



# Predictive Analysis is Now Leading the Evolution of Apartment Pricing



By [Tim Blackwell](#) | Mar 16, 2016

The modern age of the apartment industry is looking a little like America's favorite pastime.

New advances in revenue management, driven by data science remind many of the sabermetrics now prevalent in baseball. You may recall the story in 2002 of how Oakland A's general manager Billy Beane, facing a low budget and the loss of three superstars from a playoff team, signed new players who were

rather pedestrian but had high probabilities of reaching base. The A's maintained their competitive edge and returned to the post-season without breaking the bank.

## Revenue Management and Apartment Pricing

Rich Hughes, RealPage, Inc.'s, Head of Data Science, says a similarly systemic approach to revenue management will help the multifamily win the pennant. Instead of targeting a few thoroughbreds who hit for percentage, though, the audience is much broader.

RealPage's data science group digs into the numbers and analyzes millions and millions of individuals applying for apartments every day to drive YieldStar, its revenue management system. The solution, which utilizes data and trends to formulate effective rents, is the latest in the evolution of apartment pricing.

"It's probably the frontier for revenue management going forward," Hughes said.

Predictive analysis leaves in the dust more traditional pricing practices of the multifamily industry over the last three decades. The solution factors in various conditions, occupancy rates, rent rates and other data based on resident behavior to automatically recommend a price.

Evolution of pricing included only periodic or annual analytics

Setting rents have evolved from a similar mold of revenue management that the airline industry discovered in the early 1980s – to use analytics to predict consumer behavior to optimize revenue from inventory. Initially, apartments set prices once a year and offered concessions if units weren't moving.

Revolutionary amenity-based pricing followed, generating higher rents for more desirable units. For example, an apartment that overlooked the pool or was more conveniently located on the property commanded more rent than others. Next was pricing based on periodic manual analysis, enabling properties to adjust prices throughout the year as market conditions dictated.



About the same time, revenue management started to include comps in its pricing based on market surveys.

The solutions each had merit, but they have been lapped by new technology that now helps build a better apartment team.

Today's pitch on revenue management is building a better apartment team

Today, effective revenue management digs deeper, making it more of a numbers game that enables property managers to approach rents scientifically.

RealPage has the industry's largest lease-transaction database, which delivers real-time pricing strategies that balance shifting supply and demand factors. Hughes's data science team compares data that help forecast changes in new lease trends based on seasonality, which enables properties to calculate precise renewal offers or rents.

David Danish, Director of Advisory Services for YieldStar, says such an approach is important to identifying risks associated with some residents who, for example, have completed their contracted lease term and may be considering vacating.



“When someone’s lease becomes month to month, they are no longer on a long term lease contract like other residents,” he said. “Their lease term has become undefined, therefore it’s hard to measure when that lease is going to end to help you manage expirations, to help you decide how to price a new lease.”

Predictive analysis through the study of resident behavior factors in duration of month-to-month leases and original lease terms to make a price recommendation. The metrics also help to identify if there is any risk in occupancy associated with having residents on month-to-month leases.

“If you have a building with 300 units and one or two residents are on a month-to-month lease, that doesn’t really influence your pricing that much,” Danish said. “But if 10-15 or more are on a month-to-month lease, you need to acknowledge that they could provide notice at any given moment. That rent needs to be accounted for.”

Right revenue management solution as easy as a game of catch

Hughes said the right solution for revenue management will more effectively predict supply and demand. On the supply side, a good solution should predict whether people will actually renew or break the lease. On the demand side, traffic originations, what guests are saying and other information help create inputs for setting more accurate pricing. Kortney Balas, Director of Revenue Management and Business

Systems at [JVM Realty Corp.](#), says using data science in determining pricing has been a highly effective tool for the multifamily real estate investment and property management company headquartered in Oak Brook, Ill.

“What the model will do is it looks at your demand,” she said. “If you’re in a down market or not doing quite as well, it’s going to reduce that price a little bit when you have demand forecasted, which allows you to get a couple of apartment homes off your shelf, and ride the revenue wave back up. When it’s in a high market and you have demand forecasted, what will happen is the pricing will continue to push, and it will push to limits you would never do manually.”

Almost as easily as a game of catch.

