A Stadium by Any Other Name: The Value of Naming Rights

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A Stadium By Any Other Name

The Value of Naming Rights

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Since the 1990s, an increasing number of professional sports teams have sold the naming rights for their facilities to private firms. Although some policy makers have protested the private sector's appropriation of naming rights, no one has questioned the value of this strategy to the firms that buy the naming rights. The authors use a one-step version of event analysis to show that naming rights do not have a lasting impact on the profitability of the firms that buy them.

Keywords: **PLEASE PROVIDE**

I. INTRODUCTION

The financing of the construction of facilities for professional sports franchises has two sets of stakeholders: the franchises themselves and the cities that host them. Economic studies generally conclude that teams reap large profits from new, municipally funded facilities, at least in the short run. The popular press is divided regarding the value of new facilities to cities. In contrast, economists (e.g., Coates & Humphreys, 1999; Hudson, 1999; Noll & Zimbalist, 1997; Rosentraub, 1997) generally conclude that new facilities generate little or no growth in jobs or income for city residents, although some (e.g., Danielson, 1997; Swindell & Rosentraub, 1998) find evidence of nonpecuniary benefits.

There has, however, been almost no economic research that examines the investment made by private firms in naming rights for stadiums and arenas (one notable exception being DeSchriver & Jensen, 2003). Most analyses of naming rights have come from the marketing literature. In general, this literature

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endorses the popular claim that ''naming rights relationships, arguably, provide the most cost effective marketing communication in the market place today'' (McCarthy & Irwin, 2000). Throughout the past couple of years, some skeptics (e.g., Isidore, 2001, 2003) have begun to question the merits of purchasing naming rights. The lack of attention paid to naming rights is surprising because of the spate of bankruptcies in the early 2000s of firms that had purchased naming rights to facilities. Although one cannot attribute Enron's problems to its dealings with the Houston Astros, the widespread failures of firms that had purchased naming rights suggest that one should take a careful look at the value of naming rights to the firms that purchase them.

Several studies in the marketing literature have used event analysis to examine the effect of naming rights and sponsorship announcements on the value of the sponsor's stock. Most of them report a positive and statistically significant rate of return on the day of the announcement. Mishra, Bobinski, and Bhabra (1997) examine 76 announcements of corporate event sponsorships (such as the Olympics, concert tours, tennis tournaments, and even the naming of stadiums, p. 159). They find a positive and statistically significant excess rate of return (known in the literature as an ''abnormal return'') of 0.556% on the day of the announcement. On no other day in the 10 days surrounding the announcement, however, is there a statistically significant positive effect. They do not compute the cumulative abnormal returns.

Miyazaki and Morgan (2001) examine 27 announcements of sponsorships for the 1996 Olympic Games in Atlanta. They do not report the abnormal return on the day of the announcement (or any other daily abnormal rate of return) but they compute cumulative abnormal returns throughout several windows. They report a positive and significant cumulative rate of return for only two windows: $(-4, 0)$ and $(-3, 0)$.

Clark, Cornwell, and Pruitt (2002) examine the announcements of 49 purchases of corporate stadium naming rights. They find that the average abnormal rate of return on the day of the announcement is 0.73%, which is positive and statistically significant. Throughout the 3-day window, from the day before the announcement to the day after the announcement, they report a statistically positive and significant cumulative abnormal rate of return of 1.65%.

We make three contributions to the literature. First, we reinterpret the results of this literature. When the cumulative abnormal returns are statistically insignificant, then the announcement has no permanent impact on the value of the stock even when it has an impact on the day of the announcement or in a short interval surrounding it. In these studies, cumulative abnormal returns are not statistically significant after the day following the announcement (Day 1). Unlike, for example, the effect of earnings announcements cited in MacKinlay (1997), these studies find no permanent effect on the value of the stock. They thus indicate that the market displays excess volatility in the sense that the underlying

value of the naming rights does not justify the price rise that accompanies the announcement. Mishra et al. (1997), for example, find a negative, significant abnormal return at the 10% level on Day 2. This offsets the positive announcement-date effect.

