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The Value of Major League Baseball Ownership

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Abstract

The unwillingness of team owners to share their data prohibits a direct assessment of the value of professional team sports ownership. But insights into that value can be gleaned from actual team sale prices. First, throughout the entire modern history of Major League Baseball (MLB), the average real growth in team sale prices is twice the usual comparison value of 3% for the economy at large. Second, aggregated at the franchise level, the average rate of growth is about 1.6 times the 3% comparison. Third, the real growth rate an owner can expect from time of purchase to time of sale over the decades has been a roller-coaster ride. Fabulous growth occurred to the 1940s, fell off dramatically to the 1970s, rebounded very strongly in the 1980s, and was essentially zero in the 1990s. In addition, there appears to be a strong relationship between risk and return, owners have learned to price expansion franchises close to discounted expected future profits, the period of ownership has shown dramatic declines at two distinct points in time, and the portion of ownership value not associated with annual operations appears to be significant. This information has implications for claims of losses by owners and for future analysis.

Keywords: value, ownership, Major League Baseball

Introduction

Major League Baseball (MLB) owners have always made the same claims. There's never enough left-handed pitching. And nobody ever makes any money with a baseball team. According to Scully (1989, p. 126), "Whining about the lack of profit from owning a baseball club has been a sacred tradition among owners from time immemorial." He cites a case back to 1880 and other famous quotes abound (these were gleaned from USAToday.com's "Antitrust Quotes"):

> Professional baseball is on the wane. Salaries must come down or the interest of the public must be increased in some way. If one or the other does not happen, bankruptcy stares every team in the face. — Chicago White Stockings owner Albert Spalding, 1881.
>
> Unless something happens, we're all going to be out of business. When you have as many teams as there are losing money, something has got to give. — Cleveland Indians chairman Patrick J. O'Neill, February 27, 1985.
>
> We have a remarkable number of teams losing a lot of money. — Milwaukee Brewers owner Bud Selig in testimony to a House subcommittee, September 22, 1994.

More recently, Commissioner Selig's report on baseball finances for 2001 (*Street & Smith's Sports Business Journal*, December 10, 2001, p. 44) showed 19 MLB teams in the red to the tune of $362.3 million (prior to revenue

sharing). Since there were 11 teams $130.1 million to the good, consolidated losses were reported at $232.2 million for that season.

The findings in this paper shed light on these claims based on basic finance principles (building on earlier work in Scully, 1989, 1995; Quirk & Fort, 1992, 1999). Data limitations prohibit a direct assessment of the value of professional team sports ownership. But, given that competition over the purchase of MLB teams appears to be brisk, team sale prices should approximate the expected discounted future value of ownership. Further, the observed growth rate in team prices should also be at least as large as the next best alternative growth that owners could enjoy.

An alternative view is that owners don't care about cash flow, or pursue other goals. This view suggests that they are sports consumers with budgets so large that they simply buy the objects of their consumption affection. While some owners no doubt derive consumption value, the vast majority of owner behavior reveals them to be thoroughly professional business people with a keen eye toward the bottom line (Fort, 2003, Chapter 1). Further, as is quite well known, there are other monetary values to owning a team that are not captured on their income-expense reports.

These principles lead to two main findings on actual MLB team sale prices. First, the mean and median growth in team sale prices over the modern history of MLB easily exceed a standard comparison, namely, 3% real growth in the economy at large. Second, the expected growth rate from time of purchase to time of sale has fluctuated over time. The average real growth rate in team sale prices exceeded the 3% typical growth rate in the economy at large from the 1900s through the 1940s. Indeed, prior to the 1930s, growth rates were over three times this comparison value. The 1950s through the 1970s were, indeed, a down period below the 3% comparison. But a strong rebound occurred in the 1980s. Recently, in the 1990s, the growth rate was essentially zero. This roller-coaster ride reveals that owner claims are partly consistent with the data, but not always.

There are other interesting findings as well. First, as with other financial assets, there is a strong relationship between risk, measured by the variance in team sale prices, and expected return, measured by average sale prices. Second, owners appear to have learned over time how to price expansion franchises closer to a reasonable estimate of the expected discounted value of future profits. Third, omitting the tumultuous decade surrounding World War II, the period of ownership fell dramatically in the 1960s and again in the 1990s. Finally, the portion of the value of ownership that is not associated with annual operations appears to be significant, possibly in the tens of millions of dollars.

The paper proceeds as follows. In Section II, the approach to analyzing the value of team ownership is presented and some insights are offered on the popular *Financial World*/*Forbes* annual team valuations. Section III presents the historical growth of team sale prices and expansion fees. The analysis also yields some estimates of the values of ownership beyond team annual operating profits. Conclusions round out the paper in Section IV. Formal modeling of the determination of team prices would improve our understanding greatly, but the length of such an analysis precludes its inclusion here.

The Value of Team Ownership

Those seeking to analyze the value of team ownership should keep this warning from Scully (1989, p. 129) well in mind:

> To the researcher, the analysis of profit in baseball is a particularly difficult undertaking, because uniform audited financial data from the clubs generally is not available, because expended items frequently cover some portion of profits, and because the financial return to ownership is multifaceted.

The value of owning a pro sports team clearly exceeds annual operating profits. The following is a more complete categorization of ownership values:

1. Annual operating profits.
2. Shelters from federal income taxes.
3. Spillovers to other wealth generating elements of the owner's portfolio.
4. Profit taking from the expense side.
5. League revenue sharing, including future expansion fees.

Throughout this section, EBITDA refers to earnings before interest, taxes, depreciation, and amortization and ITDA will be used as shorthand for those deductions from earnings.