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# Rent-Pricing Practices Made Easier With Optimized Revenue Management

Revenue management isn't simply a software system that recommends a rental rate based on how competitors are pricing. Revenue management is a science that should employ key data, such as historical pricing trends, real-time traffic and supply-and-demand algorithms, as well as strategies such as lease expiration management and forecasting. And it should make all of these processes easy for you.

We sat down with Randy Wynne, revenue manager for General Services Corporation (GSC) to discuss how he has leveraged LRO's Lease Expiration Management (LEM) system to gain better control of GSC's portfolio-wide pricing strategies. Wynne recently spoke at the MAXIMIZE: [2015 Multifamily Asset Management conference](#).

**Operations Insights:** *What is lease expiration management?*

**Randy Wynne:** Lease expiration management analyzes market, property and unit level data to help owners and operators better control vacancy exposure.

We've come to understand with revenue management and LEM that prospects don't look for a potential apartment home in a vacuum. Take home buying, for example: You see an influx in new homes on the market in the spring, because that's when people are more likely out and about and are more likely to move — no one wants to move in the snow and cold.

The same goes for renters. In markets with harsh winters, prospect traffic will likely drop significantly November through February. Similarly, in markets with hot summers, people just aren't shopping for a new home on days when temperatures eclipse 100 degrees. This is why it is important to have a strong control of your vacancies. If there is no demand, you need to keep your units occupied.

LEM looks at these historical trends, like seasonality, finds patterns and puts measures in place to more accurately align your lease terms to match those patterns. It offers the ability to better control vacancy exposure based on this type of true-to-life data instead of making assumptions based on steadfast rules. Without LEM in place, you are at a risk of having high vacancies and needing to offer substantial concessions to rent those units, which can have a significant impact on your net operating income.

**OI:** *What is the goal of LEM?*

**RW:** GSC's goal is to deliver a monthly and annual turnover rate that will match or be slightly less than our monthly and annual demand for apartments. We want to be in full control of our pricing strategies and lead the markets we operate in.

There is an intricate balance between supply and demand. Other revenue management systems, or even an in-house process, like tracking on an Excel spreadsheet, cannot predict or react fast enough to changing supply-and-demand curves.

We have no idea what our competitors' revenue management goals are, what they set their occupancy threshold at, etc. — and frankly, we shouldn't care. LEM is all about what is happening at GSC communities and is customizable to fit our needs and goals. We're confident we are as proactive as possible and not simply reacting to what our competitors are doing.

**OI:** *What are some strategies you employ to manage your LEM?*

**RW:** Long gone are the days of six- or 12-month-only lease terms. Prior to leveraging LEM, we used mostly six- or 12-month leases. What we didn't realize is how significantly we were limiting our revenue potential by assuming people would never stay longer than 12 months or shorter than six.

When we launched LEM, we decided our focus was going to be on shifting consumer behavior by bucking the trend of six- or 12-month leases and employing premium values to undesirable lease terms. Analysis of historical supply-and-demand data available in our revenue management system quickly revealed seasonal traffic and turnover patterns. Based on these patterns, we began adding premiums to specific lease terms and/or calendar months, garnering greater control of our turnover rates and exposure trends.

We have also tried to control the number of lease options that can be both aggressive and limiting. We opted against this approach as we found ourselves being less aggressive with renewal increases and even having to lower the asking price to attract a new resident.

For GSC, adding premium values is what works best. Since we started this with our LEM practice, we are seeing great results.

**OI:** *How do you manage any perceived problems or challenges associated with an LEM strategy?*

**RW:** As LEM is customizable and specific to your portfolio needs and overall revenue management strategy, the challenges come from a lack of understanding your operational capabilities.

Maintenance obviously plays a vital role in turnovers. You need to have a strong grasp of how long turnovers take, how your teams manage the process and how seasons can impact their workloads. If you know they take an average of five days to turn an apartment, why would you schedule six units to vacate at once? That would take them an entire month to get all the units ready.

Second is training. Your leasing team needs to have a keen understanding of why LEM is important to your overall occupancy and revenue management strategy. They need to know how staggering lease terms and vacancies impact the entire year and be able to effectively sell preferred terms. Without these pieces in place, your LEM practice will never succeed.

