewing all players from all positions fairly and without bias throughout the NFL
- PER does not look directly at a players' gross output. It cares more about the process of the output (measures player efficiency)



Player Efficiency Rating (PER)

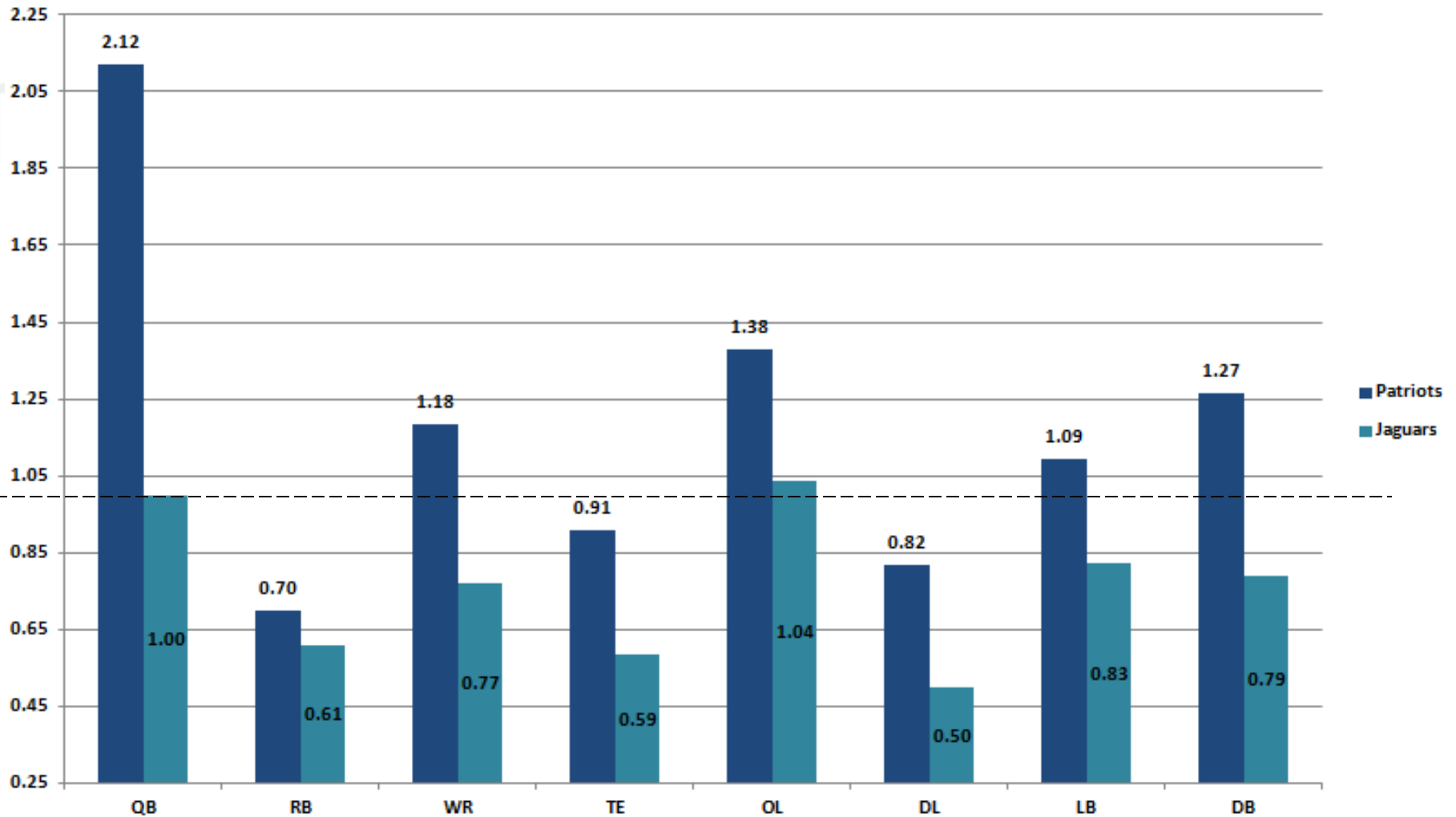
- **PER Scale** — Our PER model is built upon a scale of 1.0
 - The average roster in the NFL has an average team score of 1.0 and the average player in the NFL has a PER equal to 1.0
- The key behind PER is not only to measure player efficiency, but also value. A base PER scale of 1.0 makes it easy to calculate with salary information to report true player value