Item 1 should be clear enough. After all is said and done, even after ITDA, there may be annual operating profits. But these can be difficult to discern and, to see why, let's turn immediately to Items 2 and 3. The sports accounting practices that come into play have been allowed by the IRS since 1959 (Scully, 1989, p. 130). Okner (1974) was the first to treat these practices academically more than 30 years ago. And despite the fact that they were treated academically again by Scully (1989) and Quirk and Fort (1992), and are now the stuff of sports economics textbooks (Fort, 2003), these accounting practices are completely neglected in the popular analysis of sports team profits.

While there are other nuances concerning tax restructuring and capital gains (covered in detail in the works just cited), the easiest tax shelter to see is produced by the so-called "roster depreciation allowance" (henceforth, RDA). In 1959, Bill Veeck bought the Chicago White Sox for the first time. He argued that players "waste away" like livestock and, since livestock could be depreciated, why not players? The IRS agreed and the RDA was born.

After a few investigations of subsequent use of the RDA by other owners, the IRS finally settled in the late 1970s on the following. An owner could allocate 50% of the purchase price of a team to a five-year depreciation schedule without challenge. Any deviation had to be justified by the taxpayer. That ruling held until just recently and federal tax law amendments now allow 100% of the team sale price to be depreciated for 15 years.

While the merits of Veeck's argument are debatable (again, see the works just cited), and why it is that players can be both depreciated and expensed has not been addressed, the results for sports team owners have been valuable to say the least. The RDA, coupled with structuring the team as a pass-through for tax purposes, generates a tax shelter as follows. I buy a team for about the average price through the current decade, $255 million. I can depreciate the entire $255 million over 15 years. For easy presentation, suppose a flat schedule at $17 million per year. This $17 million annually is my RDA. Suppose my EBITDA in year one is $25 million and interest, actual physical depreciation, and amortization equal $20 million. Annual operating profits subject to taxation would be $5 million. But now my RDA comes into play—subtracting the $17 million RDA generates a $12 million loss for the year. My tax liability from the team is erased.

But what really happened? The $5 million subject to taxation is never really lost; it's a paper reduction according to allowable IRS rules. So I enjoy that $5 million tax-free. But it gets better still. If the team is originally structured as a pass-through (e.g., a Subchapter S Corporation), then the $12 million paper loss goes through to my 1040 Form and shelters other income according to my marginal tax rate. Owners surely pay the top 35% marginal tax rate so about $4.2 million in other earnings is sheltered. From the owner's perspective, this is the best kind of $12 million "loss" possible. In *The Hustler's Handbook*, Bill Veeck jokes, "We play the *Star-Spangled Banner* before every game. You want us to pay taxes, too?"

Let's move on to Items 3 through 5. Spillovers to other wealth generating items in the owner's portfolio occur along a spectrum of complexity. The more pedestrian include the value of entertaining that might lead to future business dealings; nothing like a night in the owner's box for lively business interaction. More complex is access to information concerning future government decisions that can affect the current and future business dealings of an owner. And then we get to the deeply complex, as in the following example offered by Zimbalist (1998).

The Florida Marlins won the 1997 World Series. Then owner Wayne Huizenga claimed losses of $30 million for that year. But Huizenga also owned the stadium where the Marlins played and the regional media carrier of the teams locally broadcast games. Zimbalist (1998) presents an argument that shifting reported revenues between the team, stadium, and media unit could reduce the amount of revenue shared with other MLB owners as well as produce a tax savings. By Zimbalist's account, the $30 million loss could easily be a $13.8 million gain.

The last two values of ownership are much more straightforward. Profit taking on the expense side is common in all business structures; health care benefits, transportation, and entertainment expenses commonly displace similar

expenditures that owners would otherwise have to take on themselves. And low-rate loans from "the team" to "the owner" are common. Finally, membership in a pro sports league entitles team owners to net revenue sharing amounts dictated by league sharing rules (of course, this might be negative if the team is in a relatively larger-revenue market) as well as an equal share of future expansion fees.

The foregoing provides the basic model for an approach to analyze team sale prices and expansion fees. The most anyone should pay for a team (or an expansion franchise) should be the real discounted net present value (DNPV) of the stream of returns:

$$\text{DNPV} = \sum_{t=0}^{T} \frac{V_t - C_t}{(1+r)^t},$$

where V_t is real value at time t, C_t is real cost at time t = 0, …, T, with T the owner's planning horizon and r the real interest rate. If the market for teams is competitive enough, then sale prices should equal DNPV. Further, the growth in sale prices should reflect the next best growth rate that owners might expect to enjoy in another endeavor. In the next section, the behavior of this value, reflected by actual team sale prices, is analyzed over time.

But expression (1) can also be used to approximate values of ownership other than annual operating profits. Generically, Items 1 through 5 at the beginning of the section determine $V_t - C_t$. Let DNPV_i, i = 1, …, 5, be the real discounted net present value of Items 1 through 5. Expression (1) can then be rewritten:

$$\text{DNPV} - \text{DNPV}_1 = \sum_{i=2}^{5} \text{DNPV}_i.$$

Now, DNPV_1 is what can reasonably be referred to as the stand-alone asset value of ownership and should be equal to the discounted stream of real annual *operating* profits alone. While it is only one of the ownership values, it is the object of attention in much of the discussion of MLB owner profits. DNPV_1 was clearly the object of analysis in Commissioner Selig's presentations during the last labor-management negotiations in 2001. And independent assessments also focus on this amount. For example, in personal correspondence with Michael Ozanian, one of the authors of the *Financial World-Forbes* (henceforth, FW-F) team valuation reports, it was revealed that those reports are a "multiple of revenues" estimate, adjusted for specific stadium/arena lease factors estimated by those authors.