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# Determining Rental Rates – Why and How to Do Market Rental Surveys

by Spencer Cullor on June 12, 2012

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## Determining Rental Rates – How and Why to Do Market Rental Surveys

Market rental survey's are essential to your real estate [investment success](#). Whether you are buying a new property or [managing](#) the one you have, a market rental survey is a valuable tool you cannot afford to do without. It can tell you what current rental rates are and where they are trending. It can tell you what the



occupancy is in a particular area and what things are attracting the most [tenants](#). It can also help you establish the value of a property being considered for [purchase](#) and gauge the ability to increase your return. In short, a market rental survey will help you maximize your investment property's value.

A market rental survey is a way to determine the rental rates being achieved in a particular area by an [investment property](#). It consists of a chart of available and comparable properties and compares the rental rates and occupancy of those properties by rental rate per unit type (1 bedroom, 2 bedroom/2 bath, etc.), square footage, available amenities, and property age and condition. It can show you what comparable rents are being achieved in an area and where your property is in relation to your competition and market.

You need to know the market rental rates in your area so that you can maximize your investment properties' value. They can help you answer these questions: Are we charging enough, are we charging too little, are there other features we can offer that will allow us to raise rents, what are our competitors doing, what is the upside of the property, and where are rental rates heading? The answers to these questions will help you evaluate your property, options, and maximize your investment's value. Without knowing the answers to these questions, you are just flying blind in your investment, and that is never good.

Doing a market rental survey is easy, but it can be very time-consuming. Also, you have to update it at least once a quarter to keep it up to date.

The 4 steps to doing a market rental survey:

1. Create a spreadsheet or chart to collect your market rental data. You'll want to have headers and collect information on all of the following: property name, address, phone number, unit type, size, rent per square foot, year built, and occupancy at a minimum. You can always add more information such as amenities offered, concessions given, visibility of asset, and property condition as you see fit.
2. Make a listing of competitive properties in your area. Many times you can do this by using websites such as apartments.com, For Rent, Google Maps, or by driving the area around your property and listing the properties.
3. Start collecting data. Once you have the names and addresses of the properties you are going to be comparing and surveying, it's time to start collecting data. Now is when you want to try to find all of the information for every column you listed in your spreadsheet on step number 1. A great way to find information such as amenities offered, rental rates, square footage, and concessions offered is by going to the property's website. If they don't have a website, you can call them if you have their number, sift through their advertisements, or even stop by their leasing office if they have one. Local realtors can also be helpful in your pursuit of this information. The key is to collect information that is as thorough as possible and to compare apples to apples (or 1 bedroom/1 bath apartments to other 1 bedroom/1 bath apartments, for example) and to keep the information up to date on a quarterly basis. Quick tip: for information such as square footage, if it's not listed on their website or brochures, you can often find it by looking up the property's tax records.
4. Start comparing the information. Here is where you want to take the information you collected in step 3 and start breaking it down so that you can compare like properties and unit types. Make sure you are comparing 2 bedroom/1 baths to other 2 bedroom/1 baths and so on. We find that calculations such as average rental rate per square foot and unit type can be very helpful. You can also get a median figure (half above, half below). That will tell you where your rental rates compare and will point out low and high rates. With this information you can tell if your rental rates are high or low and if you have room to raise rents. By collecting this information over time you will be able to identify trends and help determine the property's potential.

A market rental survey is essential to your real estate investment success. Whether you are buying a new property or managing the one you already have, it will help you maximize your investment's value. They are easy to do by following these four steps, and by updating them over time you can identify key trends and help determine your investment property's potential.

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# When Apartment Rents Climb, Landlords Can Say ‘The Computer Did It’

By MATT HUDGINS NOV. 29, 2011

The lease renewal notices that landlords send out annually have contained little good news for renters in recent years: Rents are up and vacancies down around the country. And having resigned themselves to paying more, renters may wonder whether the new number on their lease was plucked out of thin air.

Rest assured, it was not.

For about a decade the country’s biggest landlords, who together control about a million rental apartments, have been using powerful software tools to set rental rates on new and renewing leases. Patterned after the technology used to price airline tickets and hotel rooms, the software weighs competitors’ rental rates, market conditions, seasonal trends and hundreds of other variables to recommend the highest feasible rent for each apartment at a given time.

