



# The Value of Sports Franchises

|   |
|---|
| By – David Vine                                       |
| Advisor – David Larcker                               |
| Wharton Undergraduate Research Scholars<br>WH-299-301 |
| April 2004  |

## Introduction:

Research studies have long focused on the complexities of business valuation for a typical corporation, but very few have considered the mystery that looms over the sports franchise as an entity. Over the last few years, the newspapers have been filled from cover to cover with stories of team bankruptcies, payroll shortfalls, and city relocations. Furthermore, almost every major sport in the last decade has experienced a work stoppage, usually a result of the huge operating losses allegedly experienced by the owners. Nevertheless, with inflation remaining steady over the last few years, and the stock market in one of its worst funks in history, the market price for organizations has still managed to soar. This is exemplified by Sections A-D of the appendices, which shows the upward trend in Forbes' valuations from 1998-2003 across all four major sports.

What then, one may ask, can explain the outrageous prices that individuals have been willing to pay to acquire a franchise of their own? Clearly, this phenomenon doesn't seem tied to any wealth effect. In this paper, I will attempt to explain the drivers behind the value of sports franchises. I will pay attention to all four major sports, both in isolation and as a large common group. First, I will take a look at the analytical papers and existing research that have already been published. Then, I will examine in depth the data gathered by Forbes Magazine on an annual basis and compare these appraised values to the transactions that have actually transpired in the industry since 1999.

As the following discussion will show, most existing theory and my own empirical analysis of Forbes' data supports the notion that revenue is a key driver behind the valuation of sports franchises. However, my examination will also show that there is

more to the story than just revenues, and that Forbes fails to accurately account for all of a team's worth. Specifically, my transaction analysis shows that franchises typically demand a 27% premium to the figures devised by Forbes.

It should be noted that although the conclusions I have reached in this project are well justified, they are far from fully exhaustive. Nevertheless, they should still serve as a sufficient fundamental basis for future inquiries into the nature of the industry. If owners can be provided with a solid blueprint as to how they should run an organization profitably, perhaps many of the economic problems that hinder the prosperity of the sports world today can be eliminated. The realization of a more efficient market will not only serve to increase the loyalty of fans, but also should provide a huge stimulus to the domestic economy.

### **Existing Literature:**

#### *Value As A Sum Of The Parts:*

One of the most distinguishing features of a sports franchise is the supreme importance of intangible assets. For the standard corporation, tangible assets such as machinery, property, and equipment are primary drivers in the valuation of a company. However, these are not of preeminent relevance in considering the value of a sports entity. Rather, it is the intangible assets, things such as player contracts, television rights, stadium leases, advertising agreements, concession agreements, luxury suite agreements, season

ticket-holder relationships, coach and management employment contracts, draft rights, and goodwill that affect the market price.<sup>1</sup>

Many standard procedures such as cost, sales comparisons, and income valuation approaches (discount cash flow analysis) are available to evaluate the aforementioned components, as with any other corporation, depending upon the particular situation at hand. However, the choice of approach is very important, as it is imperative for franchise owners to provide a fair market assessment of their intangible assets in order to receive certain tax benefits from the Internal Revenue Service. “Section 197” delineates the rigid rules governing the permissible amortization of acquired intangible assets for income tax planning.<sup>2</sup>

Understanding and knowing the tax code can help potential franchise acquirers maximize their return on investment. Typically, the exchange of a sports franchise is treated as an asset transaction, which provides flexibility to purchasers who want to realize certain tax write-offs. This is likely an extremely important consideration for large corporate firms that engage in ownership such as Disney and Time Warner. Specifically, in any such deal, the intangible assets must be re-appraised at the time of sale and stepped up to their fair market value on the purchaser’s balance sheet. As each of these items is taxed differently and only a few are amortizable for federal income tax purposes, certain incentives are imposed on new owners to allocate the purchase price to the assets that will receive the most favorable tax treatment. However, although there certainly is wiggle room, firms may be called upon to justify the way that they distributed the

---

<sup>1</sup> Thornton, Eric A.