The usefulness of expression (2) is that both actual team sale values, which should approximate DNPV, and reports on team valuations, intended to measure DNPV_1, are available. And that means we can approximate values of ownership other than annual operating profits, namely, by simple subtraction. This approach helps us sidestep one of Scully's warnings that ownership is multifaceted and still get an estimate of that value.

But we should proceed with caution in this type of comparison. Under the "multiple of revenues" approach, a benchmark is set at some multiple of a team's revenues over time. Lately, reputable finance houses have raised this multiple from around 3.0 to 5.5 (Kaplan, 2004). But revenues can be shifted for some teams, as in the preceding Marlins example, so that reported revenues used in the "multiple of earnings" approach are understated. This means that teams with higher spillover values and understated reported revenues will have artificially understated estimates of DNPV_1. So, multiple of earnings estimates should be closest to DNPV_1 for teams with lower spillover values.

As an aside, the "discounted cash flow" approach to team valuation estimates team sale prices as the amount someone is willing to pay today in order to receive the anticipated cash flow in future years. Again, this is an attempt to specify NDPV_1. But, with the RDA and other tax complications, then Blue Jays President and COO Paul Beeston instructs us as follows (found at the same USAToday.com location cited earlier in the section):

> Anyone who quotes profits of a baseball club is missing the point. Under generally accepted accounting principles, I can turn a $4 million profit into a $2 million loss, and I can get every national accounting firm to agree with me.

It is straightforward sports accounting to show negative cash flows, rendering the "discounted cash flow" method without its required data.

The Growth in MLB Franchise Prices

The aims of this section are to 1) assess the growth of team sale prices and expansion franchise fees, and 2) calculate ownership value other than annual operating profits as in expression (2). The data used to analyze team sale

Table 1. MLB Team Sale Prices and Growth Rates ($Millions, 2004)

Team	t	t+	Length	P_t	P_{t+}	Growth
Angels	2000	2003	3	$207.2	$191.4	-2.6%
Astros	1979	1992	13	$50.0	$140.1	8.3%
Athletics	1954	1960	6	$47.6	$24.3	-10.6%
	1960	1980	20	$24.3	$29.5	1.0%
	1980	1995	15	$29.5	$106.3	8.9%
	1995	2005	10	$106.3	$172.8	5.0%
Blue Jays	1991	2000	9	$187.6	$194.3	0.4%
Braves	1906	1910	4	$1.5	$2.3	10.0%
	1910	1911	1	$2.3	$3.7	62.5%
	1911	1919	8	$3.7	$4.4	2.3%
	1919	1923	4	$4.4	$5.6	6.0%
	1923	1925	2	$5.6	$4.2	-12.8%
	1925	1941	16	$4.2	$15.0	8.2%
	1941	1962	21	$15.0	$39.2	4.7%
	1962	1976	14	$39.2	$40.3	0.2%
Brewers2 (Pilots)						
	1970	1981	11	$54.1	$27.3	-6.0%
	1981	2005	24	$27.3	$211.2	8.9%
Cardinals	1920	1925	5	$0.2	$13.6	124.6%
	1925	1949	24	$13.6	$26.7	2.8%
	1949	1953	4	$26.7	$26.8	0.1%
Cubs	1905	1915	10	$2.2	$9.5	15.8%
Dodgers	1912	1944	32	$3.9	$15.1	4.3%
	1944	1945	1	$15.1	$15.9	5.7%
	1945	1950	5	$15.9	$32.5	15.3%
	1950	1998	48	$32.5	$363.9	5.2%
	1998	2004	6	$363.9	$371.0	0.3%
Expos	1990	1999	9	$125.6	$164.3	3.0%
	1999	2002	3	$164.3	$127.2	-8.2%
Giants	1903	1919	16	$2.6	$19.4	13.3%
	1919	1976	57	$19.4	$28.6	0.7%
	1976	1977	1	$28.6	$32.1	12.5%
	1977	1992	15	$32.1	$136.0	10.1%
Indians	1916	1927	11	$8.8	$11.0	2.1%
	1927	1932	5	$11.0	$7.0	-8.7%
	1932	1946	14	$7.0	$15.7	6.0%
	1946	1949	3	$15.7	$20.1	8.6%
	1949	1956	7	$20.1	$27.8	4.8%
	1956	1966	10	$27.8	$47.1	5.4%
	1966	1972	6	$47.1	$49.4	0.8%
	1972	1973	1	$49.4	$30.7	-37.8%
	1973	1986	13	$30.7	$60.9	5.4%
	1986	2000	14	$60.9	$358.5	13.5%
Mariners	1981	1989	8	$27.3	$123.2	20.7%
	1989	1992	3	$123.2	$170.0	11.3%
Marlins	1999	2002	3	$182.3	$167.5	-2.8%
Mets	1980	1986	6	$48.7	$140.4	19.3%
	1986	2002	16	$140.4	$318.0	5.2%
Orioles2 (Brewers1-Browns)						
	1902	1915	13	$1.1	$9.9	18.7%
	1915	1936	21	$9.9	$4.5	-3.7%
	1936	1945	9	$4.5	$15.3	14.7%
	1945	1951	6	$15.3	$16.2	0.9%
	1951	1979	28	$16.2	$34.5	2.7%
Orioles2 (Brewers1-Browns)cont.						
	1979	1988	9	$34.5	$140.9	16.9%
	1988	1993	5	$140.9	$228.4	10.1%
Padres	1974	1990	16	$46.4	$109.5	5.5%
	1990	1995	5	$109.5	$105.0	-0.8%
Phillies	1903	1909	6	$4.2	$7.0	8.8%
	1909	1943	34	$7.0	$3.9	-1.7%
	1943	1981	38	$3.9	$63.0	7.6%
Pirates	1946	1950	4	$24.5	$12.8	-15.0%
	1950	1985	35	$12.8	$39.3	3.3%
	1985	1996	11	$39.3	$112.2	10.0%
Rangers (Senators2)						
	1963	1965	2	$52.0	$30.3	-23.7%
	1965	1969	4	$30.3	$54.3	15.7%
	1969	1971	2	$54.3	$52.3	-1.8%
	1971	1989	18	$52.3	$122.1	4.8%
	1989	1998	9	$122.1	$292.5	10.2%
Red Sox	1912	1913	1	$5.8	$7.7	32.0%
	1913	1923	10	$7.7	$12.8	5.2%
	1923	1933	10	$12.8	$5.1	-8.7%
	1933	1978	45	$5.1	$93.5	6.7%
Reds	1902	1929	27	$3.1	$13.5	5.6%
	1929	1962	33	$13.5	$29.8	2.4%
	1962	1984	22	$29.8	$44.2	1.8%
	1984	1999	15	$44.2	$210.5	11.0%
Rockies	2001	2004	3	$159.5	$142.9	-3.6%
Royals	1983	2000	17	$43.1	$106.6	5.5%
Tigers	1903	1920	17	$1.2	$4.8	8.4%
	1920	1935	15	$4.8	$27.9	12.5%
	1935	1956	21	$27.9	$38.6	1.6%
	1956	1983	27	$38.6	$101.8	3.7%
	1983	1992	9	$101.8	$111.5	1.0%
Twins (Senators1)						
	1912	1919	7	$5.3	$10.0	9.6%
	1919	1964	45	$10.0	$64.3	4.2%
	1964	1984	20	$64.3	$81.0	1.2%
White Sox	1959	1961	2	$32.8	$34.7	2.9%
	1961	1967	6	$34.7	$97.0	18.7%
	1967	1975	8	$97.0	$37.9	-11.1%
	1975	1981	6	$37.9	$15.8	-13.6%
Yankees (Orioles1)						
	1903	1915	12	$0.4	$8.7	29.8%
	1915	1922	7	$8.7	$34.1	21.5%
	1922	1948	26	$34.1	$52.8	1.7%
	1948	1967	19	$52.8	$86.2	2.6%
	1967	1973	6	$80.1	$43.0	-9.8%
	1973	1999	26	$43.0	$690.0	11.3%
Minimum			1.0	$0.2	$2.3	-37.8%
Maximum			57.0	$363.9	$690.0	124.6%
Average			13.4	$44.6	$82.1	6.2%
Median			10.0	$27.9	$38.6	5.0%
Standard Deviation			11.5	$57.4	$106.3	16.9%

