

Analysis Group is an economic and strategy consulting firm focused on providing practical, quantitatively based strategies to achieve our clients' business objectives and optimize the financial performance of their brands and franchises.



For more than 30 years, we have applied innovative analytic methods to address challenging business problems, working closely with our deep network of academic and industry expert affiliates.

Our experts have worked on high-profile cases in a range of industries, including professional sports, entertainment, music, telecommunications, energy, and health care. We collaborate closely with clients to ensure that our analyses and recommendations are effective and actionable.

Ticket Pricing for Professional Sporting Events

Ticket pricing can seem straightforward on the surface. However, myriad strategic, financial, and business objectives may dictate significantly different pricing strategies:

- **Revenue objectives:** Maximize or increase revenues
- **Attendance objectives:** Maximize attendance or meet minimum attendance levels in order to meet broadcast thresholds (over a season, or for certain games), or to sell out a stadium or arena
- **Investment issues:** Address a variety of investment questions, such as stadium enhancements, and services
- **Improve understanding** of the real market value of assets and franchise valuation
- **Improve the quality** of ticket services for fans

In our work on ticket pricing for professional sports franchises, we have found that existing pricing strategies often are suboptimal because specific objectives, such as those outlined above, have not been clearly articulated or well-communicated throughout the organization.

Indeed, defining pricing objectives and recognizing the potential trade-offs implicit in prioritizing one objective over another are the first steps in developing effective ticket-pricing strategies.

What Secondary Market Data Does – and Does Not – Tell Us

The abundance of data on secondary market transactions (that is, tickets sold by agents such as Ticket Exchange, StubHub, and Viagogo) might suggest a relatively simple, intuitive pricing paradigm: Set ticket prices to reflect the prices evident in secondary markets. Blindly following such a simple approach, however, will lead to systematic mistakes – and professional sports teams will realize suboptimal financial performance as a result. Conversely, when secondary market data on ticket prices are analyzed and interpreted appropriately, those data can be a powerful tool for determining better ticket prices.

Why aren't secondary market prices a good proxy for market-clearing or revenue-maximizing prices?

The most obvious reason is that they do not reflect the average valuation for a specific seat or section for a specific game. That is, they are not representative of *all* the tickets available for sale, both within a given section and among all the sections available. Secondary market prices represent only a fraction of sales, and the specific seats that are sold in secondary markets may not be indicative of the “average” seat in a given section – either spatially (in the stadium) or temporally (across a season). In addition, secondary market

ticket sales may reflect buyers' greater willingness to pay because of the timing of the transaction – typically closer to game time when the teams' records, players' statuses, or weather conditions may be more certain.

Decision makers who simply extrapolate from the average price observed in the secondary market can easily overestimate stadium revenue potential and set ticket prices at the wrong levels. (Figure 1 illustrates how incorrect inferences about the market value of tickets can result.)

How can decision makers overcome the limitations of secondary market prices?

Fortunately, there are sound empirical approaches to pricing that can provide both an accurate assessment of the market demand for tickets and a clear basis for more-effective ticket-pricing strategies. These approaches, which generally involve hedonic price analyses and econometric modeling, have been widely used by economists across many industries. Analysis Group and its academic affiliates have pioneered the application of these methods to complex business problems, including developing optimal ticket-pricing strategies.

Consider the example illustrated in Figure 2. It describes the process by which secondary market data are adjusted to control for the biases that may result from the non-representa-

tive nature of such ticket transactions. This process accounts for differences between the sample of secondary market ticket sales and the complete inventory of ticket sales, as well as possible differences in willingness to pay among secondary market buyers. The analysis integrates information across many dimensions, including:

- **Seat location:** section of the stadium/arena, distance to the field, angle and pitch of view
- **Seat amenities:** size of cushions and amount of leg room, associated parking privileges, or club amenities
- **Temporal attributes:** opponent, time or day of the game, team's recent performance or record, expected weather
- **Ticket-offer attributes:** time to game day, number of tickets, broker

Analysis Group and its affiliates have assessed these and other dimensions to develop more reliable estimates of market-clearing prices for teams in Major League Baseball (MLB) and the National Football League (NFL). (See Figure 3 for an example of the analysis output.)

