Outside the Lines

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Purchasing Pennants: The New York Yankees Then and Now

Part 3: Player Performance

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Introduction

In two previous essays on the financial history of the New York Yankees we have focused on the sources and uses of Yankee revenues and taken a detailed look at one of those uses: player salaries. In this essay we will take a closer look at those salaries by comparing them to player and team performance. We will look at what the team got for its money, and what the fans got for the cost of their ticket.

In this essay I will touch on how the Yankees compensated their players then and now, and the impact of those revenues and expenditures on their on-field performance. When comparing salaries directly between the two eras I adjust for inflation using the consumer price index. All values reported as inflation-adjusted dollars have been adjusted to the year 2003.

The impact of Yankee finances on performance

Are higher paid ballplayers more productive or are more productive ballplayers higher paid? The answer, it turns out, is not so easy to determine. As has always been the case, ballplayers are paid not for what for they do, but for what they have done. Their past performance is then used to determine their expected future performance.

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Relocation Quiz

By Gary Gillette

Major League Baseball gave permission last year for Florida to explore relocation sites, and the subsequent peregrinations of the Marlins in search of new stomping grounds have taken some curious turns. That is saying a mouthful for a sport that conducted a painfully prolonged charade before it plunked the Expos down in Washington, exactly where everyone knew they belonged. So, if a no-brainer like that can take years to figure out, the Fighting Fish aren't likely to be relocating anytime soon.

According to the club, seven groups outside of South Florida contacted them last year expressing their interest in becoming the new home for the 1997 and 2003 World Champions. The magnificent civic seven, in approximate order of the amount of ink spilled speculating about them so far, are:

- San Antonio;
- Portland;
- Charlotte;
- Norfolk;
- Las Vegas;
- San Juan, P.R.; and
- East Rutherford, N.J.

Since then, Oklahoma City, which no one outside of Oklahoma previously thought of as being a big-league town, threw its cowboy hat into the ring after it ended

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Purchasing Pennants *(Continued from page 1)*

In economics, the critical relationship between employer and employee is in two parts: 1) what the employee earns (salary or wage) and 2) how valuable that employee's production is to the employer. The term economists use to measure this value is called the marginal revenue product (MRP). Simply stated, the MRP is the additional amount of revenue earned by the employer as a result of the additional output produced by the employee.

There are numerous ways in which a MLB ballplayer can create revenue for the team he plays for. First and foremost, he benefits his team by contributing to the team's ability to win. A winning team is the most important variable in determining a successful bottom line. In addition, a player can contribute to the team's revenue flow through a "superstar" effect. Think Barry Bonds, McGwire-Sosa and the Nolan Ryan farewell tour, and you get the picture. Some players attract fans just for who they are, regardless of how well the team is performing.

Table 1
Average Salary and Runs Created by Length Of Time With Yankees 1985-2004

Years with Team	Average Salary	Average Runs Created	Salary/RC
1	$ 1,283,040	61	$ 21,113
2	$ 1,657,042	66	$ 25,180
3	$ 1,773,924	61	$ 28,935
4	$ 2,107,064	63	$ 33,651
5	$ 2,591,577	60	$ 43,002
6	$ 3,934,423	66	$ 59,449
7	$ 5,670,714	82	$ 69,276
8	$ 7,253,333	82	$ 88,097
9	$ 9,881,786	100	$ 98,571
10	$ 8,188,572	91	$ 89,984
11	$ 8,388,572	87	$ 96,420
12	$ 12,357,143	125	$ 98,857
13	$ 12,357,143	66	$ 187,229
14	$ 12,357,143	88	$ 140,422

Table 2
Average Salary and Runs Created by Length Of Time With Yankees 1914-1943

Years with Team	Average Salary	Average Runs Created	Salary/RC
1	$ 5,327	55	$ 96
2	$ 7,433	76	$ 98
3	$ 9,935	67	$ 149
4	$ 11,150	73	$ 154
5	$ 14,304	83	$ 172
6	$ 17,200	84	$ 204
7	$ 19,058	88	$ 217
8	$ 20,563	91	$ 226
9	$ 23,286	108	$ 215
10	$ 15,493	83	$ 186
11	$ 29,000	124	$ 234
12	$ 34,250	105	$ 326
13	$ 43,333	127	$ 341
14	$ 36,000	114	$ 315

In this essay, the indicator of performance I focus on is runs created (RC). The contribution of RC to a team's winning record is well documented and does not need to be repeated here. A few simple examples are illustrated in Tables 1 through 4. Tables 1 and 2 list the average runs created, salary and salary per run created by years of experience. Table 1 shows these relationships for the modern era Yankees while Table 2 does the same for the early Yankees. Tables 3 and 4 list the RC leaders for each era, their salaries, and the cost per run created.