Sources: Author's webpage, http://www.rodneyfort.com (click on "Sports Business Data Area" link).

Notes

The transaction time endpoints are (t, t+); buy and sell prices for each transaction are (P_t and P_{t+}); growth is calculated over the length of time between t and t+. The formula simply solves the standard discounted present value formula for the rate that would change prices from P_t to P_{t+} over the period t to t+.

prices and expansion team prices are from popular sources and are listed at the author's webpage, http://www.rodneyfort.com (click on the "Sports Business Data Area" link). Expansion episodes are reserved for separate treatment since that price isn't really the price of a team.

The transaction data were constructed as follows. If a team sells at time t for P_t and then sells again at time t+ for P_{t+}, then the buy and sell pair for this transaction at t+ is (P_t, P_{t+}). Throughout the data, the actual owner at time t is not necessarily the owner that sells at time t+. In many cases, there were intervening transactions for which there are no data. Purchases of less than 100% were adjusted to full-purchase price. No transactions that included other

Table 2. MLB Team Summary ($Millions, 2004)

Team	t	t+	T	P_t	P_T	Growth
*Angels**	2000	2003	3	$207.20	$191.40	-2.6%
*Astros**	1979	1992	13	$50.00	$140.10	8.3%
Athletics	1954	2005	51	$47.60	$172.80	2.6%
*Blue Jays**	1991	2000	9	$187.60	$194.30	0.4%
Braves	1906	1976	70	$1.50	$40.30	4.8%
Brewers2 (Pilots)	1970	2005	35	$54.10	$211.20	4.0%
Cardinals	1920	1953	33	$0.20	$26.80	15.4%
Cubs	1905	1915	10	$2.20	$9.50	15.8%
Dodgers	1912	2004	92	$3.90	$371.00	5.1%
*Expos**	1990	2002	12	$125.60	$127.20	0.1%
Giants	1903	1992	89	$2.60	$136.00	4.5%
Indians	1916	2000	84	$8.80	$358.50	4.5%
*Mariners**	1981	1992	11	$27.30	$170.00	18.1%
*Marlins**	1999	2002	3	$182.30	$167.50	-2.8%
*Mets**	1980	2002	22	$48.70	$318.00	8.9%
Orioles2 (Brewers1-Browns)	1902	1993	91	$1.10	$228.40	6.1%
*Padres**	1974	1995	21	$46.40	$105.00	4.0%
Phillies	1903	1981	78	$4.20	$63.00	3.5%
Pirates	1946	1996	50	$24.50	$112.20	3.1%
Rangers (Senators2)*	1963	1998	35	$52.00	$292.50	5.1%
Red Sox	1912	1978	66	$5.80	$93.50	4.3%
Reds	1902	1999	97	$3.10	$210.50	4.4%
*Rockies**	2001	2004	3	$159.50	$142.90	-3.6%
Royals	1983	2000	17	$43.10	$106.60	5.5%
Tigers	1903	1992	89	$1.20	$111.50	5.2%
Twins (Senators1)	1912	1984	72	$5.30	$81.00	3.9%
White Sox	1959	1981	22	$32.80	$15.80	-3.3%
Yankees (Orioles1)	1903	1999	96	$0.40	$690.00	8.1%
Minimum			3.0	$0.2	$9.5	-3.6%
Maximum			97.0	$207.2	$690.0	18.1%
Average			45.5	$47.5	$174.6	4.8%
Median			35.0	$25.9	$141.5	4.5%
Standard Deviation			34.3	$63.5	$139.1	5.3%