PER Review - Quarterback

Rk	Player	PER	2013 Cap-Hit	Value/PER
1	Peyton Manning	2.72	\$ 17,500,000.00	\$ 6,433,823.53
2	Nick Foles	2.44	\$ 655,880.00	\$ 268,803.28
3	Drew Brees	2.29	\$ 17,400,000.00	\$ 7,598,253.28
4	Philip Rivers	2.26	\$ 13,776,667.00	\$ 6,095,870.35
5	Tony Romo	2.16	\$ 11,818,833.00	\$ 5,471,681.94
6	Josh McCown	2.14	\$ 580,000.00	\$ 271,028.04
7	Russell Wilson	2.11	\$ 681,085.00	\$ 322,789.10
8	Tom Brady	1.94	\$ 13,800,000.00	\$ 7,113,402.06
9	Ben Roethlisberger	1.93	\$ 13,595,000.00	\$ 7,044,041.45
10	Aaron Rodgers	1.90	\$ 12,000,000.00	\$ 6,315,789.47

PER Rating - Top 10 Quarterbacks (2013 Season)

PER Review — Positional Breakout



PER Review – Rookie Projections

- Have also developed a PER projection system to evaluate college players entering the draft.
- Top projected player in 2011 draft – Russell Wilson
 - Projected NFL PER = 2.03
(Highest ever calculated for QB)
 - 2012 PER = 2.15
- Top projected player in 2012 draft – Logan Ryan
 - Projected NFL PER = 1.77
 - 2013 PER = 2.15



Logan Ryan, CB (Patriots) – 2013 PER = 2.15

Rank	Player	Team	G	+WPA	+EPA	+EPA/G	SC	Tkl	Asst	TF	Sk	SkYd	PD	QBHit	FF	TklLoss	Int
1	38-T.Williams	GB	16	1.50	50.3	3.14	47	61	22	1.00	3	17	11	3	2	4	3
2	23-D.Hall	WAS	16	1.43	48.9	3.06	33	57	21	0.87	0	0	13	0	3	1	4
3	26-T.Brock	SF	14	1.42	41.5	2.96	20	33	2	0.53	0	0	15	0	0	0	5
4	22-B.Boykin	PHI	15	1.31	43.8	2.92	28	40	3	0.55	0	0	17	1	2	0	6
5	25-R.Sherman	SEA	14	1.04	40.7	2.91	26	38	11	0.65	0	0	16	1	0	0	8
6	45-D.R-Cromartie	DEN	12	0.51	34.3	2.86	29	25	6	0.49	0	0	15	0	0	3	3
7	20-A.Verner	TEN	16	1.50	44.1	2.76	31	49	8	0.70	0	0	23	0	0	0	5
8	26-J.Wilson	WAS	16	1.06	41.4	2.59	45	64	24	0.98	2	24	7	5	2	5	1
9	24-A.Jones	CIN	16	0.70	41.2	2.58	34	43	12	0.67	0	0	14	0	1	2	3
10	24-T.Thomas	NYG	13	1.14	33.2	2.55	34	58	9	0.87	1	10	8	0	1	1	1
11	26-T.Jennings	CHI	16	1.78	38.4	2.40	27	48	8	0.67	0	0	13	0	2	0	4
12	33-C.Tillman	CHI	8	0.59	19.0	2.38	20	32	9	0.98	0	0	7	0	2	2	3
13	31-A.Talib	NE	13	0.83	30.8	2.37	23	35	6	0.53	0	0	13	0	1	1	4
14	26-L.Ryan	NE	11	0.81	26.0	2.36	18	30	5	0.54	2	18	10	2	1	2	5
15	21-L.Webb	BLT	16	1.34	37.8	2.36	49	64	11	0.83	0	0	23	0	0	2	2
16	23-J.Haden	CLV	15	1.11	35.3	2.35	36	43	11	0.62	0	0	20	0	0	0	4
17	20-D.Butler	IND	15	0.87	34.6	2.31	33	42	9	0.66	0	0	15	1	0	1	4
18	32-O.Scandrick	DAL	16	1.16	36.9	2.31	31	59	5	0.70	2	12	13	2	1	4	2
19	23-T.Newman	CIN	13	1.19	29.6	2.28	28	45	7	0.78	0	0	14	0	0	4	2
20	24-C.Graham	BLT	15	1.21	33.5	2.23	36	51	17	0.81	1	0	12	2	1	5	4



