CASE STUDY

TO MARKET, TO MARKET

How one municipality is using market-based pricing for on-street parking with great results.

By Michael Klein, CAPP

SHUTTERSTOCK, THINKSTOCK

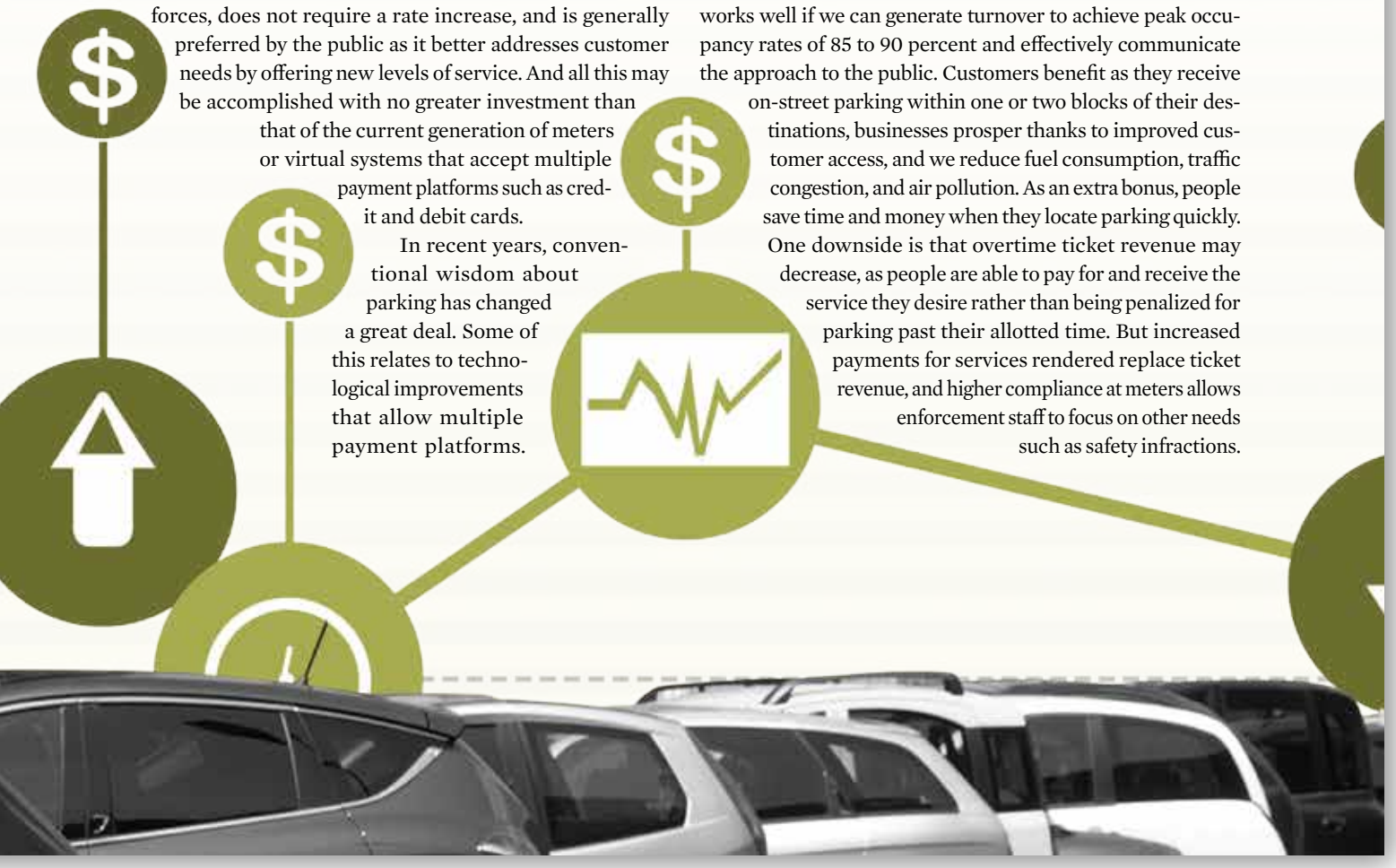
Have you ever wondered if it's possible to use market forces to allocate on-street parking without incurring the wrath and ire of the public? Would you like to improve customer service, support efficient development, and improve your financial performance? One paradigm shift will allow you to generate vehicle turnover and achieve desired occupancy levels by replacing price ceilings and rationing with market forces, without a rate increase!