Our recommended strategies have included changes to ticket prices for existing sections (either increases or decreases at the section level), changes to the overall ticket-pricing structure (both spatially and temporally), and changes to the specifications of stadium sections to better

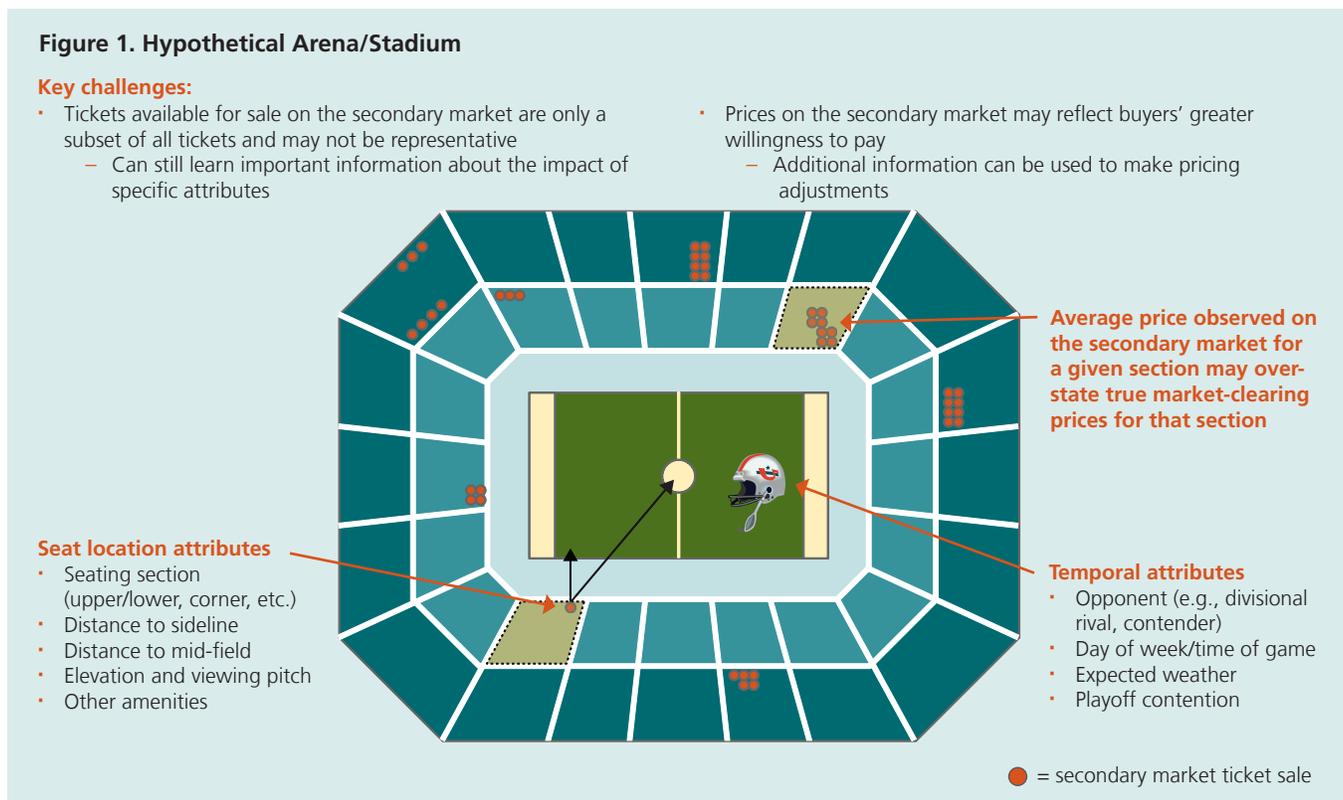
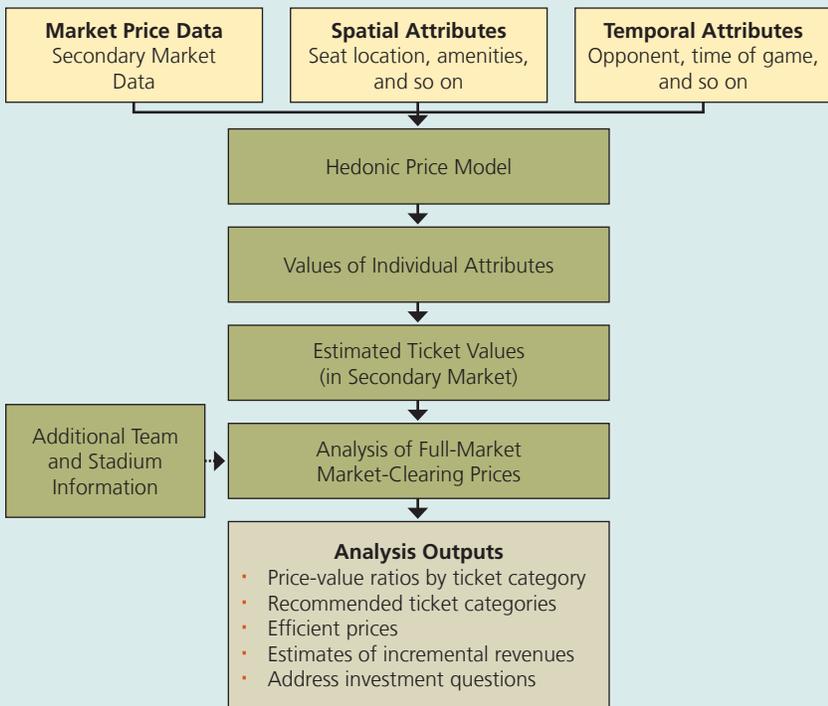