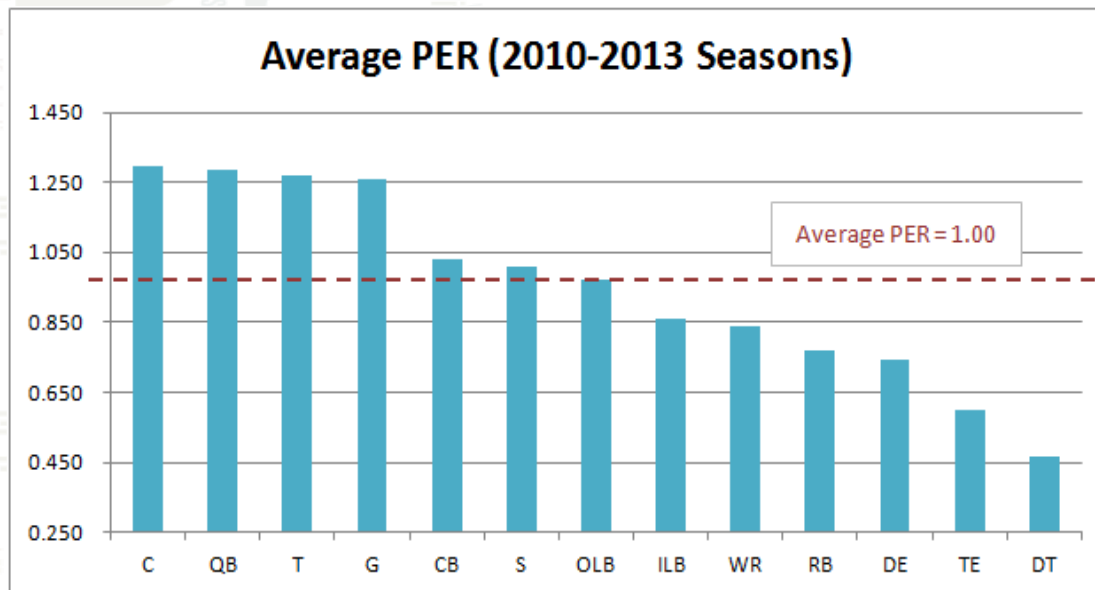
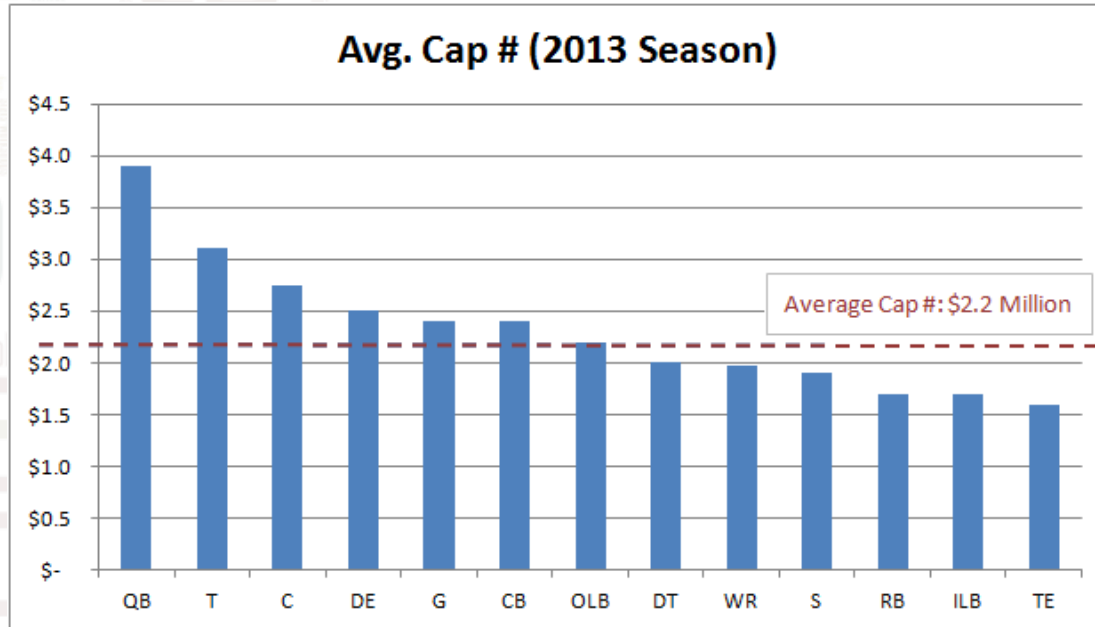
Rookie Projections – 2013 Class, Top 10