Second, unlike Clark et al. (2002), we focus on the individual firms rather than on the overall average return. We show that the average findings are strongly affected by one or two outliers. The median abnormal return (which Clark et al. report as 0.05%) would therefore more accurately reflect the impact of naming rights on firms.

Finally, using a more recent sample of stadium naming rights announcements, we focus on the long-run impact of a firm's announcement and confirm the reinterpreted results of the literature. Our results are discouraging for potential sponsors. Although some announcement-day effects are positive and significant, the cumulative effects never are. Any announcement-day enthusiasm quickly dissipates. The market does not interpret the announcements of naming rights as a positive event because the cost of the naming rights is comparable to any future cash flow benefit.

In addition to the above contributions, we use a more intuitively appealing methodology to generate our findings. Event analysis originated in finance and often has been used in many other disciplines, but it has not been widely embraced in the economics literature. In part, this may be due to the nonparametric techniques used in most event analyses. As noted in MacKinlay (1997), the estimation is a multistep process in which one first simulates what the holding period returns (typically 1 day) would have been for a company's stock in the absence of an announcement. One then subtracts the simulated returns from the actual returns to compute the abnormal returns (AR) for each day. Adding up the AR for all preceding days generates the cumulative abnormal returns (CAR). Finally, one can test statistical significance of the CAR or the individual AR (see, e.g., Aharony & Swary, 1980; Binder, 1998; Fama, 1969). By contrast, we use more familiar econometric methods developed by Salkever (1976) and Karafiath (1988) to generate our results. Specifically, we use dummy variables to measure abnormal returns. For example, if the coefficient of the dummy variable corresponding to the day of the announcement is positive and statistically significant, then we conclude that an announcement had an immediate effect on the value of the firm. If the sum of the coefficients on the dummy variables corresponding to the event window is statistically insignificant, however, we conclude that the announcement had just a transitory effect on the firm's value. If the sum of the coefficients is positive and statistically significant, we conclude that the purchase had a permanent, positive effect.

In the next section of this article, we provide a brief background into naming rights and the reasons that companies give for acquiring them. In the third section, we discuss the empirical methodology and data used in this article,

including a brief comparison of the standard approach to event studies and the dummy variable approach that we use. Our results appear in the fourth section. A conclusion follows.

II. NAMING RIGHTS

The names on professional sports facilities have changed throughout the years to reflect the sources of funds used to build or refurbish them. (For a more complete treatment, see Leeds & von Allmen, 2004.) In the first half of the 20th century, almost all facilities were built for baseball and, to a lesser extent, hockey. Football teams generally served as off-season tenants of baseball teams. When the National Basketball Association (NBA) originated in 1946, it also usually rented space in existing facilities. Most baseball stadiums that were built during this period, such as Comiskey Park, Ebbets Field, and Shibe Park, bore the names of team owners who had paid for their construction.

In the 1960s, cities began to assume more of the financial burden of building facilities. Because many cities hosted both a baseball and a football team or a basketball and a hockey team, the municipal facilities typically took the form of multipurpose structures built to house multiple sports. In keeping with the new form of funding, these structures generally had names that identified the municipality itself, reflected local flavor, or promoted patriotic themes (e.g., Atlanta--Fulton County Stadium, Three Rivers Stadium in Pittsburgh, and Veterans Stadium in Philadelphia).

The first naming rights deal for a stadium came in 1973, when the Buffalo Bills sold the right to name their new stadium to Rich Foods, Inc. As recently as 1990, no baseball stadium, and only a smattering of other facilities, bore a corporate name. The following decade brought a major change in the market for naming rights, and by 2001, the majority of all facilities bore corporate names. Half the baseball and football stadiums and more than three fourths of basketball and hockey arenas had sold naming rights to private corporations. Even colleges have begun to sell the rights to their athletic facilities (see Weinberg, 2003).