The cost of creating runs has increased over time for the same reason that salaries in general have increased over time. However, it should also be noted that the cost of creating runs per year of experience has increased as well. In other words, not only do contemporary players get paid more for producing each run, but their compensation for creating those runs increases at a greater rate as their years of experience increase. This can best be seen in Figure 1, which shows the salary/RC for each era by year of experience as a multiple of the salary/RC for the first year of

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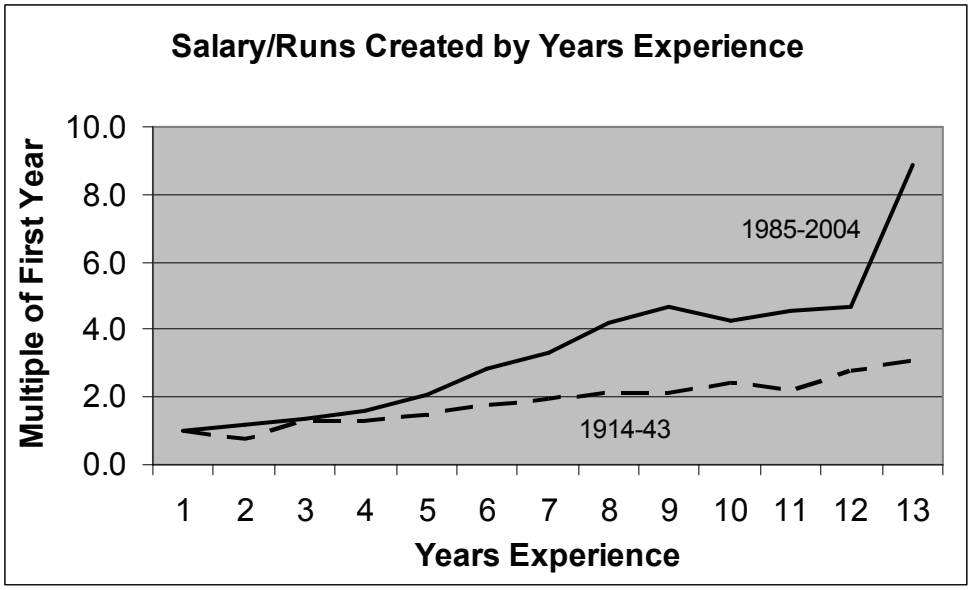
Purchasing Pennants *(Continued from page 2)*

Figure 1



before. The good news in all of this is that the Yankees are getting more evenly distributed production at the top—or perhaps today's players are less consistent? The top ten RC leaders in the Ruppert years did not include anybody who was not named Ruth or Gehrig. In the modern era, seven different players are represented among the top ten, and none of them would have made the top twenty in the earlier era.

In general, the cost of victory has gone up tremendously for the Yankees. Even after adjusting for inflation, it costs much more per victory now than it did before, and the number of victories has not changed much. From 1915-29 the Yankees won 1,361 games and from 1990-2004 they won 1,338. The overall cost of victory and player salaries per victory increases in both eras.

Table 3

Yankee Runs Created Leaders 1985-2004

Year	Name	Salary ($)	RC	Salary/RC ($)	Inflation-adusted Salary/RC ($)
1999	Jeter, Derek	5,000,000	158	31,646	34,810
1986	Mattingly, Don	1,375,000	150	9,167	15,400
2003	Giambi, Jason	11,428,571	150	76,190	76,190
1999	Williams, Bernie	9,857,143	140	70,408	77,449
1985	Henderson, Rickey	1,470,000	138	10,652	18,215
1985	Mattingly, Don	455,000	136	3,346	5,721
1997	Martinez, Tino	4,400,000	128	34,375	39,531
2004	Giambi, Jason	12,428,571	128	97,098	96,127
2002	Soriano, Alfonso	630,000	126	5,000	5,100
2002	Williams, Bernie	12,357,143	125	98,857	100,834

experience. It shows, for example, that the cost per run created in the modern era doubles in the first three years of experience. In the earlier era, it took a player seven years before his salary per run created was twice that of his rookie year.

