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# Reflections on Salary Shares and Salary Caps

Andrew Zimbalist<sup>1</sup>

## Abstract

This article takes a closer look at salary and revenue figures for the four major professional sports in the United States. It shows that the reporting typically offered in the popular media and often picked up in academic work can be rather misleading. The article first considers the conundrums in defining player compensation and then those connected to revenue. On the basis of adjusted data, the article proceeds to look at salary shares in revenue across the four leagues and considers the irony that the salary share in Major League Baseball (MLB) appears to be lower than the three leagues with a salary cap, the National Football League (NFL), National Basketball Association (NBA), and National Hockey League (NHL). It concludes with some analysis of the impact of salary caps and other mechanisms on controlling player costs.

## Keywords

league revenue, player compensation, salary caps, measurement issues

## Introduction

Writing for *Yahoo! Sports* on November 12, 2007, Jeff Passan asserted that the players' salary share of Major League Baseball (MLB) revenue in 2007 was only 41.3%.<sup>1</sup> Passan's number was then picked up by Pete Toms writing for *Baseball Digest* and other journalists.<sup>2</sup> Were Passan correct, or even nearly so, then it would be big news indeed. Because the salary shares in total revenue (TR) in the National Basketball Association (NBA), National Football League (NFL), and National

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Hockey League (NHL) are all in the mid- to high-50s and MLB is the only one of the four major professional sports in the United States, without a salary cap, it might suggest to some that Don Fehr and the Major League Baseball Players Association (MLBPA) have been fighting the wrong fight all these years. Passan's assertion, then, is another reminder that, whether we are theorizing about optimal labor market structures or doing empirical testing, it makes to get the numbers right before plowing ahead.

Accordingly, in this article, I will discuss many of the empirical issues involved in properly measuring the players' shares in MLB, along with the NBA, NFL, and NHL. I will then suggest a preliminary set of conclusions on these shares and conclude with some reflections on what these shares imply about the underlying collective bargaining institutions. Special knowledge of the real world, even though it may sometimes be proprietary or may entail diligent digging, can help sharpen and deepen research by sports economists and, thereby, make it more relevant to policy makers in the sports industry as well as in government.

## **Getting the Numbers Right**

Team payrolls can be measured in a variety of ways. First, they can include only the active roster, the active roster plus the disabled list players, or the active roster, disabled list, plus the reserves. The league with the largest "reserves" list is MLB, where there are 15 players under major league contracts, who are not on the 25-man active roster. Second, they can include or exclude player benefits, usually amounting to between 4% and 7% of salaries. Third, they can include or exclude deferred salaries. If they include them, there is a question about what discount rate to use. Fourth, they can be based on opening day, mid-season or end-season rosters.<sup>3</sup>

Fifth, player contracts have varying lengths. In the MLB, there is no limit on the length of a contract and some players receive guaranteed deals for as long as 10 years. In the NBA, player contracts are limited to 5 years for non-Bird free agents and to 6 years for Bird free agents. In the NFL, contract length is not limited, but, with few exceptions, players sign nonguaranteed contracts. The contracts may be multiyear, but because they are not guaranteed, the team can terminate the contract after any year. In lieu of guaranteed contracts, a large share of players' compensation is paid via substantial signing bonuses. These bonuses account for roughly 50% of total NFL player compensation in any given year. Normally, these bonuses are amortized over the nominal length of the contract in computing annual team payrolls. Here, too, the discount rate employed will affect valuation and the nominal contract length is a rather artificial standard to apply because it is rarely realized.

Sixth, in MLB, teams spend \$20.6 million on average on player development; of this, approximately \$11.8 million on average goes to minor league player compensation.<sup>4</sup> In the NHL, teams typically spend \$1 million to \$2 million annually on their minor league team salaries, but they also frequently own this team and therefore own

the revenues the team generates; this is true for only a minority of MLB teams. In the NBA, there is a very modest outlay for the Development League and here too revenues go to the NBA owners. In the NFL, there is no payment for minor league players.

