

What follows is an excerpt from a book by @ZackMooreNFL titled "Caponomics: Understanding NFL Roster Building through Super Bowl Champion Analysis." It is due out in the Summer of 2015. This is not a final draft, but a promotional item given to those who have joined our e-mail list at [Caponomics@gmail.com](mailto:Caponomics@gmail.com), feel free to e-mail us there to join that list and get more items like this one. We will update you when the Amazon pre-order becomes available.

In the book, we will have a complete section analyzing all 21 Super Bowl teams of the salary cap era. After that, there will be a section discussing the theories we've created off of what we learned from these teams. To finish it off, we'll take the theories we learned from the Super Bowl teams and apply them to 2014 teams and show why they did or did not succeed.

Feel free to contact me on G-Mail or Twitter with any questions you may have. Thanks for your support.

#### 2000 Baltimore Ravens Review

Figure 1: Top 30 Cap Charges

2000 Ravens			% of Cap	SB Avg	Difference			SB Average	Ravens +/-	
1	Jonathan Ogden	OL	\$4,021,605	6.47%	9.23%	-2.76%	Top 1	6.47%	9.23%	-2.76%
2	Ray Lewis	LB	\$3,311,920	5.33%	6.82%	-1.49%	Top 2	11.80%	16.05%	-4.25%
3	Michael McCrary	DE	\$3,196,473	5.14%	5.95%	-0.81%	Top 3	16.94%	22.00%	-5.05%
4	Rod Woodson	S	\$2,966,986	4.77%	5.30%	-0.53%	Top 5	26.22%	32.11%	-5.81%
5	Peter Boulware	LB	\$2,801,600	4.51%	4.81%	-0.30%	Top 10	43.14%	49.83%	-6.52%
6	Harry Swayne	OL	\$2,500,320	4.02%	4.31%	-0.29%	Top 15	55.84%	61.93%	-5.70%
7	Tony Banks	QB	\$2,263,140	3.64%	3.74%	-0.10%	Top 20	64.70%	70.34%	-5.14%
8	Jeff Blackshear	OL	\$2,183,333	3.51%	3.51%	0.00%	Top 25	70.48%	76.43%	-5.32%
9	Jamal Lewis	RB	\$1,878,000	3.02%	3.19%	-0.17%	Top 30	75.08%	81.11%	-5.32%
10	Duane Starks	CB	\$1,698,780	2.73%	2.97%	-0.24%				
11	Jermaine Lewis	WR	\$1,668,453	2.68%	2.80%	-0.12%	Team	95.12%	100.39%	-5.32%
12	Rob Burnett	DE	\$1,625,320	2.61%	2.61%	0.00%				
13	Shannon Sharpe	TE	\$1,625,320	2.61%	2.40%	0.21%				
14	Chris McAlister	CB	\$1,520,655	2.45%	2.21%	0.24%				
15	Travis Taylor	WR	\$1,453,000	2.34%	2.08%	0.26%				
16	Tony Siragusa	DT	\$1,325,000	2.13%	1.93%	0.20%				
17	Sam Adams	DT	\$1,125,640	1.81%	1.80%	0.01%				
18	Jamie Sharper	LB	\$1,029,560	1.66%	1.66%	0.00%				
19	Jeff Mitchell	OL	\$1,027,640	1.65%	1.55%	0.10%				
20	Trent Dilfer	QB	\$1,000,320	1.61%	1.46%	0.15%				
21	Qadry Ismail	WR	\$825,320	1.33%	1.38%	-0.05%				
22	Ben Coates	TE	\$750,000	1.21%	1.29%	-0.08%				
23	Larry Webster	DT	\$711,296	1.14%	1.21%	-0.07%				
24	Matt Stover	P/K	\$690,320	1.11%	1.14%	-0.03%				
25	Patrick Johnson	WR	\$616,600	0.99%	1.08%	-0.09%				
26	Spencer Folau	OL	\$604,160	0.97%	1.03%	-0.06%				
27	Frank Wainright	TE	\$603,520	0.97%	0.98%	-0.01%				
28	Sam Gash	FB	\$600,000	0.97%	0.93%	0.04%				
29	James Trapp	CB	\$526,280	0.85%	0.89%	-0.04%				
30	Bill Davis	WR	\$525,640	0.85%	0.85%	0.00%				