Taking a look at the RC leaders shows a similar trait but reveals another symptom of the increasing cost per run created. Not only are salaries higher, but the number of runs created by the leaders is much lower than

It is interesting to note that the growth rate of total cost per win is much more rapid in the Ruppert era than under George Steinbrenner. Of course the magnitude is much higher for the Steinbrenner Yankees. Jacob Ruppert's first team, the 1915 Yankees, won a

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Purchasing Pennants *(Continued from page 3)*

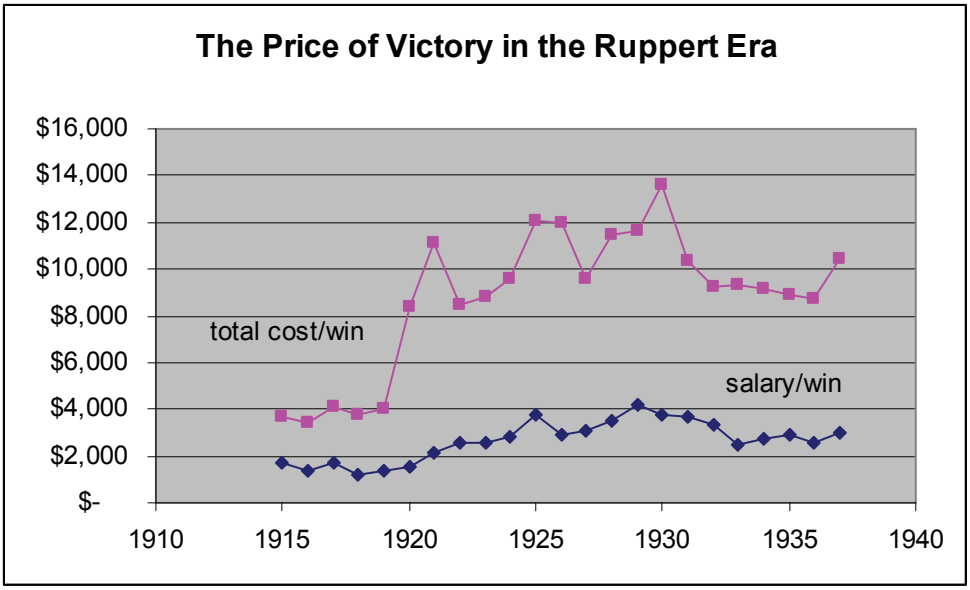
Table 4

Yankee Runs Created Leaders 1914-1943

Year	Name	Salary ($)	RC	Salary/RC ($)	Inflation-adusted Salary/RC ($)
1921	Ruth, Babe	20,000	233	86	883
1923	Ruth, Babe	52,000	216	240	2,595
1927	Gehrig, Lou	8,000	211	38	401
1920	Ruth, Babe	20,000	205	97	893
1927	Ruth, Babe	70,000	203	345	3,655
1924	Ruth, Babe	52,000	199	261	2,815
1930	Gehrig, Lou	25,000	197	127	1,394
1936	Gehrig, Lou	31,000	190	163	2,159
1934	Gehrig, Lou	23,000	190	121	1,668
1926	Ruth, Babe	52,000	187	278	2,895

total of 69 games at an average price of just under $4,000 each. Five years later the Yankees won 95 games at a price per game more than twice that of 1,915. The next year that price increased again (as did the number of wins, to 98), and it hovered in the $10,000-$12,000 per win range for most of the next decade.

Figure 2



Looking at the salary per win line in Figure 2, it is apparent that salaries are not the only cause of this cost increase. Salaries doubled over this period, but did so slowly, and eventually fell off during the depression years of the 1930s.

The modern day Yankees show a very different story. In Figure 3 we also see an increase in both total cost per win and salary per win, but the rates of increase are much slower. In 1990 the cost per win was just over $1 million. It would be four years before it was that high again and ten years before that cost doubled. The cost per win has accelerated recently, increasing from $2 million in 2002 to $3 million in 2004, not quite three times its 1990 level.