The parking and transportation industry has researched ways to improve parking management at least since 1935 when the first parking meter was put into service, and as shown by the 2012 IPI *Emerging Trends in Parking* report (parking.org/trends), the demand for cashless payments, adoption of innovative technologies, and need for greater parking revenue have collectively brought us to a tipping point.

Here, I'll detail a new approach to managing on-street parking that addresses these trends and demonstrates how to operationalize an approach that works very well. It is easy for citizens to understand, generates turnover using market forces, does not require a rate increase, and is generally preferred by the public as it better addresses customer needs by offering new levels of service. And all this may be accomplished with no greater investment than that of the current generation of meters or virtual systems that accept multiple payment platforms such as credit and debit cards.

In recent years, conventional wisdom about parking has changed a great deal. Some of this relates to technological improvements that allow multiple payment platforms. Other changes relate to budget issues or the need to improve access in cities, universities, airports, hospitals, theme parks, and other locations where demand generators create localized pressure on parking supply, and traffic congestion. Fuel is wasted and air pollution is generated when the most desired spaces are always occupied and drivers are forced to circle and look for parking. Given the new tools at our disposal, the old concept of only allowing two hours of parking at on-street meters and setting that hourly price lower than for off-street parking for the same period may be a thing of the past!

According to accepted economic and parking theory, this works well if we can generate turnover to achieve peak occupancy rates of 85 to 90 percent and effectively communicate the approach to the public. Customers benefit as they receive on-street parking within one or two blocks of their destinations, businesses prosper thanks to improved customer access, and we reduce fuel consumption, traffic congestion, and air pollution. As an extra bonus, people save time and money when they locate parking quickly. One downside is that overtime ticket revenue may decrease, as people are able to pay for and receive the service they desire rather than being penalized for parking past their allotted time. But increased payments for services rendered replace ticket revenue, and higher compliance at meters allows enforcement staff to focus on other needs such as safety infractions.



Market Pricing

Let's first consider related actions you may already be taking in terms of market or demand-based pricing. These typically occur in off-street locations where the parking access revenue control (PARC) system allows for complex rate structures. Early bird rates offer parking for less money when demand is low, which is typically first thing each morning. Rate schedules may reflect higher or lower prices based on varying demand at different times of the day or days of the week, and specialized structures are designed to match localized demand generators. Some rates encourage longer length stays (third or fourth hour free) to allow customers more time to partake of what local merchants have to offer.

Then there is special event pricing. When your local arena, stadium, or campus/civic center hosts an event that boosts demand, do you set a special event rate structure and increase staffing to support it? Perhaps you also consider throughput and street congestion when determining operational details such as pay-on-entry versus pay-on-exit? The bottom line is that many off-street pricing frameworks incorporate market forces to set prices, and consider total price for parking in context with a larger experience.

Until recently this type of rate structure was not feasible on-street due to practical limits when paying primarily by coin. However, as long as your platform allows payment via credit/debit card, web, mobile phone, smart card, memory stick, phone application, toll tag, or other non-coin payment platform, this limitation goes away. Still, the question remains: how do we generate turnover to maintain open spaces when most parking professionals generally seek peak occupancy targets of 85 to 90 percent?

The On-Street Solution

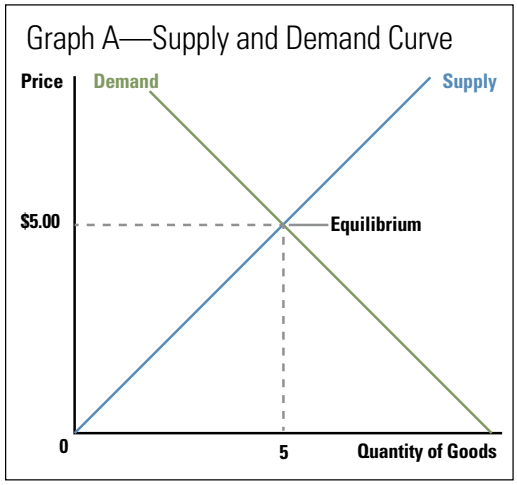
The solution employed by the Albany Parking Authority uses pricing that increases the hourly cost by $.25 for stays longer than the previous limit of two hours. We call this new class of users "long-stay customers." Many organizations have rules against re-feeding meters to maintain curbside parking availability, but with our new approach, that is no longer needed. Our focus is to address customer service needs using a cost/benefit approach. What we care about is that our customers find spaces that meet or exceed their expectations, and this supports economic development.