Figure 2: Positional Groups

Cap	Offense	% of Cap	QB	RB	WR	TE	OL					
62,172,000	\$30,737,108	49.44%	\$3,619,989	5.82%	\$4,529,289	7.29%	\$6,173,137	9.93%	\$3,681,856	5.92%	\$12,732,837	20.48%
SB Avg	\$30,613,493	49.24%	\$5,757,127	9.26%	\$5,129,190	8.25%	\$6,571,580	10.57%	\$3,108,600	5.00%	\$10,420,027	16.76%
	Defense	% of Cap	DT	DE	LB	S	CB					
	\$27,318,070	43.94%	\$3,614,696	5.81%	\$5,324,033	8.56%	\$9,106,600	14.65%	\$4,724,906	7.60%	\$4,547,835	7.31%
SB 4-3 D Avg	\$28,306,912	45.53%	\$4,718,855	7.59%	\$6,820,268	10.97%	\$6,820,268	10.97%	\$4,053,614	6.52%	\$5,719,824	9.20%
	Specialists											
	\$1,081,080	1.74%										
	Team											
	\$59,136,258	95.12%										

Figure 3: Starting Lineup and Contributors

2000 Ravens			62,172,000		
<b>Offense</b>					
QB	Trent Dilfer	28	\$1,000,320	1.61%	
RB	Jamal Lewis	21	\$1,878,000	3.02%	
WR	Qadry Ismail	30	\$825,320	1.33%	
WR	Travis Taylor	21	\$1,453,000	2.34%	
RB (flex)	Priest Holmes	27	\$472,960	0.76%	
TE	Shannon Sharpe	32	\$1,625,320	2.61%	
LT	Jonathan Ogden	26	\$4,021,605	6.47%	
LG	Edwin Mulitalo	26	\$284,160	0.46%	
C	Jeff Mitchell	26	\$1,027,640	1.65%	
RG	Mike Flynn	26	\$385,960	0.62%	
RT	Harry Swayne	35	\$2,500,320	4.02%	24.89%
<b>Defense</b>					
LDE	Rob Burnett	33	\$1,625,320	2.61%	
LDT	Sam Adams	27	\$1,125,640	1.81%	
RDT	Tony Siragusa	33	\$1,325,000	2.13%	
RDE	Michael McCrary	30	\$3,196,473	5.14%	
LLB	Peter Boulware	26	\$2,801,600	4.51%	
MLB	Ray Lewis	25	\$3,311,920	5.33%	
RLB	Jamie Sharper	26	\$1,029,560	1.66%	
LCB	Duane Starks	26	\$1,698,780	2.73%	
RCB	Chris McAlister	23	\$1,520,655	2.45%	
SS	Kim Herring	25	\$474,240	0.76%	
FS	Rod Woodson	35	\$2,966,986	4.77%	33.90%
<b>Specialists</b>					
K	Matt Stover	32	\$690,320	1.11%	
P	Kyle Richardson	27	\$388,520	0.62%	
PR	Jermaine Lewis	26	\$1,668,453	2.68%	
KR	Corey Harris	31	\$525,320	0.84%	

Figure 4: Basic Team Stats

2000 Ravens										
Offensive Stats	Pts/Game	Rank	Total Yards	Rank	Pass Yds	Rank	Rush Yds	Rank		
	20.8	14	5014	313.4	16	2815	175.9	22	2199	137.4
Defensive Stats	Pts/Game	Rank	Total Yards	Rank	Pass Yds	Rank	Rush Yds	Rank		
	10.3	1	3967	247.9	2	2997	187.3	8	970	60.6
Point Differential	Pts/Game	Rank								
	10.5	2								

Figure 5: Offensive Leaders

Leading Passer	Comp. %	Yards	TDs	INTs						
T. Dilfer/T. Banks	56.8	3080	20	19						
Leading RB	Carries	Rush Yds	Yds/Rush	Rush TDs	Catches	Rec Yards	Yds/Rec	Rec TDs	Total Yds	
Jamal Lewis	309	1364	4.4	6	27	296	11.0	0	1660	
Priest Holmes	137	588	4.3	2	32	221	6.9	0	809	
Leading Receivers	Catches	Catch Rate	Rec Yards	Yds/Rec	Rec TDs					
Shannon Sharpe	67	63.8	810	12.1	5					
Qadry Ismail	49	51.6	655	13.4	5					
Jamal Lewis	27	75.0	296	11.0	0					
Travis Taylor	28	51.9	276	9.9	3					
Priest Holmes	32	69.6	221	6.9	0					

The 2000 Ravens might be one of the best-constructed teams of the cap era because they knew who they were and what they needed to do to succeed. Their positional spending is very close to the offensive and defensive averages for Super Bowl champions, which builds on the theory I have that those are sound numbers to base spending off of. They also have under spent and over spent, based on those averages, at positions more important to their strengths as a team.

In Football Outsiders opinion, this Ravens squad was the best rush defense of all-time with a DVOA (Defense-adjusted Value Over Average) of -36.6%. What was interesting to me looking at the cap is that they only spent 4.76% more than the average on their linebackers and safeties, with a combined 6.73% below the defensive tackles, ends and cornerbacks Super Bowl averages. Their total defensive spending was 1.59% below the Super Bowl average.