<sup>2</sup> Thornton, Eric A.

purchase price. Accordingly, it is often wise for them to follow the industry standards that have been established. The following chart indicates the common methodologies used in most transactions:<sup>3</sup>

| <b>TABLE A</b>                     |   |
|------------------------------------|---|
| <b>Intangible Asset</b>            | <b>Valuation Methodology</b>            |
| Player Contracts                   | Cost Approach                           |
| Franchise Agreements               | Income Approach                         |
| Stadium Leases                     | Marked Based Analysis / Income Approach |
| Workforce                          | Cost Approach                           |
| Intellectual Property              | Typically encompassed in workforce      |
| Contracts                          | Income Approach                         |
| Season-Ticket Holder Subscriptions | Income Approach                         |
| Acquired Goodwill                  | Residual Analysis of Price Allocations  |

*Case Analysis: Derived From Chistina Vogel's Valuation of a Sports Franchise*

In situations such as this where there is not much data available and a standard has yet to be established by theorists, it is often useful to search out for precedents put forth by the judicial system. In this particular field of study, there is one case that deals directly with the issues at hand in this project. In Fishman v. Estate of Wirtz, the court examined the value of the Chicago Bulls in an effort to resolve the amount of damages to be awarded to Illinois Basketball Inc., who claimed that their purchase of the franchise had been interfered with by Chicago Professional Sports Corporation. For the court, the resolution

---

<sup>3</sup> Thornton, Eric A.

of this conflict centered on two key issues: 1) should the court include intangible assets, such as the prestige of ownership, in the value of a sports franchise and 2) why buyers might be willing to pay a price that far exceeds that which traditional valuations metrics intimate is the market value.<sup>4</sup>

In order to determine the proper damages that should have been awarded to Illinois Basketball, Inc., Christina Vogel, a professor at Wake Forest University, explains that the court found it necessary to determine the “lost appreciation value” of the Chicago Bulls. Inherent in this task was the need to produce an estimate of the present value of the franchise. In order to do this, the court laid out many principles that they felt best highlighted the value that one could reasonably attribute to a sports franchise. Comparable transactions of other National Basketball Association (NBA) teams were the most central factor of the court’s consideration. However, their examination was much more comprehensive, and included concentration on: “(1) the trend in value of NBA clubs as shown by past sales; (2) profits and losses of NBA clubs, and the trend of profits and losses; (3) profits and losses of the Bulls, and the trend of profits and losses; (4) testimony of NBA owners and other experts; (5) changes in tax laws making ownership more or less desirable; (6) recent developments in pay TV; (7) changes in availability of arenas; and (8) changes in free agent rules.”<sup>5</sup>

Despite the detailed effort of this independent review, the court ignored several factors that industry experts consider to be vital in making any predictions about the true worth of a franchise. First and foremost, although the court acknowledged that player contracts

---

<sup>4</sup> Vogel, Christina

<sup>5</sup> Vogel, Christina

were indeed valuable assets, they did not believe they could be used to directly help in the appraisal of the team. The court came to this rationale as a result of the distinctness of each player contract, which were all structured independently by the athletes. As these could not be compared amongst themselves or to those in other team sales, there was no proper basis to guide a reasonable calculation of their importance.<sup>6</sup>

The court also ignored the “ego factor” in its assessment because it was deemed that a corporation could not realize this psychological prowess like an individual could. The ego factor is a term that is often used to describe the pleasure that an owner derives from the prestige of sitting at the helm of a professional sports team’s enterprise. Although it has always been difficult to prove the presence of this attribute through quantitative analysis, one need not look much further than the actions of George Steinbrenner of the New York Yankees or Mark Cuban of the Dallas Mavericks to see how much some people enjoy this limelight. In fact, during the trial, various NBA owners were called in and provided sworn in testimony confirming that they viewed their position as status symbols that they relished. William Putnam, then owner of the Atlanta Hawks, stated that the ego factor, not financial or tax considerations, was the premier consideration in valuing a sports franchise. This statement provides some clarity to why owners would take over beleaguered teams that have failed miserably from an economic standpoint for years. Consequently, the court’s decision here was certainly questionable, as at a minimum, IBI’s majority shareholders could have enjoyed some of this gratification.<sup>7</sup>

---

<sup>6</sup> Vogel, Christina

<sup>7</sup> Vogel, Christina

Furthermore, the court did not glance at revenues, considered by many to be the best gauge of value, and rather, focused primarily on the numbers provided by the balance sheet. This was a strange decision, as the balance sheet, which presents a snapshot of the assets, liabilities, and equity of a corporation, is for the most part comprised of data listed at historical cost. The court attempted to extrapolate from these figures and derive the fair market value of the equity of the franchise, but any such extension is slightly arbitrary. Further, this choice also forced the court to ignore the advantages provided by media distribution rights, which is also a leading source of franchise profitability.<sup>8</sup> The extent of this oversight is substantiated by the huge appraisals given to teams like the New York Yankees, which employ their own cable network (YES Network), and the tremendous value of NFL franchises that result from the most lucrative television deals in professional sports.