When someone takes a trip to Albany to visit legislative representatives, we want them to be able to park without exposure to an overtime ticket because they didn't know exactly what to do. The few dollars' difference is generally a price people are willing to pay, especially when the system offers flexibility. So if someone doesn't want to pay $21.50 to park all day at a meter, they can take a break halfway through the day and re-feed the same meter (without moving their car) for a total cost of $15.50 (two five-hour purchases of $7.75 each). At the other extreme, they could go out every two hours and pay $12.50 (five two-hour purchases of $2.50). In our view, the costs to monitor and hold accountable those who re-feed meters generally do not measure up to the benefits as long as our system serves customers well.

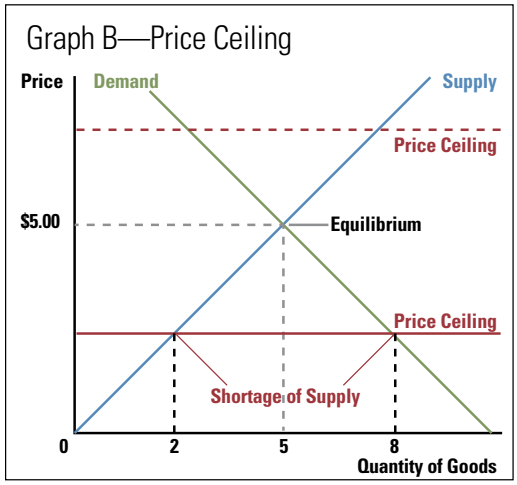
The key is to set up a pricing structure that fits your customer base and is well-accepted by the public. Based on concepts from *The High Cost of Free Parking,* by Donald Shoup, Ph.D., we used a progression based on $.25 increments, and the results have been excellent. Below is the rate structure that was implemented in the fall of 2011 and what we use today. Note that there is no rate increase or price change for customers who purchase two hours of parking at $1.25 per hour, but they also have a new alternative to buy a third hour for $1.50, purchase parking for all day for $21.50, or buy anything in between. Price motivates people to make market-based decisions where they are in control.

Here's the progressive rate structure sticker we affix to multi-space meters at eye level.

Market prices are more efficient than price ceilings and rationing. In a free market, price is determined at the intersection of supply and demand. Therefore, if supply is stable and demand rises, price should rise. When demand falls, price should fall. This economic concept allows markets to achieve equilibrium prices.

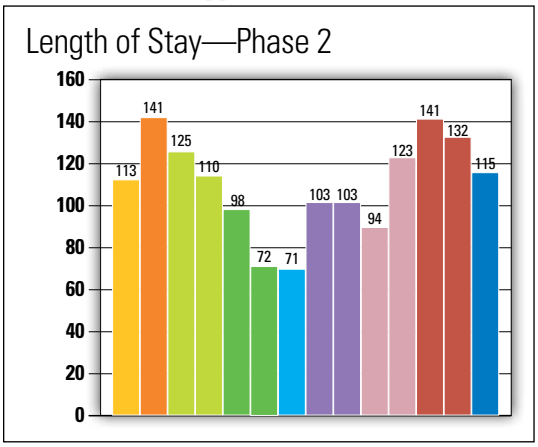


Until recently, the on-street parking market was generally regulated by price ceilings and rationing. This yields inefficiency that result in shortage of supply, queues, and unnecessary cruising, as well as favoritism and corruption.

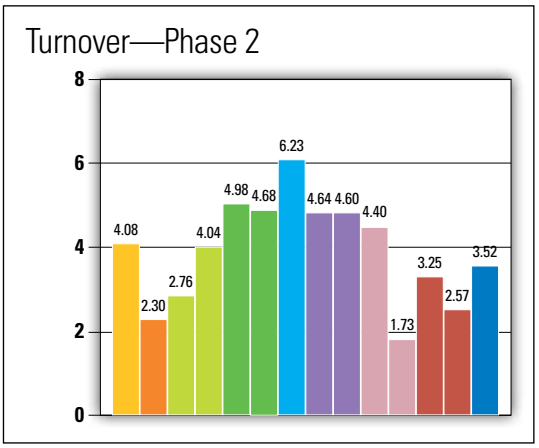


If we eliminate controls and allow people to stay as long as they want, their stay may be too long, turnover may be too low, and occupancy may be too high to support access needs and economic development. That's where market pricing leads us to success, but also to complex price structures that may result in communication challenges. The Albany model, as documented with the following actual data, addresses all these concerns quite well! Peak demand at many block faces places occupancy at 80 to 95 percent, with overall occupancy at 63 percent.