So to be such a dominant force, they had some players who exceeded their value, one of them being Ray Lewis who was only 5.33% of their salary cap, but was the 2000 NFL Defensive Player of the Year. To give that something to compare it to, in 2014, Chad Greenway of the Vikings took up 5.41% of the cap, Paul Posluszny took up 7.14% of the Jaguars cap and James Laurinaitis took up 7.26% of the Rams cap. Of course, some great players like Terrell Suggs, Patrick Willis, and Von Miller each took up around what Lewis' cap number was in 2000, but his play that year certainly far exceeded that cap figure as the leader of one of the greatest defenses of all-time.

They paired that historic defense with an offense that was fifth in the NFL that season with 2199 yards behind the strong running of Jamal Lewis and Priest Holmes. They also spent 20.48% on a great run-blocking offensive line led by Hall of Fame left tackle Jonathan Ogden and their starting five cost 13.22% of the cap, which is 2.05% more than the Super Bowl average. Their offensive spending was only 0.20% higher than the Super Bowl average and they spent the money in the right places.

Jamal Lewis was on his rookie deal and Priest Holmes was an under-valued and under-appreciated asset, so their running back spending came in under the Super Bowl average by about 1%, so not far off. Of course, the offensive line spending was well done for their needs as well.

Their quarterback spending is something I think coaches should see as a lesson of how to do business when you're a run-first, defensive team. Tony Banks is their number seven cap hit and Trent Dilfer comes in at number 20, but at very low figures as the team's quarterbacks take up only 5.82% of the cap, which is 3.44% under the Super Bowl average. This is something that I think is very important for teams to understand in the current marketplace, if you cannot get one of the top quarterbacks, then save money at the position, so you can build a strong rush offense and defense.

Along with the 2013 Seahawks, who have a very strangely designed cap, but follow the same ideology, they've set the example for how teams without elite quarterbacks should build their teams. This is not saying Wilson isn't elite, it's about his low cap hit, which allowed them to build a strong rushing team, with a great defense, a model that teams who have average quarterbacks can follow by spending accordingly.

Two 2014 teams who were great run-first, defensive teams, but spent too much at quarterback, which led to their failure to win a Super Bowl are the Bills and Texans, who both went 9-7. I know I'm simplifying things in a major way, and both teams had major issues outside of this, but the Texans and Bills both had a dead money quarterback as their third highest cap hit.

Matt Schaub was 7.89% of the Texans cap and Ryan Fitzpatrick, who was actually on the Texans, took up 5.26% of the Bills cap. Due to both players not being on the team anymore, it set off a chain of events that led to both teams having three quarterbacks in their Top 30 cap hits. It happened because both teams gave these guys contracts that paid them like elite quarterbacks, which eventually led to their release.

People always mention how teams can win without a great quarterback because the Ravens did it with Trent Dilfer, and they're not wrong, BUT you need to spend like you don't have an elite quarterback. You can win with Fitzpatrick at the helm, and

the Texans almost made the playoffs with him even with the overspending at quarterback, but overspending kills that.

Players are assets and this is especially applicable by position groups. Like in any business, you can't overpay for an asset that's going to produce under the expected value of their cost and expect to win a Super Bowl.

In my opinion, having an inexpensive quarterback was critical for the 2000 Ravens, they got what they paid for and received value comparable to the spending. Looking at the number one cap hit at each position for the 21 Super Bowl teams, when it comes to QB, Tony Banks is the second cheapest behind Tavaris Jackson of the 2013 Seahawks who, of course, knew Russell Wilson was the starter heading into the year at his miniscule 0.55%.

As proven by the Ravens four-game championship run where they averaged only 225 yards per game with only 127 of those coming through the air, they didn't need a great, or even a good, quarterback to win a Super Bowl. They needed guys who didn't turn the ball over at quarterback and did just enough to supplement the running game. They got that in the playoffs as Trent Dilfer threw one interception in four games after he and Banks combined for 19 during the regular season.

I'm always a fan of investing in good tight ends, but I'm a huge fan of investing in tight ends when you have young and/or average quarterback play. Tight ends are terrific security blankets for quarterbacks and Shannon Sharpe was not only a great pick up, but a huge reason they won the Super Bowl with big plays throughout the playoffs. He had six catches for 230 yards and two touchdowns in the playoffs, with a 96-yarder in the AFC Championship against the Raiders and a 58-yarder in the Wild Card game against the Broncos. Pair that with the fact that he was a terrific blocker and he was the perfect player for this team, while taking up only 2.61% of the cap. A very reasonable cost for a leader who already had two Super Bowl rings with the Broncos, blocked for the running game and led the team in receiving that season.