Sources and Notes: See Table 1. In addition, T is the length of time between the first buy and last sell for each franchise.
*Denotes expansion teams used for calculations in the text (Senators2 to 1971).

inseparable purchases (real estate, broadcasting ventures, teams in other leagues, and stadiums) were included.

The unit of analysis is the franchise, not the location. For example, the history of the value of the MLB Braves includes their travels from Boston (1901-1952) to Milwaukee (1953-1965) and on to Atlanta (1966-present). This follows since a foresighted owner knows full well that moving a team to a new location is within the realm of possibility and certainly can affect the growth in value of the franchise. In addition, transactions that occurred in steps are treated as a single transaction, including the CBS purchase of the New York Yankees that occurred from 1964-1967.

Only one subjective judgment was made on a transaction—the buyout of the final Marge Schott estate holding of 1/15 of the Cincinnati Reds produced a team value that simply was unbelievably too low. The result is 95 separate transactions for 28 different teams over the period 1902-2004. All values are adjusted to 2004 US dollars (some deflators for the earliest sales were extrapolated).

In the literature, Scully (1989, 1995) examines profitability and return for MLB teams, but only for a few years each time. Quirk and Fort (1992) compare nominal rates of return to the rate of return on industrial common stocks for the same data used here, through 1990, and then extend that calculation in nominal terms to sales episodes during the 1990s (Quirk & Fort, 1995). Zimbalist (1992) produces an overall nominal and real growth rate, for the entire period of the 1910s through the 1980s. But all of these works included sales with inseparable purchases other than the team. Here, those episodes are omitted and real growth rates are compared to the typical real growth rate in the economy of 3%.

Table 1 shows all of the transactions organized by franchise. The clear observation is that there was astronomical growth for some transactions. The truly fabulous all involve the earliest purchases of the older teams, although there have also been handsome growth rates in more recent times, with a few just breaking into double digits relative to the comparison 3%. This observation is consistent with imputation of monopoly power into the purchase price; subsequent returns may still be large relative to 3%, but there's nothing like being the earliest owners to capture monopoly profits (the Cardinals price grew at a 124.6% rate from 1920-1925; the Boston Braves price increased 62.5% in one year, 1910-1911). There also were some large declines in some of the transactions (the 1965 sale of the Senators2 and the 1973 sale of the Indians, and the White Sox decline of 11.1% in 1975 and then, subsequently, another 13.6% in 1981). But on balance the mean and median are well in excess of the 3% comparison.

The aggregation in Table 2 covers beginning and end results for each franchise as opposed to separate transactions for insights into longer-term ownership. The Cardinals, Cubs, and Mariners top the list, each over five times the 3% comparison. As with the individual transactions, the team-level aggregates have both average and median growth rates well in excess of the 3% comparison. And, of course, there have been clubs decline in price. There are seven losers relative to the 3% comparison (Angels, White Sox, Rockies, Marlins, Athletics, Expos, and Blue Jays). But an actual decline in the purchase price only happens for four of these franchises (Angels, White Sox, Rockies, and Marlins). And of these four, only one is over any reasonable amount of time to judge (the White Sox at 22 years, while the period for the rest is only three years). So, we can be pretty sure that 21 franchises did as well or better than the comparison 3% (and some very well, indeed) and that four franchises did not: the White Sox, Athletics, Expos, and Blue Jays. The following conclusion is a fair one: Owning a MLB franchise almost always generates growth in the sale price that exceeds the 3% comparison, and typically (at the median) by about 50%.

One item of interest, relevant to whether or not a market is producing results in line with standard finance notions, is whether or not there is a relationship between risk and return. At the team level, one can calculate the mean growth for teams with more than one transaction and the variance. The correlation between the means of sale prices (MEAN P_{t+}) and their variance (VAR P_{t+}) is 0.516. And a simple regression across teams yields the following:

$$\text{MEAN } P_{t+} = 39.2 + 0.003 \text{ VAR } P_{t+},\ R^2 = 0.152.$$
$$(7.85)\ (0.001)$$

Standard errors are in parentheses and the F-value of the regression is significant at the 95% level. While clearly much of the variation in mean sale prices remains to be

explained, there is some support that higher variance leads to higher mean prices consistent with the risk-return explanation.

Formal time series modeling of the behavior of team sale prices is beyond the aims of this particular paper, so we end with the preceding conclusions. But there is one more observation that can be made by aggregating across teams over time. While no market participant can buy a portfolio of baseball teams (the few sales of shares have been mostly gimmick short-term fund-raisers and almost immediately bought back), or speculate on some "index value" of baseball teams, they can use the aggregated information to guide their assessment of the value of purchasing any particular team. And this is especially true for the purchase of an expansion franchise.