As naming rights have grown more popular, they have come to involve more than simply a corporate logo above the entrance. For example, Lincoln Financial's purchase of naming rights for the Philadelphia Eagles' facility also gave it "commercial time on broadcasts, signs and information kiosks at the stadium, and suites at home and road games in which to entertain clients" (Bowen, 2002). Despite the expense of $139.6 million throughout 20 years, Lincoln Financial officials believe the purchase makes good business sense for the company (Bowen, 2002). Indeed, the popular wisdom is that "a naming rights agreement helps to position the company's brand at the top end of the spectrum while allowing it to speak to several marketing segments at one time" (Gruen, 2001, p. 12). When pressed for details, however, marketing executives

TABLE 1: Facilities and Troubled Sponsors

Facility	City	Difficulty
Adelphia Coliseum	Nashville	Bankruptcy
CMGI Field	Boston	Gave up name due to financial distress
Conseco Fieldhouse	Indianapolis	Bankruptcy
Enron Field	Houston	Bankruptcy
MCI Center	Washington, DC	WorldCom bankruptcy[a]
National Car Rental Arena	Miami	ANC bankruptcy[a]
ProPlayer Stadium	Miami	Bankruptcy
PSINet	Baltimore	Bankruptcy
3-Com Field	San Francisco	Gave up name due to financial distress
Trans World Dome	St. Louis	Bankruptcy
United Center	Chicago	Bankruptcy
US Airways Arena	Landover, MD	Bankruptcy

a. Parent company.

acknowledge that they have no way to measure the value of naming rights to the firm (Sandomir, 2004).

Recent events indicate that naming rights may not deliver as high a return as Lincoln Financial officials expect. Table 1 shows that several firms that purchased naming rights have relinquished them due to bankruptcy or have not renewed them due to financial losses. Several other corporate sponsors have retained their deals despite severe financial distress. For example, Ericsson, Reliant Resources, and American and Continental Airlines all lost at least 70% of their stock value in 2002. Although the difficulties faced by corporate sponsors do not prove that naming rights are a bad deal, companies that own naming rights saw their stock values decline more than twice that of the Dow Jones Industrial Average in 2002. This decline has led some pundits, such as Chris Isidore, to refer to "the stadium sponsorship curse" and suggests that further investigation is warranted.

III. EMPIRICAL MODEL AND DATA

Event-study analysis examines the impact of an exogenous event on the rate of return of a firm or group of firms. More specifically, it determines whether the event has permanently changed the price of the firms' shares. To establish whether a change has occurred, the finance literature first creates a counterfactual history by simulating the returns that would have prevailed without the event and then establishes whether the returns differ systematically from those actually observed (see MacKinlay, 1997, for greater detail; Schweitzer, 1989, for an intuitive description). Although we use a different methodology from most finance studies, all event analyses share certain basic characteristics.

First, one must establish when the event in question took place. Sometimes, the date is obvious, as in the case of a disaster (see Nethercutt & Pruitt, 1997). At other times, it is not at all obvious, as in the case of a regulatory change that takes a long time to be adopted. Announcements of naming rights purchases face two difficulties in terms of timing. First, it is sometimes impossible to find the date of the announcement. We had to delete facilities for which we could not find the announcement date from our sample. Second, even when we found an unambiguous announcement date, we could not be sure that investors did not anticipate or somehow learn about the purchase ahead of time. As a result, we had to account for the possibility that the impact of the event may have preceded the event itself.

Second, one must decide how much data to collect and what frequency to use. The data should follow the firm for a long enough period to create a meaningful baseline for the holding period return. However, it should not be so long that it includes unrelated events that significantly affect the return. There is no accepted value for the length of the base period (also known as the estimation window), the period of time that foreknowledge of the event could have affected stock prices, or the appropriate length of time to measure the impact of the announcement. We used a period of 191 days, of which 170 days preceded the announcement of naming rights. As we show below, we allowed for the possibility that the naming rights deal could have affected the firm's value for as many as 20 days before the deal was announced. We also followed the holding period return for 20 days after the announcement was made, making for a total event window of 41 days. This event window matches the one used by MacKinlay (1997). Although these decisions were arbitrary, they were well within the limits chosen by similar studies. Following the standard practice, we used daily data to measure the holding period return.[1]

Rather than following a complex, multistep procedure to simulate what the holding period return to a stock would be in the absence of an event and then calculating abnormal returns above this base level, we follow Salkever (1976) and Karafiath (1988) and use a one-step process based on the following regression equation:

$$r_{jt} = \beta_{0j} + \beta_{1j} r_t^{SP} + \sum_{s=t_A-20}^{t_A+20} \delta_s D_s + \varepsilon_{jt}, \tag{1}$$

where r_{jt} is the (daily) holding period return for stock j on day t, r_t^{SP} is the holding period return for the Standard and Poor's index, and D_s is equal to 1 on day s of the event window and 0 otherwise.