In analyzing the decision of the court, Vogel also provides insight into an “updated approach” for sports valuation. She alludes to the extensive research compiled by Financial World Magazine, which ascertained that revenues, expenses, debt obligations, and venue rights were the most important determinants of value. Forbes Magazine also came to the same realization, and accordingly, both apply a multiple to revenue based upon these others factors to arrive at a value of the entity on an annual basis.<sup>9</sup>

Revenue is considered to be the most vital factor in valuation by both Financial World Magazine and Forbes because it is believed to be much more representative of long term values than operating income. The reasoning behind this is that many things that affect

---

<sup>8</sup> Vogel, Christina

<sup>9</sup> Vogel, Christina



the franchise over the short term are included in operating expenses but obviously have no bearing on the future status of the organization. For example, signing bonuses will significantly reduce operating income for any given year, but should not affect the overall profitability of the team moving forward. It should also be noted that there are many different forms of revenue, such as franchise revenues resulting from suites, concession, parking and advertising, ticket revenue, venue naming rights, team merchandising and televisions fees. These all are vital to the overall value of a franchise, and should be considered in any true examination of its fair market value.<sup>10</sup>

The irrelevance of operating income as a tool for guiding value has been exemplified in the 2001 litigation between the National Football League and the Oakland Raiders. In this trial, the NFL was forced to turn financial statements over to the court. The treatment of some of the accounting figures in these documents should illustrate to the public why they should ignore profit or loss figures that are cried by owners. For example, the Buffalo Bills showed \$7.8 million in stadium expenses despite the fact that these are all assumed by Erie County. Such a manipulation is only one of the many ploys owners use to lower their profitability to avoid taxes. Accordingly, these numbers are subject to arbitrariness and often misrepresentative of a team's well being.<sup>11</sup>

Despite these attempts by Financial World Magazine and Forbes to provide accurate representations of the value of sports entities, transaction prices often far exceed that which is presented in their annual findings. Is this solely a result of a prestige factor or is something else involved here as well? For example, in 1998, the Dodgers sold for \$311

---

<sup>10</sup> Vogel, Christina

<sup>11</sup> Badenhausen, Kurt and Lesley Kump

million, almost \$80 million more than Forbes' estimated market value of \$236 million. Many analysts believe that there are indeed other relevant factors that often escape Forbes' analysis. Specifically for the Dodgers, the owners also owned News Corp., the owners of Fox Networks, and thus the deal brought huge ratings to the company and in many ways complemented their niche products.<sup>12</sup> The California Angels were similarly bought for the value that they could add to the extremely well marketed Disney image and broadcasting unit.

### **Data Collection:**

The most complicated process of almost any empirical research study is data collection. This is the area where classroom work is distinguished from real world experience, as under a school's umbrella, data is presented in its ideal form whereas in actuality things are messy and often imperfect. This prophecy can certainly be extended as a characterization of my efforts to discover the mechanics of sports valuation. It was much more difficult to gather information than I had expected, and in fact, I was even forced to revise my goals for the project.

My initial proposal called for me to conduct a transaction analysis in hopes of determining the various factors that affect franchise value. I planned on accomplishing this task through analyzing various changes in ownership that had taken place over the last several years and the range of issues that can drive a sport team's cash flows. After all, just like any other business, a sports franchise should technically be worth the present

---

<sup>12</sup> Vogel, Christina

value of its expected future cash flows. Specifically, I hoped to conduct a multiple variable regression, using sales price as the dependent variable, and factors such as revenue, attendance, team performance, and debt/value ratios as the independent variables.

However, as I proceeded with gathering the numbers, it became very apparent that it would be impossible to conduct such analysis of prior transactions. Although purchase prices were readily available (the dependent variable), the figures corresponding to the independent variables such as revenues and debt/value ratios were not accessible moving backwards. As most sports franchises are privately held, there is no obligation to report historical data, or really any present economic status as well.