But let's be clear. I might ask myself what the expected net discounted present value of ownership might be. This would be associated with similarly situated teams; in the comparison for expansion teams that follows, the average should be an over-statement since expansion teams in MLB typically look more like smaller-revenue market teams.

The behavior of prices, from this perspective, is shown in Table 3. If an owner bought in a given decade, what rate of growth did they enjoy to eventual sale (sort Table 1 by P_t and take averages by decade)? Again, the highest growth rates were captured by the earliest owners. Coupled with the observations around Table 2, baseball was simply a booming business through its first 40 modern years. Growth over time moderated considerably for those buying teams in the 1950s through 1970s. And then there's a fascinating episode for the 1980s. The average for those buying in the 1990s is essentially zero. The verdict is still out on those buying in the 2000s; only two of them sold their teams and they didn't hold them for very long.

A standard approach in evaluating owner choices is to compare to a buy-and-hold strategy. For example, suppose a team purchased in a given decade was held the average period that owners actually held their teams purchased in that decade. This strategy beats the decade average growth actually observed in the 1970s and 1990s (two low periods for buyers). But following this strategy would have been the height of foolishness through the first five decades of MLB and in the 1990s. While owners are typically on the ball relative to this objective buy-and-hold strategy, learning why growth is relatively so low in the 1970s and 1990s remains for future work. An obvious explanation is that if all owners sold according to this strategy, franchise prices may not be the actually observed average P_{t+} used in the buy-and-hold calculation.

It is worth noting two other observations generated by this look at decade aggregates. First, the average period of ownership drops off sharply during the War years, as might be expected in a time of high uncertainty. But it also drops off dramatically in the 1960s and again in the 1990s.

Second, this look at aggregates by decade also shows that taking on higher risk purchases yields a greater mean return. The correlation between the mean and variance of

Table 3. Growth in Pt by Decade Average Period of Ownership and Buy-And-Hold to 1999 ($Millions, 2004)

Decade (#Obs)	Growth Min	Growth Ave.	Growth Max	Ave. P_t	Ave. P_{t+}	Ave.Period	Growth Ave. Period
1900s (9)	-1.7%	12.1%	29.8%	$2.6	$8.3	15.4	10.7%
1910s (12)	-3.7%	12.2%	62.5%	$7.5	$8.3	17.0	2.3%
1920s (9)	-12.8%	13.6%	124.6%	$11.1	$12.4	15.1	4.0%
1930s (4)	1.6%	7.2%	14.7%	$11.1	$11.1	22.3	3.9%
1940s (10)	-15.0%	3.5%	15.3%	$20.5	$20.0	10.8	2.1%
1950s (7)	-10.6%	1.8%	5.4%	$29.7	$25.8	22.3	1.8%
1960s (11)	-23.7%	-0.7%	18.7%	$50.3	$50.7	10.0	-1.3%
1970s (11)	-37.8%	1.6%	16.9%	$41.7	$44.2	11.7	5.3%
1980s (13)	1.0%	10.4%	20.7%	$73.0	$76.1	11.7	9.5%
1990s (7)	-8.2%	-0.4%	5.0%	$177.0	$210.0	6.4	3.0%
2000s (2)	-3.6%	-3.1%	-2.6%	$183.3	$214.7	3.0	-

Source: Averages from Table 1.

decade-average sell prices is 0.823. Running a regression similar to the earlier one for team observations, one finds the following:

$$\text{MEAN } P_{t+} = -2825 + 1.464\,\text{YEAR} + 0.0051\,\text{VAR } P_{t+},\ R^2 = 0.861.$$
$$(939.3)\ (0.4805)\qquad (0.0018)$$

The variables are as before with YEAR the last year in the decade where there was a sale. Standard errors are in parentheses and the F-value of the regression is significant at the 99% level. Even accounting for the significant trend over time, there is a significant positive relationship between risk and return and very little of the variation in mean return remains to be explained. Let's see how the information in Table 3 can inform us about expansion franchise fees.

Table 4, Panel A, shows the fees and averages for the five MLB expansion episodes, along with growth rates from episode to episode and over the entire period where any expansion is observed. While not really a team sale price, expansion fees are reflective of a prospective owner's anticipation of collecting the type of values listed in Section II, and detailed in Table 3. And let's remember that expansion fees are low-end estimates of ownership value since expansion should occur into economically marginal territories; otherwise, existing owners would want to move there.

Over the full sample period, real expansion fees rose from a 1960 average of $12.6 million to $154.7 million in 1997. That's a real annual growth rate of 7.0% over 37 years but includes a significant decline in the 1976 expansion. This overall high rate of growth relative to the growth rate in the general economy might be explained by recognition on the part of prospective owners that the

Table 4. MLB Expansion Fees ($Millions, 2004)

Year	Team	Panel A Fee	Ave. Fee	Growth Over Last Expansion
1960	Astros	$11.6		
	Angels	$13.5		
	Mets	$11.6		
	Senators2	$13.5	$12.6	
1968	Royals	$28.9		
	Expos	$65.0		
	Padres	$65.0		
	Pilots	$27.6	$46.6	17.8%
1976	Mariners	$21.0		
	Blue Jays	$23.5	$22.3	-8.8%
1991	Marlins	$133.0		
	Rockies	$133.0	$133.0	12.7%
1997	Diamondbacks	$154.7		
	Devil Rays	$154.7	$154.7	2.6%
			Growth 1960-1997	*7.0%*

Expansion	Estimated Present Value	Panel B Franchise Fee	Difference	Ratio Fee:Estimate
1960	$47.2	$12.6	$34.6	0.3
1968	$47.2	$46.6	$0.6	1.0
1976	$63.3	$22.3	$41.1	0.4
1991	$216.0	$133.0	$83.0	0.6
1997	$220.8	$154.7	$66.1	0.7