The dummy variable D_{t_A} is 1 and δ_{t_A} is the abnormal return of the stock on the day of the announcement (t_A). The sum of the coefficients of the dummy variables, $\sum_s \delta_s$, captures the cumulative effect of the announcement throughout

the entire event window (the CAR). The dummy variables prior to the announcement date account for the possibility that word of the announcement leaked out to the markets before the official announcement was made.

The dummy variable approach to event studies has two key advantages. First, it greatly simplifies the analysis. To determine whether the abnormal return on the day of the announcement was statistically significant, one need only determine whether the estimate $\hat{\delta}_{t_A}$ is statistically significant. One can determine the statistical significance of the cumulative effect by referring to the covariance matrix of the regression.

Second, the regression methodology is based on less restrictive assumptions. MacKinlay (1997) points out that the traditional method of computing the standard error of the CAR implicitly assumes that the covariances of the abnormal returns are all zero. Using the covariance matrix of the regression model, one can use the covariance terms directly without making such restrictive assumptions.

One problem for which we do not account is that of possible selection bias. In their study of prices charged for naming rights, DeSchriver and Jensen (2003) used the standard Heckman correction for selection bias, which they justified as follows:

> For the facilities that are named we observe the characteristics of the facility and the price that sponsors are willing to pay for the naming rights. However, for the unnamed facilities we observe the characteristics of the facility but not the price that potential sponsors are willing to pay. (p. 360)

Because their unit of observation is the facility, they are able to split their data set into named (or renamed) and unnamed (or unrenamed) facilities. Such a correction is impossible for our article because our unit of observation is the company. Our relevant comparison group is therefore all firms that did not buy naming rights. Not only is this set of firms far larger than the number of unnamed facilities, it is almost impossible to identify. However, because firms that expect the greatest gains from naming rights are most likely to win the auction for naming rights, any selection bias is likely to be positive. That means that if selection bias is a factor in our estimates, it is likely to cause the estimates to overstate the true impact of naming rights. This will have a significant impact on the conclusions we draw later in the article.

We focus our attention on naming rights deals for the four major sports leagues (baseball, basketball, football, and hockey) in the United States and Canada. *Street and Smith's SportsBusiness Journal* (2003) lists 70 such deals, from which we derived 54 usable transactions. We could not use all 70 deals for several reasons. First, as noted above, event studies require that the date of the announcement be well documented, and we could not find the announcement date for several facilities. Second, some companies that purchased naming rights, such as Citizens Bank (a subsidiary of The Royal Bank of Scotland), are

not traded on U.S. exchanges. Finally, some companies that bought naming rights are not publicly listed (e.g., the Jones Financial Company). We found information on 19 announcement dates from the official stadium Web sites and the remainder through LexisNexis searches.

We used Center for Research in Security Prices (CRSP) data for the daily holding period returns for each company's stock and for the concurrent daily returns on the Standard and Poor's Composite Index. The names of the companies, the cities and teams in which the facilities were built, and the announcement dates appear in Table 2.

Table 2 shows that the four major sports are almost equally represented throughout the 1990-2004 period. Sixteen Major League Baseball (MLB), National Football League (NFL), and National Hockey League (NHL) franchises and 19 NBA franchises occupy facilities in the study. The sum of these numbers exceeds the number of facilities in the study because, as Table 2 shows, several arenas hold more than one team. As expected, almost all of the naming rights in this sample were purchased after 1990. Only the ARCO arena in Sacramento was named in the 1980s. The remaining rights announcements were distributed fairly evenly the 1990-2004 period, with 36 purchased in the 1990s and 17 purchased in the 2000s.

Naming rights were distributed across a variety of industries. The telecommunications and technology sectors were well represented in the sample, with nine facilities. Banks and other financial institutions surpassed the technology sector with 13 facilities. The more traditional manufacturing and transportation sectors were even more heavily represented, with 23 facilities. The remainder came from a variety of industries (e.g., Gaylord Entertainment and FedEx). The spread across both time and type of industry suggests that no one macrofactor, such as the rise of the technology sector in the late 1990s and its collapse in the early 2000s, dominated the impact of naming rights on stock market returns.