Thus, when comparing player shares at the top level, it is relevant to consider the substantial additional expenditure on player compensation in MLB due to the structure of its extensive minor league system. To a lesser extent, this is true for the NHL. To be sure, it is important to use a uniform accounting system across the leagues for all these issues in measuring player compensation.

Revenue data, like payroll data, come in different shapes and sizes. One only has to read the definition of revenues in the three salary cap leagues to be convinced of this. In the NFL, NBA, and NHL, the salary cap is defined as a share of defined revenues. Thus, the definition of revenues is an integral part of the payroll determination process and, hence, it is a subject of intense negotiations during collective bargaining. The NFL and NBA have changed the definition of revenues with each new collective bargaining agreement (CBA) because the union has sought a more inclusive definition and because new revenue sources have become available over time.<sup>5</sup>

Here are some examples of the conundrums that must be sorted out. When a team owner also owns another business that trades with the team, the owner can arrange for that trade to occur at any price. This is known as a related party transaction. In a salary cap league or a league with revenue sharing (e.g., baseball), there is a strong incentive for the owner to price the trade in a way that minimizes team revenue or profit and maximizes the revenue or profit of the related entity. The CBA must sort out a way to treat such transactions. The NBA CBA, for instance, has a clause that states that the Knicks deal with Madison Square Garden (MSG) network (both companies are owned by Cablevision) must be valued at the price that the Los Angeles Lakers receive from the team's local television (TV) rights holder.

The NFL introduced its G3 program in the late 1990s to help teams with the private financing component of building new stadiums. In essence, the league makes a grant<sup>6</sup> between \$60 million and \$150 million to the team, depending on the size of the team's capital contribution to construction and on the size of the team's market. The National Football League Players Association (NFLPA) agreed that because new stadiums helped grow league revenues and, thus, help to increase salaries, that the union would support the G3 program by allowing a cap credit in proportion to the size of the private contribution to stadium renovation or construction.<sup>7</sup> The upshot was that this credit was the equivalent of a leaguewide revenue reduction of tens of millions of dollars annually.<sup>8</sup> With the new CBA, which took effect in 2006, the adjustments for G3 loans and security expenditures are still more complex.<sup>9</sup> There are further complications because NFL stadiums are invariably used for other events, for example, college football, concerts, mass rallies, and so on. Because the union does not want to contribute to raising the team owners' revenues from events that do not enter the computation of football-related revenues, involved formulas must

be devised to parse revenues from nonfootball events and to adjust the allowed deductions from cap-based revenues.

A similar problem emerges when an arena hosts multiple types of events during the year. It could be that the NBA and NHL teams play in the same arena, which might also host the Women's National Basketball Association (WNBA), the circus, the rodeo, concerts, and more. In such a case, how is the NBA or the NHL to determine which proportion of permanent signage or year-long suite revenue is attributable to each category of event?

The leagues and unions bargain over these and other arcane issues, and the result is long, complex sections in each league's CBA to set rules for defining revenue. The 2005 NBA CBA, for instance, contains 25 pages dedicated to defining basketball-related income (BRI), the base on which the salary cap, the escrow threshold, and the luxury tax are defined.

Although there is no salary cap in baseball, the revenue definition issue is still hotly contested for several reasons. Chief among them is that MLB introduced a revenue sharing system among the teams back in 1996, that has grown considerably over the past 13 years. In 2008, approximately \$400 million was transferred from the high- to the low-revenue teams. The higher a team's revenue, the more it has to contribute. The lower the revenue, the more it receives. The principal terrain of disputation is related party transactions, where team owners also own the regional sports network (RSN) that broadcasts the teams' games. It appears that several teams underreport the market value of the RSN revenue received by tens of millions of dollars and, in one case at least, this underreporting appears to exceed \$100 million by a substantial margin.

As mentioned above, the NFL, NBA, and NHL each have concepts of sport-related revenues that are intended to be inclusive. Yet, the specifics of the definitions of league revenues, as defined in each league's CBA, still vary. Here are some of the ways the definitions differ. Regarding gate revenue, the NHL's hockey-related revenues (HRR) include revenue that would be generated by complimentary tickets if they were sold, while the NBA's BRI allows for the exclusion of 1.35 million complimentary tickets. The NFL's TR excludes the value of tickets exchanged in barter transactions, while BRI and HRR include them.