This highlights the most perplexing problem of any analysis of sports franchises. In contrast to the typical firm that must meet SEC regulations and publish financial statements annually, sports franchises typically opt to be secretive about their profitability and sources of revenue. Accordingly, they do not publish their internal records, which in turn makes it impossible to have a first hand account of their internal operations. Only secondary sources can be accessed, which unavoidably, are subject to certain inaccuracies.

That being said, the data provided by Forbes truly became the centerpiece of my efforts. One of the premier magazines, often commended for its thorough investigations and dedication to accurate journalism, Forbes clearly has the reputation to give credence to its findings. Accordingly, I used their website to gain access to their archives and the information they have gathered on sports franchises since 1998. Please refer to the

appendices to view the data sets, which were also compiled with some attendance figures from ESPN.

### **Empirical Research:**

#### *Forbes Transaction Analysis:*

Drawing upon my earlier discussion about the tendency of Forbes to understate the value of franchises, I decided it would be wise to analyze transactions across all four major sports in the last few years. Specifically, for all changes in ownership from 1999-2003, I compared the actual sales price to the appraisal given by Forbes in the year preceding the deal. Overall, franchises traded at a 27% premium to the amount listed in the magazine, which can be interpreted to suggest the presence of the “ego factor.” A detailed data set is presented in Appendix E, but the table below presents summary statistics for each sport.

| <b>TABLE B</b>             |                 |                   |                 |               |
|----------------------------|-----------------|-------------------|-----------------|---------------|
| <b>Sport</b>               | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> |
| Average Forbes Value:      | \$354           | \$175             | \$241           | \$132         |
| Average Transaction Price: | \$632.50        | \$240.86          | \$268.10        | \$131.23      |
| Average Premium            | 79%             | 38%               | 11%             | -1%           |

Surprisingly, the results for each sport are quite different, with football teams demanding much larger premiums than any other sport. Furthermore, hockey transactions even occur at slight discounts, another astonishing finding. A possible explanation for these discrepancies is the actual financial standing and potential of each league. Without

question, football is the soundest sport financially, with a salary cap limiting player expenses and the most lucrative television deals, while hockey is the weakest in these areas. Furthermore, perhaps the glamour of football surpasses that of the other sports, and owners are thus much prouder to own an NFL team than a NHL team. These explanations seem more than plausible given the stigmas attached to each of these sports by society.

*Recent Transaction Examples And Discussion:*

In 2003, the Boston Celtics were sold to venture capitalists for \$360 million, a price tag that represented the highest amount ever paid to acquire a professional basketball team. This transaction occurred at a 31% premium to the calculation performed of the Boston Celtics by Forbes in 2002 and at a multiple of 3.8 times the team's revenue. This far exceeded standard NBA multiples, which typically fall in the 2.5 to 3 range. In trying to understand the cause of this discrepancy, Forbes questioned bankers familiar with the deal. Allegedly, the negotiating team made several optimistic assumptions, such as the amount of playoff games the Celtics would host and the amount of stadium revenues they would be able to squeeze out from Jeremy Jacobs, the owner of the Fleet Center. To finance such a purchase, the capitalists, led by Wycliffe and H. Irving Grousbeck, obtained \$180 million unsecured debt. Typically, the NBA imposes a limit of \$100 million, but in the case, it relaxed its guidelines as this propelled the revenues it would soon receive for the Charlotte expansion franchise. Regardless, the sale of the Celtics still appears to be guided by some ego factor, as the projections made by the capitalists were somewhat unrealistic. It seems more probable that these explanations were used to

obtain more favorable debt agreements, and that the acquirers were willing to assume a lot of risk for this once in a lifetime opportunity.<sup>13</sup>

Earlier this year, negotiations began to take place for the New Jersey Nets, the two time defending champions of the Eastern Conference in the NBA. On February 17, 2003, Forbes valued the Nets, a firm with an income of approximately \$4.5 million, at \$217 million. Nevertheless, the current owners agreed in principal to sell the team to Bruce Ratner for roughly \$300 million, a figure that again far exceeds that which Forbes presented. Ratner, a real estate developer, intends to move the team from the Continental Arena to a new state of the art complex he would construct in Brooklyn that would serve as the center of a \$2.5 billion office, residential and shopping complex. Clearly, these potential additions would likely juice up revenues, with attendance likely to soar because of the surrounding attractions. Furthermore, a Brooklyn location would provide far easier access to fans than the Continental Arena, as the city has a fully developed transportation system. In this deal, it does seem that Ratner can add value to the numbers Forbes generated by moving cities, thus justifying some premium. However, with up front costs likely to reach into the billions, and no inflows projected for about 10 years, it is questionable whether an \$80 million premium was truly warranted.<sup>14</sup>