Figure 2. Hedonic Analysis of Ticket Pricing



| Ticket Category | Lower Central | Club Sideline |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Face Value | \$120 | \$350 |
| Secondary Market Average | \$230 | \$145 |
| Market-Clearing Price | \$160 | \$210 |
| Seating Capacity | 7,500 | 900 |
| Implications for Ticket Pricing | <ul style="list-style-type: none"> ▪ Market-clearing price is higher than current face value – these seats are under-priced ▪ The secondary market average price greatly overstates the difference | <ul style="list-style-type: none"> ▪ The market-clearing price is lower than face value – these seats are over-priced ▪ The secondary market average price unduly magnifies the discrepancy |

differentiate seats based on the underlying attributes that are most important to fans.

Our methodology applies to pricing strategies in other professional sports, as well.

Other Analysis Group Services for Professional Sports

Analysis Group has a broad base of experience consulting on topics related to professional sports, including baseball, football, and soccer. These cases have involved economic impact studies, intellectual property rights, contract disputes, executive compensation, and antitrust matters. Some examples are highlighted here:

- Analysis Group measured the potential economic and fiscal impact on a local economy of hosting a major sporting event. We measured the impact of attendees’ expenditures on lodging, food and beverages, transportation, shopping, and entertainment.

Analysis Group Helps Miami Dolphins Develop Ticket-Pricing Plan

As reported in the *Miami Herald*, the NFL’s Miami Dolphins turned to Analysis Group and its academic affiliates to help develop a pricing plan for 2010 season-pass and individual-game tickets.