Regarding media revenues, the leagues have different conventions for deducting the value of advertising spots used to promote the league. Regarding sponsorship and sponsorship revenues, HRR includes 100% of facility naming rights revenues, while BRI includes 45–50% of such revenues. BRI includes 40% of fixed signage revenue, while HRR includes 65% (or 32.5% for two-team arenas). Regarding premium seating, TR includes all luxury suite revenues net of direct expenses, while BRI includes only 40% and HRR includes 65% (32.5% for two-team arenas). Regarding related party transactions, HRR is less inclusive than BRI.

The foregoing should serve as a caution flag about the nuances in the ways different leagues define salary and revenue. Certainly, the nature of these differences needs to be understood before meaningful salary and revenue comparisons can be made.

## A Preliminary Look at the Evidence

With the above caveats in mind, we can proceed cautiously to review some of the available evidence on salary shares in the top four team sports leagues in the United States.

The foregoing numbers from the NFL are based on total player compensation, measured on a cash, end-of-season basis, and including benefits. The player shares are given both in relation to defined gross revenues (DGRs) and TRs, as defined in the CBAs.<sup>10</sup> Up until 2006, the NFL salary cap was calculated as a share of DGR, but DGR came to include a larger and larger share of football's TRs. In the agreement that commenced in 2006, it was decided to use TR as the base for the salary cap calculation, but to lower the nominal cap percentage from 65.5% of DGR in 2005 to 57% of TR in 2006. As a result, the salary and benefit share of TR jumped from 54.3% in 2005 to 58.4% in 2006.<sup>11</sup>

Two interesting points about this jump need to be made. First, although the share jumped appreciably in 1 year, the share in 2006 was less than 1 percentage point higher than it was in 2004, and it was below the average share of 59.55% during the entire period from 1994 to 2006. Second, the 2006 agreement added a cap adjustment mechanism (CAM), which made it more difficult for clubs to regularly use signing bonuses as a means to go over the official cap. In other words, it tightened the cap (Table 1).

Table 2 below reports the trend in player shares for the NBA since 1995. These data are reported as a share of BRI. As discussed earlier, BRI is more inclusive than DGR, and almost as inclusive as TR. Salary represents cash payouts and includes benefits. As depicted, the players' share rose between 1995-1996 and 2000-2001 but then fell. With the escrow system and luxury tax to supplement the basic NBA team cap, the salary share has remained steady at 57% since the 2001-2002 season. Although precise calculations are not available, it appears that the players' share in total basketball revenue, as opposed to BRI, would be between 55% and 56%.

Reliable data for the players' share in NHL revenues are not available over a multiyear period. However, the 2005 CBA clearly stipulates a mechanism to maintain the players' share in the 54–57% (of HRR) range. The NHL has an escrow system that ensures the player share will remain within the set parameters.

Interestingly, the players' share rises as hockey revenues increase: players are to receive 54% of league revenues (including benefits) when league revenues are below \$2.2 billion; 55% when between \$2.2 billion and \$2.4 billion; 56% when between \$2.4 billion and \$2.7 billion; and 57% when more than \$2.7 billion.<sup>12</sup> The following hypothetical illustration makes clear why it is sensible for the players' share to rise as revenues increase.

|               | Year 1         | Year 2         | Year 3         | Year 4         | Growth Rate |
|---------------|----------------|----------------|----------------|----------------|-------------|
| Revenues      | \$70 million   | \$77 million   | \$84.7 million | \$93.2 million | 10%         |
| Payroll (54%) | \$37.8 million | \$41.6 million | \$45.8 million | \$50.3 million | 10%         |
| Other costs   | \$30 million   | \$30.9 million | \$31.8 million | \$32.8 million | 3%          |
| Profits       | \$2.2 million  | \$4.5 million  | \$7.1 million  | \$10.1 million | 66.2%       |