Salary per win increased modestly in the first ten years of this sample period, but grew rapidly over the last five years to a level nearly six times that of 1990. It wasn't until 1992 that salary per win crossed the half million dollar mark. It took another eight years for it to double to $1 million. Once it did though, it was short trip to $2 million per win. Player salaries are almost solely responsible for the increased total cost per win under the Steinbrenner Yankees.

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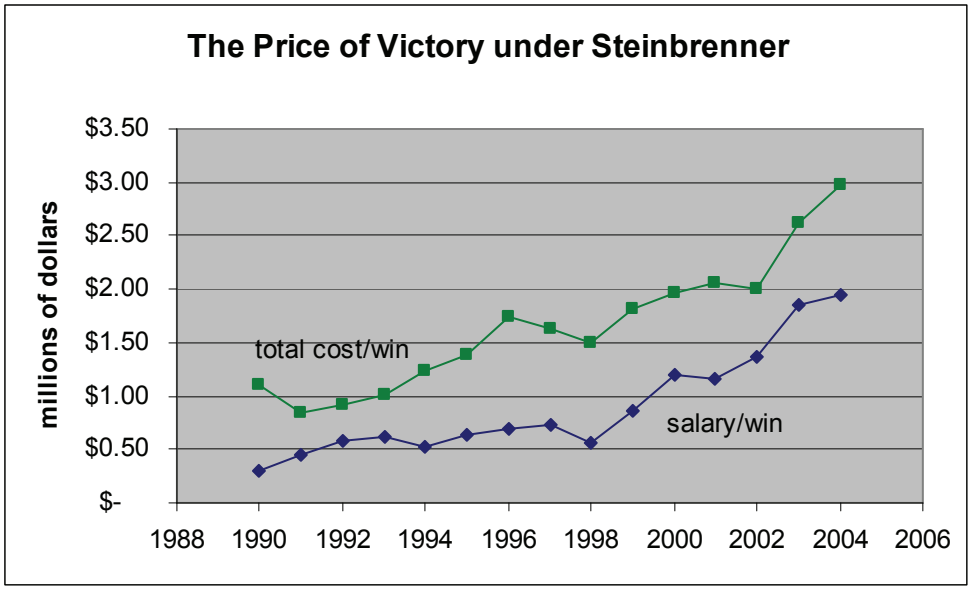
Purchasing Pennants *(Continued from page 4)*

The primary culprit for the increase in salary per win is obviously free agency. But what could explain the overall increase in the cost of victory aside from salaries? In the modern era the increased cost per victory is driven by player salaries, which increase roughly twice as fast as total costs per win, so that over the fifteen year period salaries increase by a factor of six, while total costs increase by a factor of three.

Another factor in the cost of running the team was the amount the Yankees spent to purchase player contracts. This amount was variable, fluctuating between $20,000 and $400,000 during the period in question. While player salaries could be controlled fairly well thanks to the reserve clause, once the Yankees left the comfortable confines of baseball's monopoly they were at the mercy of the market and had a much more difficult time controlling costs.

Figure 3



During the early period however, quite the opposite is true. The increased price of victory is driven not by salary per win, which is double its original cost only twice in 15 years, but by other costs of running the team.

A look at the details of the cost data reveal what the Ruppert Yankees were up against. Besides renting the Polo Grounds, which increased in cost in the years immediately before the opening of Yankee Stadium, they were constructing their own stadium. In addition, the Yankees began to pay income tax in 1920 to the tune of $292,000, a hefty 24 % rate.

Conclusion

Despite the change in scale, the Yankees of today are remarkably similar to the Yankees of yesteryear. They pay their players well, though they cannot exploit them as much today as they did prior to free agency. They rely on fan interest in a winner to provide their income – though attendance plays second fiddle to television revenue today. Finally, they attempt to reward their most productive players, and they have a lot of those players. In both periods examined in this essay the Yankees employed some of the marquee players in the game, and those players helped them win with unnerving consistency.

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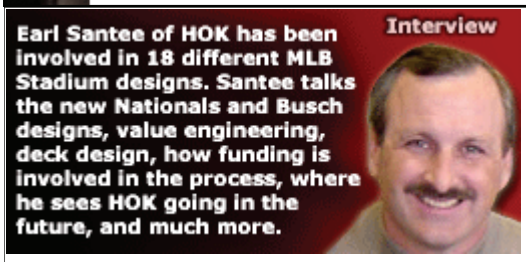
THE BUSINESS OF BASEBALL



On the Business of Baseball website, recent additions include an interview with Earl Santee of ballpark designers HOK Sport, which is a division of Hellmuth, Obata and Kassabaum .