Table 5. Actual Sale Prices and Financial World/Forbes Valuations ($Millions, 2004)

Team	Year	FW-F	P_{t+}	Diff	%Diff.
Col-NL	2001	$360.7	$159.5	$201.2	60.2%
NY2-NL	2002	$483.5	$318.0	$165.5	34.2%
Col-NL	2004	$285.0	$142.9	$142.1	49.9%
Ana-AL	2003	$234.0	$191.4	$42.6	19.0%
Cle-AL	2000	$385.8	$358.5	$27.3	7.5%
Mon-NL	1990	$146.0	$125.6	$20.4	20.4%
KC2-AL	2000	$126.9	$106.6	$20.3	16.7%
Oak-AL	1995	$126.3	$106.3	$20.0	19.8%
LA-NL	2004	$383.0	$371.0	$12.0	3.0%
SD-NL	1990	$119.0	$109.5	$9.5	11.2%
Ana-AL	2000	$210.6	$207.2	$3.4	1.7%
Det-AL	1992	$113.7	$111.5	$2.2	2.6%
Tex-AL	1998	$291.0	$292.5	-$1.6	-0.6%
SF-NL	1992	$131.3	$136.0	-$4.8	-4.5%
Fla-NL	1999	$169.8	$182.3	-$12.4	-8.1%
SD-NL	1995	$90.3	$105.0	-$14.7	-19.9%
Mon-NL	2002	$111.9	$127.2	-$15.3	-14.2%
Hou-NL	1992	$121.4	$140.1	-$18.6	-20.3%
Fla-NL	2002	$145.6	$167.5	-$21.8	-15.9%
Cin-NL	1999	$187.5	$210.5	-$23.0	-14.1%
Tor-AL	2000	$162.0	$194.3	-$32.3	-19.9%
Pit-NL	1996	$75.6	$112.2	-$36.6	-59.0%
Bal2-AL	1993	$184.8	$228.4	-$43.6	-31.1%
Mon-NL	1999	$90.7	$164.3	-$73.6	-87.6%
Sea2-AL	1992	$92.1	$170.0	-$77.9	-109.1%
LA-NL	1998	$277.3	$363.9	-$86.6	-36.5%
NY-AL	1999	$520.5	$690.0	-$169.5	-34.5%
Averages		*$208.4*	*$207.1*	*$1.3*	*-8.5%*

Sources: Annual issues of *Financial World* (now defunct) and *Forbes*. Particulars are also available at the author's website, see Table 1.

returns to expansion franchises are more risky. And there is some evidence to support this view.

All expansion franchises except the Pilots and the most recent Diamondbacks and Devil Rays appear in Table 2. Seven of the 11 are below average and all of the observations with negative growth rates (except the White Sox) were expansion franchises. And the overall average for the 11 expansion teams (including the Senators2 to 1971 with a growth rate essentially equal to zero) with observations in Table 2 is 3.4%.

But the evidence isn't complete on the idea that expansion franchises are quite risky prospects. For example, the Astros (8.3%), Mets (8.9%), and Royals (5.5%) are all strong performers and the Mariners (18.1%), thanks to the dot.com boom in the Seattle area, show the highest rate of real growth of all teams in Table 2. In addition, the Pilots, arguably the worst experiment in modern MLB history, sold for $54.1 million in 1970 when the average sell price was $44.2 million (Table 3). So, while risky on average, there were some true gems in the expansion mix. This begs an alternative explanation and one does present itself.

Table 4, Panel B, compares an estimated present value of profits to franchise fees. The estimated present value is found as follows. Suppose an existing team were purchased at the same time as the 1960 expansion. Given that the average period of ownership for those buying in the 1960s was 10.0 years (Table 3), and the rate of growth for buyers in the 1960s was –0.7%, and the sale price in the 1970s averaged $44.2 million, then what original buy price in 1960 solves $P_{1960}{}^{*}[44.2/(1-0.7)^{10.0}]$? This estimated buy price should be the discounted present value of profits for such a team. These values are shown in Panel B, column 2. Of course, when one buys an expansion franchise, there is still the player roster, stadium arrangement, and other operating expenses to incur. Especially for marginal territories, the franchise fee should be less than the estimated present value of the eventual team that takes the field. But it is the pattern of the fees that proves interesting, not their absolute level.

As an alternative to the idea that expansion teams are riskier than others, Panel B suggests that the overall 7% growth rate is overblown because the franchise fee in the 1960 expansion is only 30% of the estimate of net present value of profits! An explanation for this "mistake" by the league owners in 1960 could simply be "learning by doing." After all, this was their first experiment with expansion in the modern period. The 1960s expansion involved only one city of unknown potential (Houston) but the price was only 30% of the reasonable estimate. Subsequently, for the 1968 expansion, the price jumps to equal the reasonable estimate, but this price is too high for an expansion franchise for the reasons just noted—

the owner still needs to buy players, a stadium arrangement, and the rest of their operations. And after the 1968 over-charging, the expansion franchise cautiously rises from 40% to 70% of the estimated present value of profits. This is consistent with learning over time.

Panel B also suggests the following for expansion team owners. Since the expansion of 1976, it appears that owners have been zeroing in on the estimated present value of profits for potential expansion owners. And this really doesn't bode well for potential owners of expansion teams since they must then earn back a discounted present value of profits to cover the expansion fee and their net rate of return. Perhaps the below-average growth rates for the seven of 11 expansion teams in Table 2 is due to this added burden in territories that already were marginal in terms of expected profitability.