With a plus 10-turnover ratio during the playoffs, the defense created 12 turnovers on top of allowing a mere 209 yards per game. That plus 10 ratio is tied for the second most with the 2004 Patriots behind the 1998 Broncos who had 12. They also kept up with their epic regular season by only allowing 64 rush yards per game. Outside of the Divisional Round game against the Titans where the Ravens could only muster 49 rush yards, they had 114 yards per in the other three games, so they really were able to control the game on the ground.

Their great defense and special teams also helped them overcome their average offense at times. They were out-earned against the Titans 318 to 134, but broke away in the fourth quarter with an Anthony Mitchell 90-yard blocked field goal return to make it 17-10, then a Ray Lewis 50-yard interception return to make it 24-10 and put the game away.

Likewise, in the Super Bowl, Duane Starks had a 49-yard interception return for a touchdown late in the third quarter that made the game 17-0. On the ensuing kickoff, Ron Dixon ran the kick back 97 yards for a touchdown to make it a two possession game, but Jermaine Lewis responded immediately with a touchdown of his own on the Ravens kickoff return which quickly crushed the Giants hopes and made it a 17-point difference again.

Which brings me back to a point on that defense, since they only gave up two touchdowns during the playoffs and one of them was a kick return, that means that Eddie George's two-yard touchdown run with 7:43 remaining in the first quarter of their Divisional Round match-up was the only touchdown the defense gave up the entire 2000 playoffs. One lone touchdown in 16 quarters of football...remarkable.

This defense had All-Pros and guys who had career years at every level from the defensive line to the secondary with Ray Lewis in between gluing it all together.

It's important to note the incredible football minds on this coaching staff. Brian Billick was the head coach until John Harbaugh replaced him after the 2007 season. Marvin Lewis was the defensive coordinator before taking the same job with the Redskins, one year before becoming the Bengals head coach in 2003, a job he still holds today.

Jack Del Rio was the linebackers coach, then became the Panthers defensive coordinator in 2002 before moving on to become the Jaguars head coach for nine seasons, then went to Denver to reclaim a defensive coordinator job before being named the Oakland Raiders head coach this season.

Rex Ryan was the defensive line coach until he was promoted to the coordinator job in 2005, a position he held until he was the Jets exciting head coach until just last season before landing a job with the Bills, which seems like a perfect landing spot for him and his future.

Mike Smith was a defensive line assistant before taking on the defensive coordinator job for Del Rio from 2003 to 2007. He then took the Falcons head coaching job, which he held until he was fired after the 2014 season.

What the Ravens had in 2000 was a perfect storm of talent, a well build salary cap for what their strengths were and a coaching staff that was one of the best of the salary cap era, a staff filled with industry leaders. They are a team that serves as a lesson and the perfect example for all other teams who want to use the run-offense, great defense team-building model. As I stated above, the Bills and Texans are two 2014 teams that should have built their team in the image of the 2000 Ravens, but the Seahawks and Chiefs did a good job building this kind of squad.

The Eagles could have invested a little more in their defense and they would have had a similar team, with more of a passing offense than other teams built in this model because Nick Foles could have created more value than his salary cap number, if he was healthy and in 2013 form.

The Browns were hoping that Johnny Manziel would be the guy for them, but it has been a failure up to this point. They did have their money invested well in 2014, with a bit of overspending at offensive line as they were 2% higher than any other team and about 8% higher than the Super Bowl average, but they did have much of that money invested in two of the best linemen in the NFL in Alex Mack and Joe Thomas. I also think that offensive line is the best place you could over invest against league and Super Bowl averages if you have it invested in the right players. They put defensive money in cornerbacks and pass rushers, which was another good move. If they can build a Seahawks-style offense around Manziel, if he digs himself out of the hole he's in, and a stout defense, they could really turn that franchise around.

As we'll learn from looking at the 2005 and 2008 Steelers, the 2007 Giants, the 2012 Ravens, and 2013 Seahawks, building a strong running offense and a good to great defense around a good, young quarterback can net you a championship if it's done the right way. Now, the 2000 Ravens did not have a good, young quarterback, but Trent Dilfer did just enough to help them win a championship and when you have a great defense and a great running attack, sometimes all the quarterback has to do is not turn the ball over.

Moving forward, the Vikings are a team that sticks out as a prime candidate to follow the lead of these great teams with Teddy Bridgewater, who looks like he could be a very good quarterback. The Vikings had an above average defense in 2014 and their running game was average, which was a surprise considering that Adrian Peterson was suspended after Week 1. What they need to do now is take full advantage of Bridgewater's low cap number and build a team with the run-first, defensive philosophies employed by those Ravens, Steelers, Seahawks and Giants Super Bowl teams.

There is a lot to learn from this 2000 Ravens club, they are the benchmark for one of the main team building strategies with their run-first, defensive model and they'll be referenced time-and-time again throughout this book.