"Santee has worked on more than 18 Major League Baseball parks and 40 minor league and spring training baseball projects, including the successful completions of PNC Park, Minute Maid Park and Angel Stadium of Anaheim. His responsibilities include design, project direction, interior architecture, cost estimating, feasibility studies and master planning."

In addition to the interview, Santee supplied a set of stadium renderings of the new stadiums for the Nationals, Marlins, Yankees, Cardinals, Twins and Mets.

Other recent interviews have included broadcaster Steve Lyons, Marlins President David Samson, Mariners President Chuck Armstrong and former Commissioner Fay Vincent.

Relocation Quiz *(Continued from page 1)*

up as the temporary home for the NBA's displaced New Orleans Hornets. Needless to say, if it takes a natural disaster of historic proportions for a city to get a chance at the big leagues, it's not likely you're going to land the big fish.

So far, the Marlins have met with interested parties in San Antonio, Portland, and Norfolk. They have also talked with Charlotte and Oklahoma City but have not yet indicated whether either will be graced with a visit from the South Florida mendicants.

The names of two other cities, Monterrey and Hartford—one the source of perennial speculation and one a completely new entry--have also been bruited in the media. While the relocation site list initially looks promising, most of the candidates fall by the wayside as soon as one starts asking a few hard questions about their viability. To wit …

Charlotte. There are multiple problems with Charlotte that ruin what would otherwise be a very attractive place for MLB to relocate. First, the city already has two other big-league pro franchises in the NFL Panthers and the NBA Bobcats. The public and private money that would be needed to build a state-of-the-art new ballpark in Charlotte has already been spent, and fans there have no deficit of sports to keep them entertained.

Second, NASCAR is wildly popular in Charlotte, as it is in the rest of North Carolina. Charlotte quite reasonably considers itself as the home of NASCAR (more than 90 percent of all NASCAR teams are headquartered in the area), and it will soon start building a NASCAR Hall of Fame at a cost to the local taxpayers of approximately $150 million.

Third, politicians in the Queen City have repeatedly said that they would be willing to help with site acquisition and infrastructure if a major league team wants to come there, but they are not going to subsidize a new ballpark any further. No MLB club will take that kind of deal now, nor for the foreseeable future.

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Relocation Quiz *(Continued from page 6)*

Fourth, minor league baseball is extremely well-entrenched in the Tar Heel State, which 10 teams call home (including the Triple-A Charlotte Knights that play just across the state line in South Carolina). Many people in Mecklenburg County would gladly spend the relatively small sum of money it would take to build a new Triple-A park to bring the Knights downtown rather than spend 5-10 times that amount to lure MLB.

Las Vegas. Heretofore an irrepressible suitor for any team that might be up for grabs, the burgeoning metropolis' bid was quickly nixed by MLB without public explanation. The probable explanation is that potential funding sources for a new park in Vegas appear to be no more solid than a desert mirage, despite several plans announced by "Mayor Martini" Oscar Goodman. The sideshow atmosphere that Goodman created wherever he appeared—always with scantily-clad showgirls on his arms—as well as the thorny issue of Nevada's legal gambling industry, do not appear to have been insurmountable obstacles. The commissioner did not blackball Las Vegas when it expressed interest in the Athletics and Expos in recent years

Puerto Rico. San Juan, the hub of the island commonwealth, hosted home 22 games for the lame-duck Expos in both 2003 and 2004 in an attempt to establish its *bona fides*. It has now expressed interest in hosting some "home" games for the Marlins. But MLB was distinctly underwhelmed by attendance at games played in Estadio Hiram Bithorn, which averaged less than 15,000 per game in the first year and barely 10,000 per game in the second, even though the park seated only 20,000.

A big reason for the disappointing patronage was that MLB set ticket prices far above the capacity of most Puerto Ricanos to pay, with a top price of $85 and general admission going for $20, twice as high overall as in Montreal. The Expos then traded star pitcher and Puerto Rican native Javier Vazquez and also let Latino superstar Vladimir Guerrero leave as a free agent before the 2004 season, plunging the club into the NL East basement.