IV. RESULTS

We find little evidence that the purchase of naming rights had a statistically significant impact on the value of the companies that bought them, even less evidence that the impact was positive, and no evidence at all that there was a permanent, positive impact. Of 108 possible effects, 54 each for the announcement-day impact and for the permanent impact, only 13 were statistically significant at the 10% level and only 7 were statistically significant at the 5% level. Our predominant finding was thus that we could not reject the hypothesis that purchasing naming rights had no impact on the profitability of the firm.

The 13 companies that experienced a statistically significant impact at the 10% level showed no clear pattern either in terms of the date of purchase or the type of firm. The purchases range from among the earliest in the sample to among the most recent, and they cover all the major sports. The companies

TABLE 2: Companies With Facilities in Sample

Company	City	Team	Announcement Date
Alltel	Jacksonville	Jaguars[a]	4/18/97
America West Airlines	Phoenix	Suns[b]; Coyotes[c]	8/4/89
American Airlines	Dallas	Mavericks[b]; Stars[c]	3/18/99
American Airlines	Miami	Heat[b]	10/21/97
American Financial Group	Cincinnati	Reds[d]	7/7/00
Amvescap	Denver	Broncos[a]	1/29/01
ARCO	Sacramento	Kings[b]	8/20/85
Bank One	Phoenix	Diamondbacks[d]	4/5/95
Cinergy	Cincinnati	Reds[d]	9/9/96
CMGI	Foxboro (MA)	Patriots[a]	8/23/00
Coca Cola	Houston	Astros[d]	6/5/02
Comerica	Detroit	Tigers[d]	1/21/98
Compaq	San Jose	Sharks[c]	10/19/00
Conseco	Indianapolis	Pacers[b]	5/22/98
CoreStates	Philadelphia	76ers[b]; Flyers[c]	9/9/94
Delta	Salt Lake City	Jazz[b]	7/26/91
Edison	Anaheim	Angels[d]	9/15/97
Enron	Houston	Astros[d]	4/18/99
Ericsson	Charlotte	Panthers[a]	6/26/96
FedEx	Landover (MD)	Redskins[a]	11/21/99
FedEx	Memphis	Grizzlies[b]	10/16/02
FleetBoston	Boston	Celtics[b]; Bruins[c]	3/16/95
Fruit of the Loom	Miami	Dolphins[a]	8/26/96
Ford	Detroit	Lions[a]	11/16/99
Gaylord	Nashville	Predators[b]	8/4/99
General Motors	Vancouver	Grizzlies[b]; Canucks[c]	3/29/94
Gillette	Foxboro (MA)	Patriots[a]	8/4/02
H.J. Heinz	Pittsburgh	Steelers[a]	6/15/01
Key	Seattle	Supersonics[b]	2/21/95
Lincoln Financial	Philadelphia	Eagles[a]	6/2/02
MCI	Washington, DC	Wizards[b]; Capitals[c]	6/13/95
M&T Bank	Baltimore	Ravens[a]	5/5/03
Network Associates	Oakland	Raiders[a]; A's[d]	9/10/98
Northern States Power	St. Paul	Wild[c]	6/15/00
Office Depot	Sunrise (FL)	Panthers[c]	9/13/02
Pepsico	Denver	Nuggets[b]; Avalanche[c]	3/16/95
Pepsico	St. Petersburg	Devil Rays[d]	10/4/96
Petco	San Diego	Padres[d]	1/17/03
Phillip Morris	Milwaukee	Brewers[d]	3/21/96
Philips	Atlanta	Hawks[b]; Thrashers[c]	2/2/99
PNC	Pittsburgh	Pirates[d]	8/6/98
PSINet	Baltimore	Ravens[a]	1/28/99
Qualcomm	San Diego	Chargers[a]; Padres[d]	2/25/97
Raymond James	Tampa	Buccaneers[a]	6/26/98
RBC	Raleigh	Hurricanes[c]	9/19/02
Reliant Energy	Houston	Texans[a]	8/15/02