*Forbes Multivariate Regression Analysis:*

In order to dig deeper and complete the aforementioned task of determining which factors most affect the market price of a sports franchise, I also collected data on a multitude of

---

<sup>13</sup> Badenhause, Kurt and Lesley Kump

<sup>14</sup> <http://sports.espn.go.com/nba/news/story?id=1714858>

variables that one would imagine to be vital to a sports franchise. These variables included revenue figures, attendance records, leverage ratios, risk proxies, and team performance measures. These factors were used as the independent variables in multivariate regressions, with Forbes' value acting as the sole dependent variable. I ran 5 different models for each sport in isolation and then as a combined entity. In each of these models, Debt/Revenue and TRPS (team relative productivity score) were used as variables to measure risk and team performance respectively. For clarity, TRPS compares the number of wins per player payroll relative to the rest of the league. Below are the descriptive coefficients for each model, while the t-statistics can be found in Appendix J.

| <b>TABLE C: DESCRIPTIVE STATISTICS (Coefficients)</b>  |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 1: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Operating Income)X<sub>3</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | 482.7935*       | 220.6666*         | 593.0414*       | 240.0713*     | 353.0970*  |
| <b>Debt/Revenue</b>  | 43.3003         | 23.9015           | -13.2022        | 12.3389       | 28.1356    |
| <b>TRPS</b>  | -0.1176         | 0.1928            | -2.8010*        | -0.8135*      | -0.9561*   |
| <b>Income</b>  | 3.5263*         | 0.6587            | 4.7631*         | 2.9727*       | 6.6186*    |
| <b>R Square</b>  | 0.7070          | 0.0906            | 0.4996          | 0.3689        | 0.5394     |

Model 1 shows that operating income will show up as a significant predictor of value, given that there are no revenue proxies in the model. A surprising feature is the significant negative coefficient given to TRPS in several of the tests, indicating that value is negatively related to team performance. However, the low R Squares (relative to Table D-G) and the significant intercepts show the weakness of this test of predicting value.

| <b>TABLE D: DESCRIPTIVE STATISTICS (Coefficients)</b>  |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 2: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Total Revenues)X<sub>3</sub> + (Total Expenses)X<sub>4</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -12.8575        | 30.9665           | -217.0535*      | -20.4887      | -91.3932*  |
| <b>Debt/Revenue</b>  | 16.5265*        | -8.5810           | -0.5032         | 2.3022        | 7.0044     |
| <b>TRPS</b>  | -0.1175         | -0.0779           | 0.0364          | -0.1977*      | -0.2357    |
| <b>Revenues</b>  | 3.8219*         | 2.6754*           | 3.2947*         | 2.8567*       | 5.9244*    |
| <b>Expenses</b>  | -0.3804         | 0.0258            | -0.8722         | 0.0375        | 2.0214*    |
| <b>R Square</b>  | 0.9540          | 0.8647            | 0.9173          | 0.9381        | 0.8846     |

Model 2 breaks up operating income into total revenues and total expenses. The importance of this separation is highlighted by the improvement in the R Squares from Table C to Table D. We also can see the preminent relevance of revenues, which maintain high coefficients and have emerged as a significant predictor of value in all of the models.

| <b>TABLE E: DESCRIPTIVE STATISTICS (Coefficients)</b>  |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 3: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Gate Receipts)X<sub>3</sub> + (Payroll)X<sub>4</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | 346.1121*       | 173.6968*         | -67.9440        | 39.5076       | -125.6140  |
| <b>Debt/Revenue</b>  | 21.5139         | -15.8540          | -6.4470         | 4.3752        | 20.6415    |
| <b>TRPS</b>  | -0.4443         | -0.2559           | -0.0231         | -0.2813       | 0.3373     |
| <b>Gate Receipts</b>   | 7.0152*         | 5.3568*           | 2.6838*         | 3.5111*       | 0.1908     |
| <b>Payroll</b>   | -0.7089         | 0.8737            | -3.2059*        | -0.6985       | -6.1807*   |
| <b>R Square</b>  | 0.5737          | 0.7161            | 0.8507          | 0.7828        | 0.4182     |