All of which raises the question of whether the Expos were deliberately set up to fail in Puerto Rico. If the Expos had played for two years in front of enthusiastic sellout crowds, it would have been much harder for the commissioner to snub them in favor of the inevitable Washington.

New Jersey. East Rutherford, home to the two NFL teams that call themselves "New York," represents the northern New Jersey urban sprawl that covers more than half the state—from the Palisades on the west bank of the Hudson River to Trenton and from the Poconos in northeastern Pennsylvania to the Jersey shore in Ocean County. It is a huge market where about 6.8 million potential fans reside. However, despite its impressive size, it has no more a chance of luring an MLB team while Yankees and Mets are writing out hefty revenue-sharing checks than Barry Bonds has of becoming commissioner.

Norfolk. Any minuscule chance that the small-market Virginia Beach-Norfolk-Newport News area had of becoming the home port of a Major League team was permanently foreclosed when the Expos moved to Washington.

Hartford. Starting out with two strikes because it is regarded as too small and as having failed to support its former NHL franchise, Hartford was mentioned recently in a San Antonio newspaper piece. While it would be an interesting experiment to locate a team in Connecticut, halfway between MLB's two plutocrats (New York and Boston), it isn't going to happen until the Red Sox and Yankees are freed from the twin burdens of revenue sharing and the luxury tax. That can be expected about the same time as the next Ice Age arrives.

Monterrey. Since the Padres played a series in Monterrey in 1996, the northern Mexican industrial city is still mentioned occasionally as a future home for MLB. Monterrey was ostensibly considered by MLB as a new home for the Expos, but that was merely a cruel fiction. Aside from the obvious issues of the size of the potential TV market there, the fact is that soccer is the national sport and that baseball in Mexico is declining in popularity while American football and basketball gain fans and expand their amateur programs

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Relocation Quiz *(Continued from page 7)*

south of the border. There are also the unspoken concerns about security problems if a group of wealthy, high-profile foreign ballplayers were to spend six months of the year in Mexico.

Last One Standing. At the end of the yellow brick road, only San Antonio and Portland can realistically be counted as viable sites for the Marlins if they don't succeed in their high-stakes poker game in South Florida. The Marlins' big problem is that Portland refuses to play the relocation game the way MLB wants.

Basically, Portland has steadfastly refused to commit existing public monies to building a new ballpark, nor is it willing to impose new taxes on the citizenry to raise the money. The various ballpark financing schemes proposed in Portland depend heavily on taxing the ballplayers' and team employees' income—which is not popular in baseball circles, to say the least.

All of which pretty much leaves San Antonio as the last candidate standing—giving the Texas metropolis a lot of leverage when negotiating with the indigent, forlorn Marlins.

Pop Quiz. Rarely does anyone take a hard look at the proposed sites, evaluating how they compare in important demographic categories. In the interest of clarifying the muddy picture just a bit—as well as having a little fun—we're performing our civic duty by offering a pop quiz on relocation sites.

Take a look at Table 1 on page 9 which provides information for a baker's dozen of American metropolitan areas, including those interested in luring the Marlins. Then try to answer the questions using the information presented as well as your overall baseball sensibility and historical knowledge. The answers are on page 10.

For comparison purposes, data for the Marlins current home in Miami-Fort Lauderdale is shown at the top. The other 13 areas are presented in random order so as not to bias perceptions.

1. Six of the areas shown had higher growth rates from 2000–2004 than Miami-Fort Lauderdale. How many of those are relocation candidates?
2. Obviously, no relocation candidates have populations anywhere near as large as South Florida. But how many at least rank in the top 30 in the U.S.?
3. Only one area shown has as many TV Households in its DMA as Miami-Fort Lauderdale. But how many relocation candidates at least rank in the top 30 in the U.S.?
4. How many relocation candidates have at least one million TV households?
5. How many relocation candidates rank in the top 30 in both population *and* TV Households?
6. When trying to sell season-ticket packages for premium seats and multiyear leases to expensive luxury suites, the number of large corporations located in the area is a key factor. South Florida is home to 12 Fortune 1000 companies; how many of the relocation candidates are the homes of at least half as many?
7. Miami is about 194 air miles from Tampa, its nearest major league city. Since it's better if competing teams aren't too close to each other, how many of the relocation candidates are at least that far from the nearest big-league city?
8. Only one major league club is currently located in a market with less than two million souls. How many of the six relocation candidates are in markets at least that large?