The technology can benefit residents as well. Just as travelers can lower their airline fare by flying at off times, residents can often lock in lower monthly rents by agreeing to lease terms that help apartment owners avoid downtime or fill less popular units. Revenue management software can generate options for renters by varying rental rates, start dates and numbers of months on the lease — and still hit a landlord’s revenue target.

Now landlords with as few as 3,000 units are testing the technology, which is chiefly produced by two companies, the Rainmaker Group of Alpharetta, Ga., which sells a program called Rainmaker LRO (for lease rent options); and RealPage Inc., of Carrollton, Tex., which calls its version YieldStar Price Optimizer. Both products incorporate data collected automatically from competitors along with masses of market and property information. YieldStar adds data from RealPage's market researcher, MPF Research.

David Romano, the vice president of pricing and revenue management at Equity Residential, one of the largest publicly traded apartment owners in the United States, uses Rainmaker LRO at more than 100,000 apartment units in 15 states and the District of Columbia. There are exceptions, including complexes where subsidies impose rent parameters, and at rent-controlled properties in New York. The overall portfolio includes 8,290 units in the New York metro area, with 4,057 of those in New York City, Equity Residential said.

"It's the combination of rent and occupancy which produces revenue, so we're maximizing that optimum mix," said Mr. Romano, who joined Equity Residential in 2004 to set up and run the centralized pricing system. "We don't have occupancy targets per se. We let the system determine at what rate revenue is maximized at a given occupancy level."

Landlords pay for an initial setup as well as a monthly subscription fee based on the number of units at each property. Neither software company would disclose rates, but clients said the costs were small relative to property budgets and potential income to be gained.

"You're talking about \$2 per unit, per month," said Steve Gilmore, a senior vice president of Shea Properties in Aliso Viejo, Calif., a diversified real estate company that uses YieldStar Price Optimizer at all of its 14 apartment properties and 6,000 units. Mr. Gilmore said the software paid for itself in about six months.

Shea Properties had eschewed one-month leases, for example, before YieldStar began suggesting pricing options that made short-term deals worthwhile. At the Madrid Apartments in Mission Viejo, Calif., the company recently rented out a \$1,200-a-month unit on a one-month lease for \$3,000, a sum Mr. Gilmore says the

company would not have thought to ask for before it began relying on revenue management software.

Revenue management is entrenched among apartment real estate investment trusts, or REITs, and has a growing following of smaller portfolio owners, said Steve Lefkovits, the president and chief executive of Joshua Tree Internet Media in Emeryville, Calif., which provides best-practice information to the multifamily industry.

“All of the public REITs except one use a revenue management software, and all of them use some type of revenue management strategy,” said Mr. Lefkovits, who in September co-hosted with the National Apartment Association an industrywide apartment revenue management conference in Arizona that drew 263 participants.

“The thing that was most interesting to me about this year’s conference,” Mr. Lefkovits said, “was the number of smaller owner-operators, with 3,000 to 10,000 units, that have invested the time and energy into adopting a revenue-management strategy.”

Greystar, a third-party apartment manager based in Charleston, S.C., has found that the apartment communities it prices with YieldStar Price Optimizer outperform the other properties in its portfolio by about 2.7 percent, said Tom Bumpass, the company’s chief information officer.

“We’ve seen it work,” Mr. Bumpass said, “and we’re encouraging others of our owners to move to this solution.” Greystar uses YieldStar at 182 complexes with a total of about 70,000 units, or a third of its management portfolio.

In initial testing, Equity Residential found it was able to raise revenue 3 to 5 percent at complexes using Rainmaker LRO, Mr. Romano said. That persuaded company leaders to buy the software for the entire portfolio.

Those results are fairly typical for operators that adopt revenue management, said Robert G. Cross, the chairman and chief executive of Revenue Analytics Inc. in Atlanta. “Across industries, you get a 3 percent to 7 percent increase in revenue and

most of that goes to bottom line,” said Mr. Cross. “We’ve seen that in every industry we’ve been in, and the same is true for multifamily.”