Model 3 analyzes the components of revenues and expenses that are most related to the team's operations (gate receipts and payroll). This model is far less explanatory than that used in Table D, but still, we again see the importance of the revenue proxy, gate receipts, in predicting value. This variable is significant in 4/5 of the regressions.

| <b>TABLE F: DESCRIPTIVE STATISTICS (Coefficients)</b>  |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 4: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Gate Receipts)X<sub>3</sub> + (Other Revenue)X<sub>4</sub> + (Total Expenses)X<sub>5</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -21.6596        | 38.9924           | -269.7988*      | -19.1196      | -90.1351*  |
| <b>Debt/Revenue</b>  | 22.6583*        | -9.5753           | 2.7859          | 2.3731        | 11.5693    |
| <b>TRPS</b>  | -0.0298         | -0.1046           | 0.0896          | -0.2024*      | -0.1978    |
| <b>Gate Receipts</b>   | 2.5467*         | 3.0297*           | 3.0232*         | 2.9138*       | 2.9558*    |
| <b>Other Rev.</b>  | 4.4256*         | 2.4786*           | 4.3476*         | 2.8048*       | 6.2462*    |
| <b>Expenses</b>  | -0.1169         | 0.0792            | -0.6518         | 0.0479        | 1.3032*    |
| <b>R Square</b>  | 0.9635          | 0.8663            | 0.9223          | 0.9382        | 0.9177     |

Model 4 is a more detailed breakdown of the revenue side of operating income, as it offers insight into gate receipts and cash streams that result from other sources such as cable deals. Both of these variables are significant across all of the regressions, and the high R Squares indicate the predictive power of this model. The coefficients themselves reveal that other revenues, the money that arises from things besides gate receipts (attendance), are more important to increasing the value of a franchise.

| <b>TABLE G: DESCRIPTIVE STATISTICS (Coefficients)</b>  |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 5: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Revenue)X<sub>3</sub> + (Payroll)X<sub>4</sub> + (Other Expenses)X<sub>5</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -18.3433        | 105.2621          | -213.4741*      | -16.9789      | -104.7534* |
| <b>Debt/Revenue</b>  | 16.6355*        | -9.2111           | 0.1598          | 3.1527        | 11.3428    |
| <b>TRPS</b>  | -0.1116         | -0.0734           | 0.0425          | -0.1862       | -0.1694    |
| <b>Revenues</b>  | 4.0222*         | 2.4097*           | 3.3414*         | 2.9601*       | 5.9843*    |
| <b>Payroll</b>   | -0.3716         | 1.3791            | -0.9087         | -0.0256       | 1.4868*    |
| <b>Other Exp.</b>  | 0.2011          | -0.9993           | -0.5623         | 0.6040        | 3.1074*    |
| <b>R Square</b>  | 0.9545          | 0.8753            | 0.9174          | 0.9398        | 0.8871     |

Model 5 is a more detailed breakdown of the expense side of operating income, as it offers insight into the payroll and money that is dispersed on ancillary items such as interest on debt. These variables are both significant in the combined regression, although they are insignificant for all sports in isolation. Again, revenue is significant in all of the tests, highlighting its true importance in assessing the value of a franchise. The high R Squares validate the explanatory power of this model.

I also conducted the same tests using transaction price as the dependent variable for the franchises that have changed ownership since 1999. As the chart below will indicate, these models have less explanatory power than those above, which is expected given old transaction prices are compared with 2003 balance sheet and income statement figures. For the most part, revenue continues to stand out as the most important variable guiding value. The coefficients are displayed in the table below.

| <b>TABLE H: DESCRIPTIVE STATISTICS (Coefficients)</b> |                |                |                |                |                |
|---|----------------|----------------|----------------|----------------|----------------|
| * = Significant at 5% level                           | <b>Model 1</b> | <b>Model 2</b> | <b>Model 3</b> | <b>Model 4</b> | <b>Model 5</b> |
| <b>Intercept</b>                                      | 301.8685*      | -127.0685      | -208.1446      | -127.4049      | -140.4166      |
| <b>Debt/Revenue</b>                                   | 56.4015        | 57.2198*       | 75.1438        | 57.0303*       | 51.7940*       |
| <b>TRPS</b>   | -0.9262        | -0.0749        | 0.2525         | -0.0639        | 0.2152         |
| <b>Income</b>   | 6.2017*        | --             | --             | --             | --             |
| <b>Revenue</b>  | --             | 5.3401*        | --             | --             | 5.4423*        |
| <b>Gate Receipts</b>                                  | --             | --             | 1.1436         | 5.7664*        | --             |
| <b>Other Rev.</b>                                     | --             | --             | --             | 5.3007*        | --             |
| <b>Expenses</b>                                       | --             | 1.8164         | --             | 1.9399         | --             |
| <b>Payroll</b>  | --             | --             | -4.9245*       | --             | 0.4835         |
| <b>Other Exp.</b>                                     | --             | --             | --             | --             | 5.0361*        |
| <b>R Square</b>                                       | 0.4413         | 0.8388         | 0.6295         | 0.8398         | 0.8581         |