**Table 1.** NFL Salary Shares, 1994-2006

| League Year       | Player Compensation<br>as % of Total Revenue | Player Compensation<br>as % of DGR | TR/DGR |
|-------------------|--|------------------------------------|--------|
| 1994              | 62.10%                                       | 69.40%                             | 1.118  |
| 1995              | 64.70%                                       | 73.10%                             | 1.130  |
| 1996              | 65.00%                                       | 74.00%                             | 1.138  |
| 1997              | 57.60%                                       | 66.20%                             | 1.149  |
| 1998              | 61.40%                                       | 69.00%                             | 1.124  |
| 1999              | 63.00%                                       | 71.30%                             | 1.132  |
| 2000              | 62.60%                                       | 70.80%                             | 1.131  |
| 2001              | 56.90%                                       | 64.40%                             | 1.132  |
| 2002              | 56.10%                                       | 63.60%                             | 1.134  |
| 2003              | 54.50%                                       | 62.00%                             | 1.138  |
| 2004              | 57.50%                                       | 65.70%                             | 1.143  |
| 2005              | 54.30%                                       | 62.30%                             | 1.147  |
| 2006              | 58.40%                                       | N/A                                |        |
| Average           | 59.55%                                       | 67.65%                             | 1.136  |
| Average 2003-2006 | 56.18%                                       | 63.33%                             |        |
| Average 2000-2006 | 57.19%                                       | 64.80%                             |        |
| Average 1994-2006 | 59.55%                                       | 67.65%                             |        |

Note: DGR = defined gross revenues; NFL = National Football League; TR = total revenue.

If league revenues increase at a faster rate than the economywide inflation rate and if player salary growth follows revenue growth, then the pattern of outcome will resemble that shown in the table above. Because overall revenues and player compensation have grown at the same rate, but the remaining roughly 55% of costs augment only at the national inflation rate, the profitability necessarily has to grow and it may do so very rapidly.

A similar pattern holds when comparing salary shares across leagues. Because teams in MLB, the NFL, NBA, and NHL all have certain basic costs, such as front office, facility rental and/or maintenance, team travel, promotion, ticketing, and so on, the share of TRs represented by these costs shrinks as revenues rise. Other things equal, this leaves more room for profit, at any given player compensation share, in those leagues with higher revenues.<sup>13</sup>

As depicted in Table 3, the player salary share of TRs in MLB displays more volatility than the other U.S. team sports; understandably so, because MLB is the only U.S. league without a salary cap.

The player compensation figures in Table 3 include benefits and bonuses for all players on the 40-man major league roster.<sup>14</sup> The revenue data include only the revenue emanating from baseball-related activities. Thus, for example, if Major League Baseball Advanced Media (MLBAM; MLB's Internet business) earns revenue from selling tickets to nonbaseball events, this revenue would not be included above.

**Table 2.** NBA Salary Shares, 1995-1996–2006-2007

|                     | Salary Share of BRI |
|---------------------|---------------------|
| 1995-1996           | 53%                 |
| 1996-1997           | 55%                 |
| 1997-1998           | 57%                 |
| 1998-1999           | 59%                 |
| 1999-2000           | 62%                 |
| 2000-2001           | 65%                 |
| 2001-2002           | 57%                 |
| 2002-2003           | 60%                 |
| 2003-2004           | 57%                 |
| 2004-2005           | 57%                 |
| 2005-2006           | 57%                 |
| 2006-2007           | 57%                 |
| 2003-2004–2006-2007 | 57%                 |
| 2000-2001–2006-2007 | 59%                 |
| 1995-1996–2006-2007 | 58%                 |

Note: BRI = basketball related income; NBA = National Basketball Association.

Overall revenues generated by MLB-connected businesses exceeded \$6 billion in 2007; of this, approximately \$5.7 billion came from MLB activities.

The player share reached a peak of 67% of revenues in 2002, but since has fallen to 51%. This decrease is a function of new provisions in the 2002 CBA (sharply increased revenue sharing with high marginal tax rates, a higher luxury tax on the top payrolls, and debt limitation rules) as well as the rapid growth in MLB revenues over this period (causing the players to play catch up) and more stringent player disability insurance rules with higher premiums.