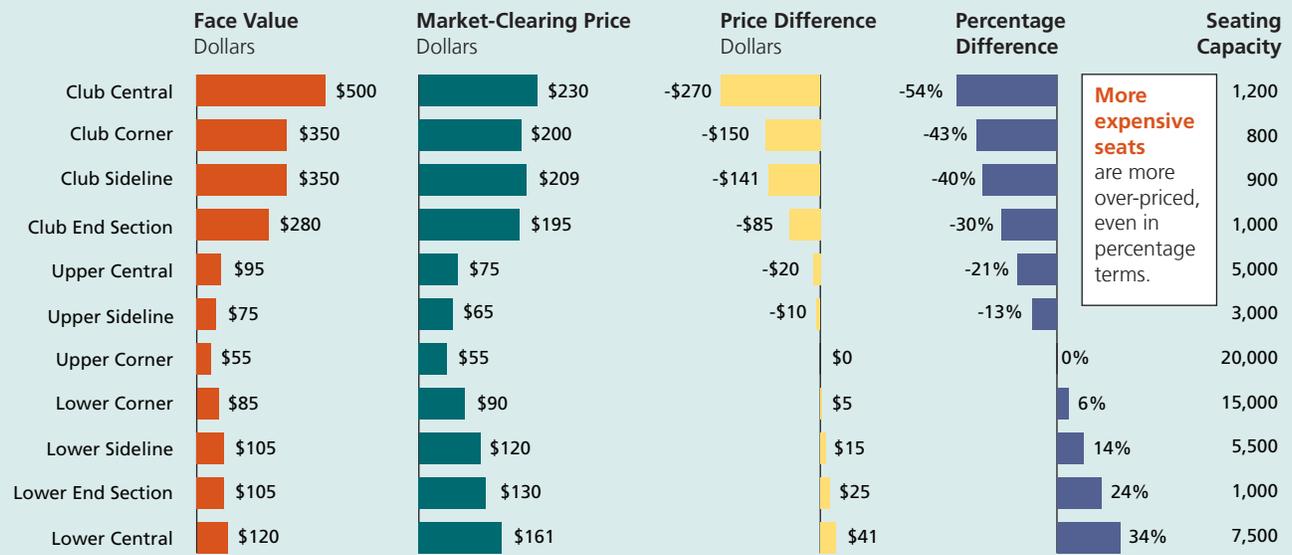
Senior Advisor **Andrew Parece** and Manager **Noam Kirson** provided analytic support to affiliates Professor **Robert Stavins** of Harvard University’s John F. Kennedy School of Government and Assistant Professor Matthew Notowidigdo of the University of Chicago’s Booth School of Business. Using econometric analysis of data on secondary market transactions, Professor Stavins directed an evaluation of the team’s existing ticket prices and consumer demand in order to determine market-clearing prices and recommend a new pricing approach.

The Dolphins’ new ticket-pricing plan resulted in an overall price increase of 5.8%: The team increased ticket prices for 56% of the seats, left prices the same for 31%, and lowered prices for 13%. The team also created new higher-priced categories for those seats located closer to the 50-yard line and in the shade.

“Professor Stavins and Analysis Group were instrumental in helping us increase our attendance and revenue through more effective, thoughtful ticket-pricing strategies. We highly recommend them to other teams facing challenging ticket-pricing decisions.”

Mark Tilson
SVP of the Miami Dolphins

Figure 3. Face Value, Secondary-Market Average & Primary Market-Clearing Price, by Arena/Stadium Section



Face value and market-clearing prices are highly correlated, suggesting the team has a good understanding of relative value among seating categories.

Modest percentage increases in large capacity sections can have significant revenue implications.

More expensive seats are more over-priced, even in percentage terms.

- Analysis Group quantified the economic impact of proposed gaming facilities on state and local economies. We also analyzed potential lost business to competitors and subsequent lost economic activity, jobs, and wages to surrounding cities and counties.
- We worked on behalf of MLB in a class action matter involving 384 former baseball players who alleged they were owed royalties from the use of their names and pictures.
- In a dispute involving copyrighted footage of sports legends (including Babe Ruth, Willie Mays, Muhammad Ali, and Hank Aaron) that the University of California Regents had licensed to ESPN, we analyzed program-
- ming costs for ESPN and its parent company, ABC, to estimate their cost savings from the unauthorized use of our client's footage.
- Analysis Group has been retained on suits involving claims of patent infringement, trade secrets theft, and unjust enrichment, as well as licensing disputes, related to various sports equipment and sports merchandising companies.
- A senior member of our professional staff has extensive experience as an expert witness in a range of litigations, including high-profile cases involving the NFL, MLB, and the National Basketball Association.

For more information on Analysis Group's capabilities for assisting clients with ticket pricing and other services for professional sports teams, please contact:

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