(Continued on page 9)

Relocation Quiz *(Continued from page 8)*

9. How many of the six relocation candidates are also the home of two or more NFL, NBA, or NHL franchises?
10. How many of the six relocation candidates have no other big-league teams?

Extra Credit: After analyzing the data, can you identify the six areas other than New Jersey that have expressed interest in the Marlins?

Table 1

Site	Metro Pop	Rank	Growth 2000-2004	DMA TV HH	Rank	F1000 Corp.	Distance
Miami-Ft. Lauderdale	**5.4**	**10**	**7.1%**	**1.5**	**17**	**12**	**194**
SITE A	2.1	25	7.1%	1.1	23	4	133
SITE B	1.9	30	8.3%	0.8	37	5	187
SITE C	1.7	31	1.2%	0.9	33	14	80
SITE D	1.5	36	4.2%	0.7	47	5	236
SITE E	2.0	26	4.8%	0.9	31	10	210
SITE F	2.1	23	2.5%	0.9	34	15	182
SITE G	2.1	24	9.0%	1.0	27	13	224
SITE H	1.6	33	4.3%	0.7	42	4	120
SITE I	2.2	22	11.9%	1.3	19	0	75
SITE J	1.7	32	19.9%	0.7	48	7	233
SITE K	1.9	28	13.2%	1.3	20	3	82
SITE L	1.2	47	4.3%	0.7	45	4	178
SITE M	2.6	20	8.0%	1.7	12	7	194

Notes: Population growth from 2000 to 2004 per census estimates.
Designated Market Area TV Households in 1,000,000s.
Distance in air miles to/from major airports nearest ballparks.
Fortune 1000 Companies located in metro area (including those located in other states) per Fortune magazine April 18, 2005.
(Continued on page 10)

Table 2

	City	Metro Pop	Rank	Growth 2000-2004	DMA TV HH	Rank	F1000 Corp.	Distance	To Nearest ML Team	Other Teams	Sports
	Miami-Ft. Lauderdale	**5.4**	**10**	**7.1%**	**1.5**	**17**	**12**	**194**	**Tampa Bay**	**3**	**FBH**
SITE A	Portland	2.1	25	7.1%	1.1	23	4	133	Seattle	1	B
SITE B	San Antonio	1.9	30	8.3%	0.8	37	5	187	Houston	1	B(F)
SITE C	**Milwaukee**	**1.7**	**31**	**1.2%**	**0.9**	**33**	**14**	**80**	**Chicago**	**2***	**FB**
SITE D	Greensboro--Winston-Salem	1.5	36	4.2%	0.7	47	5	236	Washington	0	
SITE E	**Kansas City**	**2.0**	**26**	**4.8%**	**0.9**	**31**	**10**	**210**	**St. Louis**	**1**	**F**
SITE F	**Cincinnati**	**2.1**	**23**	**2.5%**	**0.9**	**34**	**15**	**182**	**Cleveland**	**1**	**F**
SITE G	Charlotte	2.1	24	9.0%	1.0	27	13	224	Atlanta	2	FB
SITE H	Norfolk-Virginia Beach	1.6	33	4.3%	0.7	42	4	120	Washington	0	
SITE I	Sacramento	2.2	22	11.9%	1.3	19	0	75	Oakland	1	B
SITE J	Las Vegas	1.7	32	19.9%	0.7	48	7	233	Los Angeles	0	
SITE K	Orlando	1.9	28	13.2%	1.3	20	3	82	Tampa Bay	1	B
SITE L	Oklahoma City	1.2	47	4.3%	0.7	45	4	178	Texas	0	(B)
SITE M	**Tampa-St. Petersburg**	**2.6**	**20**	**8.0%**	**1.7**	**12**	**7**	**194**	**Florida**	**2**	**FH**

Notes

Population in 1,000,000s as of July 1, 2004 (latest census estimate)

Population growth from 2000 to 2004 per census estimates

Designated Market Area TV Households in 1,000,000s

Distance in air miles to/from major airports nearest ballparks

Fortune 1000 Companies located in metro area (including those located in other states) per Fortune magazine April 18, 2005

Other Sports are F (NFL), B (NBA), and H (NHL)

Current MLB markets in bold

Business of Baseball Committee

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In This Issue: Purchasing Pennants—The New York Yankees Then and Now, Part 3