(Continued)

TABLE 2: (Continued)

Company	City	Team	Announcement Date
Republic Industries	Sunrise (FL)	Panthers[c]	7/11/98
Safeco	Seattle	Mariners[d]	6/4/98
SBC	San Antonio	Spurs[b]	7/19/00
Staples	Los Angeles	Clippers[b]; Lakers[b]; Kings[c]	12/1/97
United Air Lines	Chicago	Bulls[b]; Blackhawks[c]	11/5/92
US Airways	Landover (MD)	Wizards[b]; Capitals[c]	5/17/93
U.S. Cellular	Chicago	WhiteSox[d]	3/7/00

a. National Football League (NFL) franchise.
b. National Basketball Association (NBA) franchise.
c. National Hockey League (NHL) franchise.
d. Major League Baseball (MLB) franchise.

ranged from traditional mortar-and-brick companies to the hot high-tech firms of the 1990s.

Three companies showed a positive and statistically significant announcement-day effect at the 5% level: CMGI, Network Associates, and Republic Industries (the parent company of National Car Rental). CMGI, which became so financially stressed between its purchase of naming rights for the home field of the New England Patriots (NFL) and the opening of the field, purchased the rights in 2000. Network Associates bought the rights to the home field of the Oakland A's (MLB) and Raiders (NFL) in 1998. Republic Industries (the parent company of National Car Rental) bought the rights to the Florida Panthers' (NHL) home arena in 1998.

The three positive impacts were partly offset, however, by the fact that two companies experienced negative and significant announcement-day effects. Phillip Morris (the parent company of Miller Brewing Company) bought the rights to the Milwaukee Brewers' home field in 1996, whereas US Airways bought the rights to the home arena for the Washington Wizards (NBA) and Washington Capitals (NHL) in 1993.

Although our individual results seem to contradict Clark et al. (2002), we find the mean abnormal return (the average of the last column of Table 3) to be 0.18%, which is broadly consistent with their findings. However, Table 3 shows that the mean was strongly affected by one outlier. CMGI experienced an abnormal return of 15.5%, which was more than 1.5 times the size of the next highest impact (an abnormal return of −9.9% for US Airways). This large abnormal return was abnormal in more ways than one. Figure 1 shows the closing stock price for CMGI for all of 2000. From a start of more than 300, its stock price fell to a fraction of a point by the end of the year. The large holding-period return on August 23 (its announcement date) is a barely discernible blip in this steep decline. The loss in value was so great that CMGI had to forfeit its naming