Before comparing MLB's apparently low 51% with the 55% of HRR in hockey, the 57% of BRI in basketball or the 58.4% of TR in football, it is necessary to make at least one important adjustment. MLB teams have to cover very substantial minor league player costs, whereas the NBA (National Basketball Development League [NBDL]) and the NHL (American Hockey League [AHL] and a few players in the East Coast Hockey League [ECHL]) have modest minor league player costs, and the NFL has none. The NBDL and AHL also generate revenues that help to defray the player costs. The minor league MLB teams are mostly independently owned and, in any case, the revenues earned do not go to the major league team, yet the major league team pays the salaries of all the players on affiliated clubs.

In 2007, the average MLB team spent more than \$20 million on its player development system. Of this, more than \$11.5 million went to pay the salaries of the minor league players. Generally, each MLB team has six minor league affiliates. Teams also run fall and winter development camps and leagues. Together, an average of 6.2% of MLB revenues went toward these minor league salaries.

**Table 3.** Major League Baseball (MLB) Salary—Revenue Data: 1990-2007 (thousands of dollars)

| Year              | Total Player Compensation | Total Revenue | Ratio |
|-------------------|---------------------------|---------------|-------|
| 1990              | 532,740                   | 1,277,399     | 42%   |
| 1991              | 681,488                   | 1,456,217     | 47%   |
| 1992              | 906,420                   | 1,669,878     | 54%   |
| 1993              | 1,007,887                 | 1,862,682     | 54%   |
| 1994 <sup>a</sup> | 758,536                   | 1,209,286     | 63%   |
| 1995 <sup>a</sup> | 864,783                   | 1,384,990     | 62%   |
| 1996              | 1,036,930                 | 1,775,170     | 58%   |
| 1997              | 1,213,741                 | 2,067,220     | 59%   |
| 1998              | 1,383,764                 | 2,478,850     | 56%   |
| 1999              | 1,618,518                 | 2,761,060     | 59%   |
| 2000              | 1,878,436                 | 3,324,828     | 56%   |
| 2001              | 2,149,660                 | 3,536,546     | 61%   |
| 2002              | 2,298,347                 | 3,432,156     | 67%   |
| 2003              | 2,355,663                 | 3,728,096     | 63%   |
| 2004              | 2,341,007                 | 4,257,770     | 55%   |
| 2005              | 2,493,938                 | 4,743,972     | 53%   |
| 2006              | 2,636,186                 | 5,205,535     | 51%   |
| 2007              | 2,882,560                 | 5,654,511     | 51%   |
|                   | Average 2003-2007         |               | 54%   |
|                   | Average 2000-2007         |               | 57%   |
|                   | Average 1994-2007         |               | 58%   |

<sup>a</sup> Shortened seasons due to players' strike.

If we add the 6.2% that goes to minor league baseball players (without generating revenue for the major league club), the total player share in MLB revenue rises to 57.2%, putting it ahead of the NBA and NHL shares. Other special features of the baseball labor market reinforce the downward pressure on annual player salaries. First, baseball does not have statutory limits on the length of player contracts. Alex Rodriguez just signed a 10-year contract worth between \$275 and \$300 million. If MLB had a rule, as does the NBA, limiting A-Rod's contract to 6 years, how much would he have been paid on an annual basis? Competitive forces would have led to something considerably higher than \$28 or \$29 million a year, and MLB's salary share would be higher.

Second, some of the money that teams pay out for players in MLB does not go to the players; rather, it goes to Japanese companies, thanks to the idiosyncrasies of baseball's posting system. Thus, the Red Sox paid \$101 million for Matsuzaka, but only \$50 million of this went to Matsuzaka and the Yankees paid \$46 million for Igawa, but only \$20 million was part of the players' salary share.

That said, MLB has higher TRs than hockey or basketball and we would expect its player compensation share to be higher. The MLB adjusted share of 57.4% during

2006 and 2007 is basically at the same level as the NBA share. Because some NHL teams do not own their AHL affiliates (and do not reap revenue from the club's activities, but nonetheless cover compensation for the team's players), some of their minor league costs should also be added to its player share. After this adjustment, the NHL player share appears also to be around 58%. Thus, the recent MLB adjusted share is very similar to the adjusted shares in the NBA and the NHL, but, given the higher revenues in MLB, one would expect its share to be above those leagues.