### **Conclusion:**

The existing research and my own analysis establishes that revenue is the most important factor in determining the value of a franchise. It also shows that each sport is driven by different factors. For example, the tremendous cable deals in the NFL make “other revenues” much more important to value than attendance and gate receipts. Furthermore, as transaction prices typically exceed the appraised worth of teams conducted by independent sources such as Forbes, there is some evidence confirming the presence of an ego factor. However, it would be unfair to attribute the entire premium to this feeling of prestige.

The research that I have conducted should pave the way for future inquiries into the mechanics of valuing a sport franchise. Hopefully, my results have provided insight into the true sources of value for an organization, although this can only be used for guidance, as market prices will inevitably be determined by supply and demand. However, perhaps if owners paid more attention to the bottom line and avoid overpayment, there would be less financial problems occurring within modern day sports. This is one of the most important and interesting areas that remain available for future studies. If owners continually focus on growing revenues without an eye on expenses, stagnation and bankruptcy will cripple professional sports. This was exactly the mantra that resulted in the technology bubble of the late 1990s. Accordingly, future studies should analyze the sources of profitability for a franchise and the factors that need to be in place, such as salary caps, that will be useful to insure the efficiency and safety of sports financially.

## Bibliography

Badehnausen, Kurt and Lesley Kump. “*Cashing In.*” Forbes Magazine, September 21, 2001.

Badehnausen, Kurt and Lesley Kump. “*Coupon Clippers.*” Forbes Magazine,  
February 17, 2003.

Thornton, Eric A. “*How To Value Professional Sports Franchise Intangible Assets.*”

<http://www.willamette.com/pubs/insights/02/howtovalue.html>

Vogel, Christina. “*Valuation Of A Sports Franchise.*”

[http://www.wfu.edu/users/palmitar/Law&Valuation/Papers/1999/Vogel-Sports  
Franchise.htm](http://www.wfu.edu/users/palmitar/Law&Valuation/Papers/1999/Vogel-SportsFranchise.htm)

<http://www.forbes.com/>

<http://sports.espn.go.com/nba/news/story?id=1714858>

Appendix J (Please Insert Appendices A-I From Excel Before)

| <b>T-STATISTICS:</b>   |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 1: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Operating Income)X<sub>3</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | 14.3537*        | 5.3662*           | 7.6386*         | 6.6900*       | 7.8864*    |
| <b>Debt/Revenue</b>  | 3.0287          | 0.9676            | -0.3829         | 0.7432        | 1.3073     |
| <b>TRPS</b>  | -0.4762         | 0.5887            | -4.2977*        | -3.1209*      | -2.6859*   |
| <b>Income</b>  | 6.4212*         | 1.2082            | 2.8488          | 3.0585*       | 11.4871*   |

| <b>T-STATISTICS:</b>   |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 2: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Total Revenues)X<sub>3</sub> + (Total Expenses)X<sub>4</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -0.2968         | 1.3525            | -2.7493*        | -0.9916       | -2.7857    |
| <b>Debt/Revenue</b>  | 2.6745          | -0.8486           | -0.0351         | 0.4307        | 0.6438     |
| <b>TRPS</b>  | -1.1793         | -0.5947           | 0.0984          | -2.1332*      | -1.2875    |
| <b>Revenues</b>  | 17.1517*        | 9.7247*           | 4.6708*         | 9.1968*       | 20.2838*   |
| <b>Expenses</b>  | -0.9688         | 0.1168            | -1.0195         | 0.1024        | 5.3113*    |