Rk	Player	Position	Projected PER	Actual PER
1	Eric Fisher	T	1.08	1.13
2	Luke Joekel	T	1.34	1.37
3	Dion Jordan	DE/OLB	0.44	0.46
4	Lane Johnson	T	1.18	1.41
5	Ziggy Ansah	DE/OLB	0.91	1.57
6	Barkevious Mingo	DE/OLB	0.66	0.92
7	Jonathan Cooper	G	1.42	IR
8	Tavon Austin	WR	0.84	0.87
9	Dee Milliner	CB	1.44	0.55
10	Chance Warmack	G	1.31	1.44

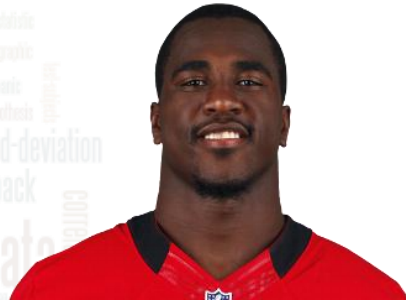
Position	Margin of Error (%)	Success %
QB	13.2	86.8
RB	10.6	89.4
WR	18.3	81.7
TE	10.7	89.3
OL	12.5	87.5
DT	0.5	99.5
DE	26.0	74.0
OLB/DE	13.8	86.2
LB	22.2	77.8
CB	14.0	86.0
S	15.0	85.0
Overall	14.3	85.7
<i>2012 Class</i>	<i>19.0</i>	<i>81.0</i>
<i>2011 Class</i>	<i>12.2</i>	<i>87.8</i>

PER Rating - Top 10 Drafted, 2013 Draft Class

PER Metric – Scaling to 1.0



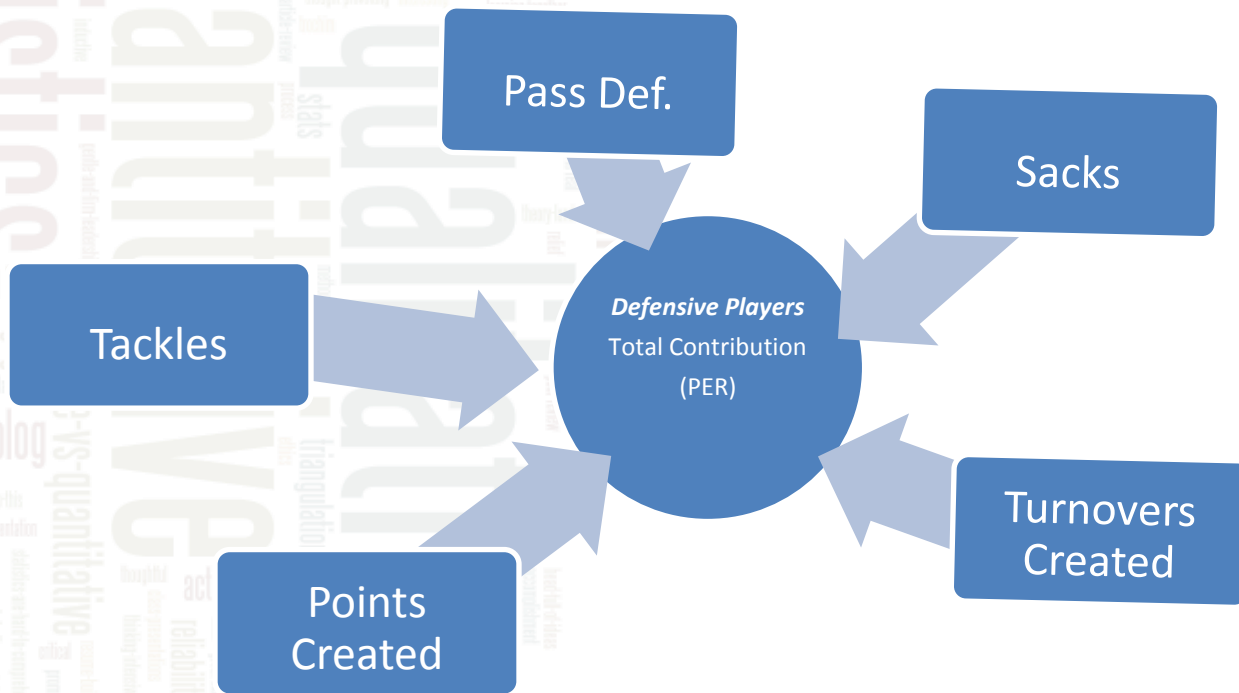
PER Review – Levonte David



2013 PER = 2.61

2013 Cap-Hit = \$789,303.00

Value/PER = \$303,310.34



PER Review – Eli Manning

Average PER (2010-2013) = 1.655

2014 Cap-Hit = \$20.4 Million

Value/PER = \$12,326,283.99