Mr. Cross pioneered revenue management in the airline industry during the 1980s and 1990s before taking the concept to hotels and other sectors. In 1999, his company developed revenue management software for Archstone, owner of a large multifamily portfolio. Archstone later sold its rights to the software, which is now marketed and sold in updated form as LRO by Rainmaker.

Apart from raising revenue, executives at both software providers said such gains had a multiplier effect on property value.

A \$2 million improvement in annual rent, for example, would add approximately \$40 million to the sale price of a property trading at a 5 percent capitalization rate. A capitalization rate is an investor’s expected return on the purchase price in the first year after a sale.

Multifamily landlords say the systems have proved particularly useful with lease renewals, because it takes emotion out of the process.

“Now it’s more about the analytics,” said Bryan Pierce, the revenue manager at Holland Residential in Vancouver, Wash., which uses Rainmaker LRO at 63 of its 70 properties. “Maybe this person is paying 15 percent below market, and as much as we love them, maybe it’s time to let them move on and capture that 15 percent.”

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# Revenue Management's All Grown Up

Broad industry adoption and maturation of systems suggests an even more integrative role ahead. By Chris Wood

By [Chris Wood](#)



"Surveys are a great way to measure consumer attitude, but they're lousy indicators of future behavior, and when it comes to reading the mind of the consumer, humans are lousy statisticians." So says Robert Cross, the author of *Revenue Management: Hard Core Tactics for Market Domination* and the keynote speaker at the inaugural Apartment Revenue Conference, which drew 263 attendees to the Westin Kierland resort in Scottsdale, Ariz., in 2011 for a three-day confab dedicated specifically to the use of price optimization systems in the multifamily sector.

A recognized pioneer and oft-described "guru" of revenue management systems, Cross told attendees that there is no other single investment they can make that will provide a better ROI than the adoption of a revenue management platform. He should know: After he launched revenue management technologies for Delta Airlines in 1984, the company saw \$300 million in incremental


revenue gains in the first year. While apartment firms typically see a less influential revenue lift of between 2 percent and 5 percent relative to the market when rolling out revenue management, Cross nevertheless proselytized the significant role that the systems are playing in the apartment industry. "It gets the property manager out of the middle of the transaction," Cross says. "And the important thing to realize is that revenue management is resident-centric—and it is not so much a technology initiative as it is a business initiative."

Conference attendees echoed that sentiment, with apartment firms large and small and at various stages of system implementation universally describing a profitable experience leading to NOI growth and the discovery and development of new business intelligence tools. "This product has come a long way, and there's no doubt that it works. It is a godsend," said Phoenix-based Alliance Residential senior vice president Brad Cribbens, who moderated a panel featuring Greystar CIO Tom Bumpass and Axiometrics president Ron Johnsey that compared the financial performance of revenue-managed properties with that of traditionally comp-priced communities.

According to Johnsey, revenue-managed communities consistently show a rent premium over their non-

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management, Johnsey said. Among the top 20 U.S. apartment markets, that penetration has reached 43 percent.

Much of the conference focused on the maturation of revenue management systems: specifically the ability to tie price optimization to marketing efforts and gain other significant business intelligence from the vast data sets and functionality provided by the technologies. "Revenue management systems maturing over time is a significant business phenomenon," said Bumpass of the system life cycle thus far. "First we control inventory, then it moves to price optimization, then to margin management. As you get smarter [with system implementation], you can even manage profitability by channel rather than relying on fixed cost structures."

While acceptance of revenue management technologies has come a long way in the apartment sector, conference speakers and attendees weren't oblivious to change management during rollout of the systems, and indicated that full acceptance of revenue management paradoxically had yet to penetrate the institutional investor set. "Institutional investors are worried that it pushes rents down too fast in a declining market," Cribbens said, adding that some underwriters may struggle with dynamic rents as they are building and penciling out investment pro formas.

Cross, who has also worked with Marriott International in the implementation of revenue management technology, says change management and incremental adoption have likewise been common in the airline, hospitality, and gaming industries as revenue management systems have matured.

"Draw out objections and address them as part of change management," Cross told attendees. "One-third of my time at Delta was spent addressing field logistics issues. You simply have to put a stake in the ground [and commit to the system]. View revenue management as a lifelong learning process."

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