| <b>T-STATISTICS:</b>   |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 3: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Gate Receipts)X<sub>3</sub> + (Payroll)X<sub>4</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | 3.0480*         | 4.1755*           | -0.6665         | 1.0900        | -1.6542    |
| <b>Debt/Revenue</b>  | 1.0599          | -1.0805           | -0.3354         | 0.4412        | 0.8421     |
| <b>TRPS</b>  | -1.4251         | -1.2854           | -0.0459         | -1.5040       | 0.8098     |
| <b>Gate Receipts</b>   | 4.3047*         | 6.8273*           | 3.2438*         | 4.6039*       | 0.1582     |
| <b>Payroll</b>   | -0.6205         | 1.1223            | -3.3638*        | -0.9840       | -6.8920*   |

| <b>T-STATISTICS:</b>   |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 4: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Gate Receipts)X<sub>3</sub> + (Other Revenue)X<sub>4</sub> + (Total Expenses)X<sub>5</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -0.5485         | 1.4038            | -3.0369*        | -0.8589       | -3.2400*   |
| <b>Debt/Revenue</b>  | 3.7207*         | -0.9173           | 0.1931          | 0.4343        | 1.2508     |
| <b>TRPS</b>  | -0.3084         | -0.7350           | 0.2433          | -2.0707*      | -1.2730    |
| <b>Gate Receipts</b>   | 4.7906*         | 4.1677*           | 4.1355*         | 6.6862*       | 5.8937*    |
| <b>Other Rev.</b>  | 14.3505*        | 5.3207*           | 3.9660*         | 6.7172*       | 24.7733*   |
| <b>Expenses</b>  | -0.3151         | 0.3215            | -0.7539         | 0.1270        | 3.8384*    |

| <b>T-STATISTICS:</b>   |                 |                   |                 |               |            |
|--|-----------------|-------------------|-----------------|---------------|------------|
| <i>Model 5: Forbes Value = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + (Revenue)X<sub>3</sub> + (Payroll)X<sub>4</sub> + (Other Expenses)X<sub>5</sub></i> |                 |                   |                 |               |            |
| * = Significant at 5% level  | <b>Football</b> | <b>Basketball</b> | <b>Baseball</b> | <b>Hockey</b> | <b>All</b> |
| <b>Intercept</b>   | -0.4062         | 1.8257            | -2.5442*        | -0.8000       | -3.1171*   |
| <b>Debt/Revenue</b>  | 2.6541*         | -0.9279           | 0.0105          | 0.5756        | 1.0191     |
| <b>TRPS</b>  | -1.0981         | -0.5714           | 0.1120          | -1.9747       | -0.9089    |
| <b>Revenues</b>  | 9.0257          | 7.3043*           | 4.2712*         | 8.7918*       | 20.4668*   |
| <b>Payroll</b>   | -0.9327         | 1.3912            | -1.0040         | -0.0681       | 2.9641*    |
| <b>Other Exp.</b>  | 0.1698          | -1.3076           | -0.2536         | 0.7761        | 4.0404*    |

| <b>T-STATISTICS:</b>   |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|
| <i>Transaction Analysis: Sales Price = b + (Debt/Revenue)X<sub>1</sub> + (TRPS)X<sub>2</sub> + .....</i> |                |                |                |                |                |
| * = Significant at 5% level  | <b>Model 1</b> | <b>Model 2</b> | <b>Model 3</b> | <b>Model 4</b> | <b>Model 5</b> |
| <b>Intercept</b>   | 3.0748*        | -1.7216        | -1.8759        | -1.7012        | -1.9828        |
| <b>Debt/Revenue</b>  | 1.2415         | 2.3058*        | 2.0196         | 2.2648*        | 2.1707*        |
| <b>TRPS</b>  | -1.2827        | -0.1839        | 0.3994         | -0.1544        | 0.5170         |
| <b>Income</b>  | 4.0489*        | --             | --             | --             | --             |
| <b>Revenue</b>   | --             | 6.3356*        | --             | --             | 6.7471*        |
| <b>Gate Receipts</b>   | --             | --             | 0.6864         | 4.3170*        | --             |
| <b>Other Rev.</b>  | --             | --             | --             | 6.1607*        | --             |
| <b>Expenses</b>  | --             | 1.8453         | --             | 1.8618         | --             |
| <b>Payroll</b>   | --             | --             | -4.0220        | --             | 0.4160         |
| <b>Other Exp.</b>  | --             | --             | --             | --             | 2.6499*        |