TABLE 3: Cumulative Abnormal Returns

Company	41-Day Effect	Announcement-Day Effect
Alltel	−0.113 (−0.91)	−0.001 (−0.07)
America West Airlines	0.052 (0.29)	0.047* (1.89)
American Airlines-1999 (American Airlines Center)	0.253 (1.23)	−0.046 (−1.60)
American Airlines-1997 (American Airlines Arena)	−0.044 (−0.39)	0.016 (1.02)
American Financial Group (Great American Ball Park)	−0.082 (−0.49)	−0.007 (0.29)
Amvescap (Invesco Field at Mile High)	−0.188 (−0.88)	−0.003 (−0.10)
ARCO	−0.015 (−0.13)	0.004 (0.23)
Bank One	0.0664 (0.73)	0.023* (1.84)
Cinergy	−0.009 (0.01)	0.0042 (0.42)
CMGI	0.248 (0.59)	0.154** (2.62)
Coca Cola (Minute Maid Field)	−0.010 (−0.03)	0.021* (1.66)
Comerica	−0.134 (−1.29)	−0.009 (−0.60)
Compaq-2000 (Compaq Center -- San Jose)	−0.136 (−0.64)	0.054* (1.82)
Conseco	−0.033 (−0.24)	0.016 (0.81)
CoreStates	−0.075 (−1.05)	−0.003 (−0.25)
Delta	−0.081 (−0.74)	−0.017 (−1.09)
Edison	−0.077 (−0.96)	−0.011 (−1.00)
Enron	0.038 (0.27)	0.012 (0.06)
Ericsson	0.009 (0.05)	−0.033 (−1.33)
FedEx-2002 (FedEx Forum)	0.219 (1.56)	−0.006 (−0.31)
FedEx-1999 (FedEx Field)	−0.047 (−1.37)	−0.028 (−1.09)
Fleet	−0.033 (−0.34)	−0.009 (−0.63)
Fruit of the Loom (Pro Player Stadium)	0.187 (1.62)	−0.014 (−0.90)
Ford	−0.142 (−1.13)	−0.017 (−0.97)
Gaylord	0.038 (0.23)	−0.004 (−0.16)
General Motors	−0.015 (−0.13)	−0.002 (−0.11)
Gilette	−0.054 (−0.56)	−0.020 (−1.50)
Heinz	−0.015 (−0.12)	−0.015 (−0.82)
Key	0.124 (1.49)	−0.009 (−0.78)
Lincoln Financial	−0.033 (−0.37)	0.007 (0.53)
MCI	0.081 (0.56)	−.0002 (0.01)
M&T Bank	−0.011 (0.11)	−0.004 (0.29)
Network Associates	−0.315** (−5.01)	0.069** (2.47)
Northern States Power (Xcel Center)	−0.079 (−0.63)	0.019 (1.09)
Office Depot	−0.042 (−0.22)	0.043 (1.63)
Pepsico (Pepsi Center)	−0.051 (−0.55)	−0.008 (−0.59)
Pepsico (Tropicana Field)	−0.009 (−0.09)	−0.009 (−0.66)
Petco	−0.189 (−0.87)	−0.031 (−1.04)
Phillip Morris (Miller Park)	−0.127 (−1.59)	−0.030** (−2.84)

(Continued)

TABLE 3: (Continued)

Company	41-Day Effect	Announcement-Day Effect
Philips	0.141 (0.61)	0.023 (0.78)
PNC	−0.028 (−0.31)	−0.005 (−0.44)
PSINet	0.271 (0.69)	−0.022 (−0.41)
Qualcomm	0.129 (0.61)	−0.002 (−0.07)
Raymond James	−0.203 (−1.23)	−0.026 (−1.12)
RBC	0.016 (0.18)	−0.014 (−1.15)
Reliant Energy	−0.300* (−1.79)	−0.004 (−0.17)
Republic Industries (National Car Rental Center)	−0.135 (−0.75)	0.067** (2.71)
Safeco	0.023 (0.22)	0.0007 (0.04)
SBC	−0.111 (−0.61)	0.013 (0.52)
Staples	−0.016 (−0.10)	0.001 (0.06)
United Air Lines	0.118 (1.05)	0.030* (1.94)
US Airways	−0.510** (−2.40)	−0.099** (−3.36)
U.S. Cellular	−0.005 (−0.02)	−0.023 (−0.66)

*$p < .05$. **$p < .10$.

rights to the New England Patriots' new facility before the first game was played there. Thus, CMGI's huge abnormal return reveals nothing about the firm's profitability in either the long or short run. When one deletes CMGI from the sample, our average abnormal return for the announcement day falls to −0.12%. When we drop the largest negative value (US Airways) as well, the mean abnormal return is roughly 0.07%. Because of the lack of robustness, the median is likely to be a better indicator. Using the median, Clark et al. (2002) find basically no impact---an abnormal return of 0.05%---whereas we find an abnormal return of −0.4%.

The differences between Clark et al.'s (2002) results and our own are smaller than they first appear, but some differences remain. Some of these differences might be due to our use of a different estimation technique. Although we cannot comment fully on their methodology (which is not described except for their referring to the use of *Eventus* software), we see three possible sources of differences. First, although our announcement dates largely conform to theirs, we do differ on several observations. The differences occur because Clark et al. use the official announcement date, whereas we use the first date that the purchase is mentioned in the media. Thus, our event date sometimes precedes theirs by a day or two. Second, as noted above, our methodology provides a better measure of the standard error than the traditional approach. If Clark et al. use the traditional methodology, they might be basing their findings on incorrect standard errors. Third, we use a different baseline index for our regression. We use the Standard and Poor's 500, whereas Clark et al. use the value-weighted index of all stocks. Finally, we use more recent data, which incorporates a few observations that did not appear in Clark et al.'s data set.