## Discussion

The abiding question is why, given the presence of a salary cap system in the NBA, NHL, and NFL and the absence of a cap in MLB, MLB players do not command a higher share of sport revenues. The MLBPA has made a religion of avoiding a salary cap system at all costs and, as a result of this orthodoxy, has endured multiple work stoppages over the years. Has the fight been in vain?

Unfortunately, there are no definitive answers to that question, but the very fact that the question can be asked is of profound interest. After all, if cap and open systems are salary share neutral, but cap systems, as economic theory instructs us under most assumptions, are more likely to promote competitive balance, then cap systems would appear to be a preferred mechanism for optimizing league performance.

The tensions experienced in the NFL since the 2006 move to using TR as the cap base, however, suggest a possible disadvantage to a cap system. Namely, in the presence of unequal club revenues, if all teams are compelled to have payrolls within a certain narrow range, and such range is determined based on leaguwide revenues, then markedly unequal rates of profit across the clubs may result. Minimally, this outcome produces tension and conflict among the team owners and, maximally, it could challenge financial stability across the league.

In this way, the more open system of MLB may be preferable. As stated above, MLB has noncap mechanisms that appear to be very effective at controlling team payrolls. When MLB introduced its more extensive and mature system of revenue sharing in the 2002 CBA, the owners offered the players association the option of setting a minimum team payroll at \$40 million. The players association rejected this offer for three reasons (a) the MLBPA has always maintained that it was in favor of free labor market and having a payroll floor would be inconsistent with this position; (b) the MLBPA saw the floor as a prelude to a ceiling, which they wanted to avoid; and, (c) back in 2002, the lowest team payroll was close to \$40 million anyway and the MLBPA expected all teams to naturally rise above this threshold.

The owners' thought behind the minimum payroll was that some teams would be receiving revenue transfers upward of \$30 million annually in the name of promoting competitive balance. If the transfers were indeed to level the playing field, then the recipient clubs should use their transfers on improving their rosters. The minimum payroll would support this goal.

What was perhaps not anticipated by the MLBPA is that the introduction of the revenue-sharing welfare system in baseball would create a new model for success of low-revenue franchises. Basically, if a team received \$30 million in sharing transfers and another \$30 million from the central fund (from national and international media, sponsorship, and licensing revenues), then by lowballing payroll, such a team could almost guarantee itself an operating profit at season's end. Indeed, several teams apparently adopted this strategy and lowered payroll into the \$14–\$30 million range over the ensuing years. The good news was that this option preserved the profitability and financial strength of low-revenue clubs, the bad news is that it did little to provide ownership incentive to produce a winning team or to promote the desideratum of competitive balance.

One of the strongest claims in favor of more open labor markets is that they are the mechanism by which higher team revenues lead to higher player salaries. That is, under competitive conditions, a team will find itself pushed to offer a player a salary equal to his expected marginal revenue product.<sup>15</sup> So, as revenues rise, so will salaries. This argument is sound but requires two caveats.

First, a salary cap mechanism can accomplish the same result, as salaries are defined explicitly as a share of revenues. Indeed, in the NHL cap system, the salary share increases as revenues grow. Nonetheless, the issue remains under a cap system, whether all the appropriate revenues are being reported accurately. If, for instance, some related party revenues are being underreported, then a cap system potentially will not capture a fair share for the players. In contrast, an open system is more likely to capture such revenues, because teams with auxiliary revenue streams will take these into account as they bid for players in the open market. This point segues directly to the next caveat.

Second, the presence of substantial related party revenues lends greater attractiveness to a cap system. This is because related party revenues are another source (in addition to, e.g., market size or facility characteristics) of major revenue differentials among the clubs. To the extent that some clubs may be receiving \$100 million or more annually in related party revenues, the ability of such clubs to outbid their competitors for the best free agents and to raise the price on other players beyond the means of clubs without related party revenues is heightened, and the issues of competitive imbalance and financial fragility become more pressing. Under such circumstances, the desirability of a cap system may become greater. Of course, as indicated above, salary caps have come with salary floors, and minimum payrolls require a certain degree of revenue balance across teams to be viable.