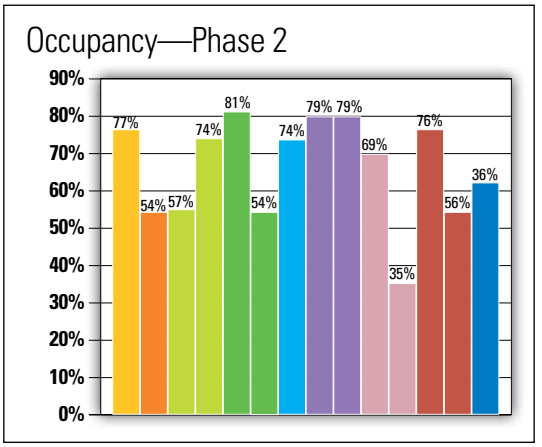
The next chart shows actual average customer length of stay during weekdays from 8 a.m. to 6 p.m. Use varies from block to block to reflect demand generators and proximity, and averages 115 minutes in this zone. Other zones have different profiles, but are similar. Color coding indicates block faces that are opposite sides of the same street.



Average turnover also varies from block to block to reflect demand generators and proximity, and for this zone, is 3.52 turns daily. Color coding indicates block faces that are opposite sides of the same street.



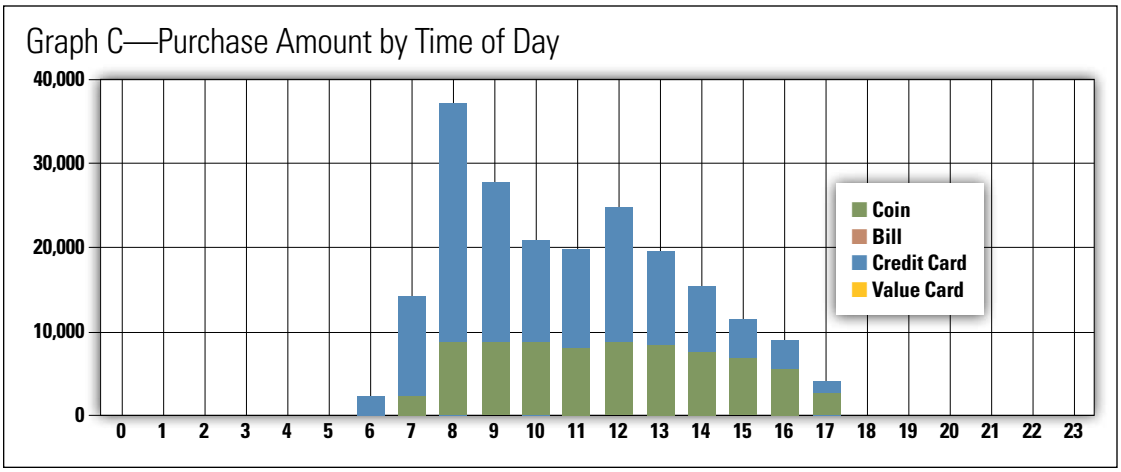
Occupancy is calculated from detailed meter transactions and also varies from block to block to reflect demand generators and proximity, and for this zone, averages 63 percent paid occupancy. Color coding indicates block faces that are opposite sides of the same street.



By drilling into the data, we are also able to identify use in many ways, including purchase amount by hour of day. In the following example, we surmise that this block face filled between 8 and 9 a.m. Based on the data, we infer that more customers would have parked between 9 a.m. and noon if spaces had been continuously available, and so we were bumping up against 100 percent occupancy. After 1 p.m., demand ebbs and space availability increases. This appears to be an opportunity to set up a split rate structure in which we rethink rates, durations, and the on-street/off-street pricing tradeoffs. These report-based numbers are reviewed and compared to site surveys to better understand actual use.

The progressive rate structure allows customers to satisfy their access needs without creating occupancy issues, and does so while substantially improving revenue per space. Bottom line, 22 percent of our patrons are long-stay customers who generate 59 percent of the revenue with suitable lengths of stay, turnover, and occupancy metrics!

Last, but not least, the data we are receiving regarding on-street use allow us to make data-driven decisions, are valuable to local stakeholders, and may even help us transition to a better trade-off between on- and off-street parking.



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