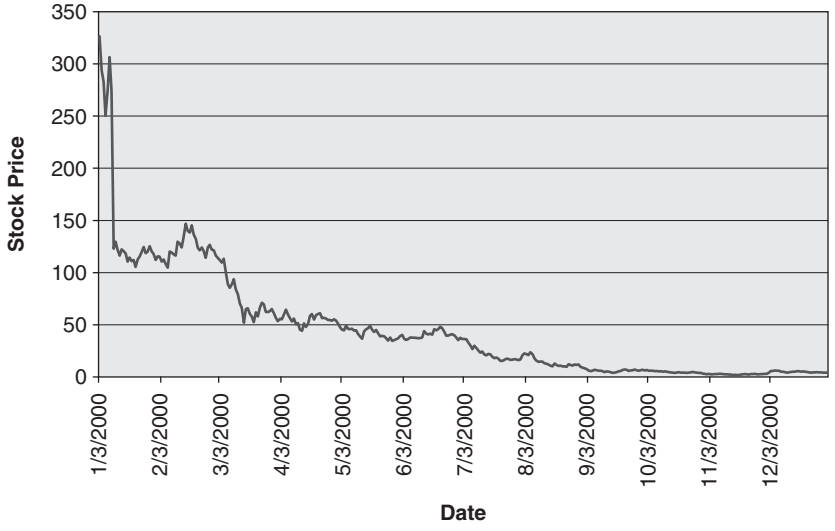

Figure 1: CMGI Stock Price in 2000

The cumulative impact was statistically significant at the 5% level for only two firms, and in both cases the impact was negative. The positive announcement-day effect for Network Associates was short-lived. By 20 days after the announcement of the naming rights purchase, the cumulative return for holding Network Associates stock had turned negative. The announcement-day effect for US Airways was not misleading because the overall impact on holding its stock also was negative. These findings accord more closely with those of Clark et al. (2002), who also find no lasting effect.[2]

In sum, we find that the announcement that a firm has purchased naming rights has no short-run effect. Of 54 companies in our sample, only 5 experienced statistically significant announcement-day effects. Only 3 of these effects, however, were positive, whereas 2 were negative. The permanent effects were even less likely to be positive. Only 2 of 54 companies had statistically significant changes in the stock returns after 20 days, and both of these estimated effects were negative.

V. CONCLUSION

When firms announce that they have purchased the naming rights to a sports facility, they routinely describe the purchase as a savvy investment. The firms that buy naming rights believe that the rights provide greater visibility, which leads to higher profits. This sentiment has generally been echoed in the

marketing literature. In contrast, our main finding is that naming rights offer no economic value---in the form of abnormal returns---to the firms that buy them. We conclude that the popular press and the existing literature have overstated the impact of naming rights on the profits of firms. Purchasing naming rights is no more profitable than any other investment the firm might make.

Our finding that naming rights have no cumulative effect does not differ materially from the previous literature that emphasizes that announcing the purchase of naming rights (or sponsorships) has a 1- to 4-day positive effect on the return to investors. However, our interpretation differs from Clark et al. (2002) in two important ways. First, even if there were a positive impact for a day or more---a finding we dispute---we claim that the cumulative impact makes a better statement about the true value of the purchase to the firm. Second, although we also find a positive announcement-day effect on average, the mean is swayed by one outlying result for CMGI. As noted earlier, a single outlier is not reflective of the sample as a whole, and---in this case---it is not indicative of the true health of CMGI itself. The median abnormal return is thus more representative of the impact that the naming rights announcement has on profits. Clark et al.'s median abnormal return is essentially zero, whereas ours is negative.

Our finding derives from a previously referenced, but rarely applied, events-study methodology. This methodology makes less-restrictive assumptions about standard errors and is more intuitively appealing to economists. We hope that our use of a dummy variable approach to event analysis will make the method more attractive to economists and will encourage them to apply it to new situations.

Notes

1. As a check on the robustness of our results, we also used an event window of 21 days. The results were not significantly different from those using a 41-day window.

2. Our cumulative effects with the 21-day window showed a negative impact in 35 of 54 cases. None of the 19 positive estimates was statistically significant at the 10% level.

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