The foregoing is a general consideration of some of the extant structural issues confronting the management of sports leagues. The purpose of these reflections has not been to resolve the issues, but, rather, to point out the need for empirical rigor in defining the dimensions of the problem and for more nuanced analysis of the complex forces at play.

## Notes

1. Jeff Passan, "Comfortably Numb: Free Agents Paydays Should Grow," *Yahoo! Sports*, November 12, 2007.
2. See, for instance, Pete Toms, "Beyond the Diamond," *Baseball Digest*, March 18, 2008, and Liz Mullen, "Flood of Talent Keeps Salaries in Check," *Sports Business Journal*, March 17, 2008.
3. It is particularly important to pay attention to this distinction when looking at the relationship between payroll and performance. Teams in the playoff hunt frequently add to their payroll toward the end of the season, while teams out of the hunt unload players. This raises the payroll of successful teams (and vice versa), increasingly the correlation between payroll and performance, but in this case it is the performance that causes payroll rather than the other way around.
4. The \$11.8 million does not include compensation to the players on the 40-man major league roster.
5. The National Basketball Association (NBA) switched from defined gross revenues (DGR), basically media plus gate revenues, to basketball-related income (BRI), including various categories of arena revenues, in 1999. In the 2005 Collective Bargaining Agreement (CBA), they kept the BRI term, but broadened the concept further to make it somewhat more inclusive. The National Football League (NFL) introduced its DGR with its salary cap in 1993. In that concept, a distinction was drawn between revenues supposedly directly generated by the players (media and gate), called DGR, and revenues not directly generated by the players, excluded defined gross revenues (EDGR). However, the 1993 CBA also stipulated that if the ratio of EDGR/DGR increased beyond its 1993 level, that any overage (known as spillover) would be added into the revenue base for calculating the salary cap. Spillover did grow over time, until the NFL and the National Football League Players Association (NFLPA) decided to shift to the TR concept in 2006, which nominally includes all football-related revenues. When they made this switch, the league also lowered the designated percentage going to the players from 65.5% to 57%.
6. The G3 contribution is referred to as a loan, but it is paid back with funds (34% of club seat revenue) that the team would transfer to the league in any event. So, it is more accurately described as a grant.
7. The actual computation of the credit is convoluted in the extreme. Fifty percent of up to a maximum of \$300 million per project in present value terms would be allocated for more than 15 years, or a maximum of \$20 million per year per project. On a per team basis, this amounts to a \$625,000 cap credit on each team's salary cap per project. Thus, in 2005, for instance, with the player share being 65.5% of DGR, this was the equivalent of a downward revenue adjustment of just more than \$954,000 per team, or \$30.5 million leaguewide.
8. See previous footnote.
9. In 2007, for instance, the salary cap was set by taking 57% of "TR," subtracting benefits, and dividing by 32, to get the per team cap. Within this 57%, there is assumed to be a credit of 1.8% to cover the former G3 and security credit. If the G3 and security credit exceeds

1.8%, then the league is entitled to an additional credit up to 2.3%. Expenditures on G3 and security in excess of 2.3% can only be credited by decision of an arbitrator.

10. The source of this table is author's communication with the NFL. As indicated in the table, TR exceeds DGR by between 11.8% and 14.7%, depending on the year.
11. As I write in mid-April 2008, the 2007 share has not yet been officially tabulated, but the author was told by a league executive that the share should come in very close to the 2006 share.
12. For the 2008-2009 season, the players' share of hockey-related revenues (HRR) is projected to increase to 56%, or roughly \$56.3 million per team, with a team payroll floor of \$40 million.
13. Ironically, the NFL displays a contrary pattern. One exception to the general pattern is the rapidly escalating cost of building stadiums and arenas. Insofar as new facility construction is funded by the team or the league (as in the NFL's G3 program), then the tendency for rising salary shares to follow rising revenues may be attenuated or reversed.
14. For most MLB teams, the 40-man roster payroll is usually only \$1 million or \$2 million above the payroll for the active 25-man roster.
15. Or, to the extent it is known, one dollar more than the player's MRP to the club with the next highest MRP for the player.

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