Think about this: It appears that the most reasonable conclusion is that owning MLB teams is, with a few notable exceptions, quite profitable and nearly always beats the growth rate in the economy at large. These results, along with the ability of owners to use the RDA or revenue transfers to mask actual operating profits, cast serious doubts on claims of poverty voiced by MLB owners. And expansions franchises appear to be less and less valuable on net, over time, once the original purchase price is imputed into the result.

Finally, what can we learn about ownership values other than operating profits by employing expression (2)? The FW-F valuations are $DNPV_1$, the other values of ownership are $\sum_{i=2}^{5} DNPV_i$, and actual sale prices should be DNPV. So we should be able to find the other values of ownership as:

$$\sum_{i=2}^{5} DNPV_i = P_{t+} - DNPV_1.$$

There are 27 transactions from Table 1 that occurred over the period of the FW-F data. Actual sale prices (P_{t+}), FW-F valuations ($DNPV_1$), and differences are shown in Table 5, arrayed from highest positive difference to most negative difference. The difference between average actual sale prices and average FW-F valuations is only $1.3 million, or about 0.63%. If we toss out the three largest FW-F misses (Seattle, Montreal, and Colorado) the average difference is less than $1 million.

But, the variation is broad in the FW-F estimates; the average percentage difference across all of the observations is about -8.5% (-3.9% without the three biggest misses). So the FW-F estimates are less than actual sale prices as hypothesized in Section II with the conclusion that other ownership values average about 8.5% of actual sale prices. At the average of all actual sale prices, the other values of ownership would be 8.5% of $208.4 million, or about $7.7 million.

But by the discussion in Section II and equation (3), the differences should all be negative in Table 6. Perhaps heroically, let's focus only on the 15 transactions where the difference is negative and assume that the estimates in those cases are somehow more accurate than the rest. For those 15 transactions, the average difference is $42.1 million. Since the average actual sale price for these transactions is $218.9 million, then other ownership values would be about 19.2% of the actual average sale value.

Conclusions

Since believable profit data are not provided by MLB owners, one way to track the value of ownership is through actual team sale prices. If owners maximize economic return and competition is brisk, sale prices should approximate the discounted net present value of ownership. Further, observed growth rates in these prices should indicate the next best alternative growth that team owners can obtain.

Examining these growth rates for MLB franchises, it appears that MLB team ownership, once all values to ownership are included in the analysis, is profitable in the aggregate. At the level of individual transactions, the average rate of growth in sale prices is twice the 3% typical growth rate in the economy at large and the median is 1.6 times larger. The average real growth rate in sale prices aggregated at the franchise level is 4.8% and 4.5% at the median. Again, both values are well in excess of the 3% real growth rate in the economy at large. Further, there is a strong risk and return relationship in these prices suggesting that the market for franchises reward those buying higher risk teams.

Without any formal time series analysis, all that can be said is that the behavior of growth rates aggregated at the

decade level has been a roller-coaster ride, dramatically high in MLB's earliest decades, falling below the 3% comparison rate from the 1950s through 1970s, bouncing back handsomely in the 1980s, and falling off again in the 1990s to essentially zero. While some of these periods are consistent with owner laments of losses, not all periods back up these claims. And there is an even tighter risk-return relationship at the decade averages (statistically speaking, based on the significance of the regression and coefficient estimates).

In addition, owners appear to have learned over time how to price expansion franchises closer to a reasonable estimate of the expected discounted value of future profits. This may help explain why the growth rates in sale prices for the vast majority of expansion teams are so weak. And, omitting the tumultuous decade surrounding World War II, the period of ownership fell dramatically in the 1960s and again in the 1990s. Finally, the portion of the value of ownership that is not associated with annual operations appears to be significant, possibly in the tens of millions of dollars.

Even at its generous length, the paper fails to address some obvious and important issues. The results in Tables 1 and 2 cry out for formal modeling and estimation of the price determination process, perhaps along the lines begun by Alexander and Kern (2004). And surely solid time series techniques can inform us about the interesting roller-coaster ride for sale price growth rates in Table 3. The explosion in the 1980s is consistent with the dramatic expansion of cable TV. But why are growth rates so phenomenal early on only to fall into the doldrums from the 1950s through the 1970s? And why did the fall off to essentially zero growth rates in the 1990s occur? Finally, there is the puzzle of the two fairly distinct points in time where the average period of ownership drops substantially. Related to time series issues, perhaps regime changes based on structural alternations occurred; changes in the tax value of owning teams is one possibility worth exploring.

The analysis suffers from the absence of actual profit data. In the absence of those data, we are left with our suspicions and the results that can be determined from available data. And the results here suggest that few owners actually do experience negative cash flows in the first place since 1) team sale prices increase at rates in excess of the growth rate in the economy at large, and 2) riskier prospects do, indeed, receive higher mean returns. Outside of a few very remote theoretical oddities (Quirk & Fort, 1992, pp. 72-77), claims of negative cash flow appear to be an artifact of acceptable accounting practices. The roster depletion allowance and the ability to shift revenues between multiple operations generate paper losses only. And that is what owners report.

My favorite quote about MLB is attributed variously to Hall of Fame Manager Leo Durocher, "Baseball is like church. Many attend. Few understand." And on the business side of the game, it is no wonder. It is relatively straightforward to list the elements of ownership value. But our ability to untangle values other than operating profit depends on data we rarely get to see. And to date the popular media reports of team sale prices and *Financial World*/*Forbes* team valuations are what we have to work with. The analysis should be extended as just suggested and revisited as it is here if additional data ever become available.

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