Retail Pricing in Refractive Surgery

Lower prices have failed to boost market demand.

BY SHAREEF MAHDAVI

Since the first FDA approval of refractive surgery in late 1995, there has been a great deal of debate over the pricing issue, and many providers have assumed that price is the key factor in a prospective patient's decision-making process. Implicit in this assumption is a belief that, the less something costs, the more of it you will sell. Although this premise, known by economists as price-demand elasticity, may hold true for well-established product categories, it cannot be automatically applied to the relatively new category of refractive surgery.

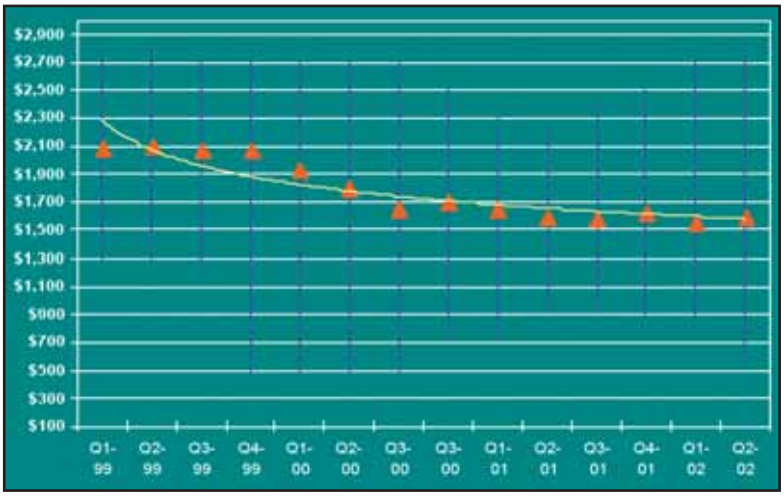
Considering the current lull in demand for refractive surgery in the US, it seems appropriate to conduct a thorough review of price and how it relates to procedural volume, consumer adoption, profitability, and physician marketing. Market Scope, the industry's best source of procedure and price data, has provided both quantitative and qualitative survey data that offer insight into understanding the impact of changes in procedure pricing (Figure 1) on the industry. The data suggest that price, although important, is just one factor in a much larger equation that governs candidates' decision-making. Further, the suggestion that lower prices can significantly impact LASIK procedural growth is not supported by historical trends seen over the past few years.

THE VALUE EQUATION

Every prospective patient who considers undergoing refractive surgery goes through a decision-making process that begins with *awareness* (heard about the procedure on the news) and progresses to *interest* (has a friend who recently underwent LASIK), *consideration* (attended a seminar given by a local provider), and then *action* (decides whether or not to proceed). Ultimately, a person will make the decision by weighing the pros and cons in relation to the cost of undergoing the procedure. Although an individual would be unlikely to describe the thought process in mathematical terms, the decision could be represented as follows:

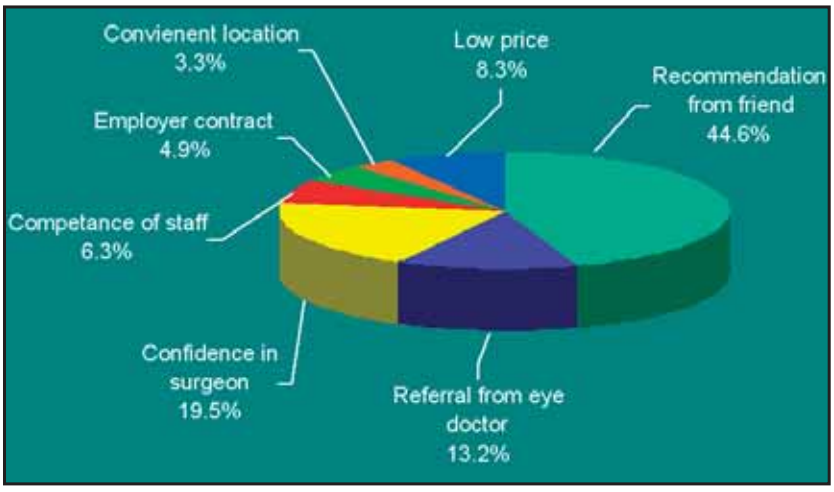
Perceived Value = (Benefit – Cost) – Fear

The components of value, namely benefit, cost, and fear are all added together in people's minds to form the value they place on the procedure. Providers are accustomed to helping candidates understand how a procedure's benefits outweigh its costs ("cost benefit analysis"), but they often ignore fear, the other major element that prospective patients mentally subtract from the overall value. The benefits of refractive surgery include convenience, performance, lifestyle, appearance, and cost savings versus replacement glasses and/or contacts. The cost is simply what the provider charges for the procedure. Fear can generally be categorized as one of three things: fear of blindness, pain, or an unsuccessful procedure (ie, poor outcome).



(Courtesy of Market Scope.)

Figure 1. The average prices of refractive surgery have declined during the last 3 years. The vertical bars indicate the highest and lowest price offered; this range became much wider in Q4 1999.



(Courtesy of Market Scope.)

Figure 2. When deciding whether to undergo LASIK, low price is significant to only a small percentage of prospective patients. Endorsement from others and confidence in the surgeon and staff play the biggest role in decision-making.

The low-price segment of providers that emerged in late 1999 misunderstood this very real fear on the part of candidates. These providers believed that the market would grow even faster if LASIK were made more affordable. A review of survey data, however, makes clear what was important to the decision-making process of consumers who underwent LASIK. As Figure 2 shows, less than 10% of these patients responded that the low price enticed them to undergo the surgery. This survey is consistent with most others that show respondents rank price at the bottom of a list that includes surgeon reputation, safety of the procedure, and endorsement by someone they know personally. These responses were simply ignored by low-price providers. Not surprisingly, their poor financial results have reinforced what patients repeatedly communicated in these surveys.

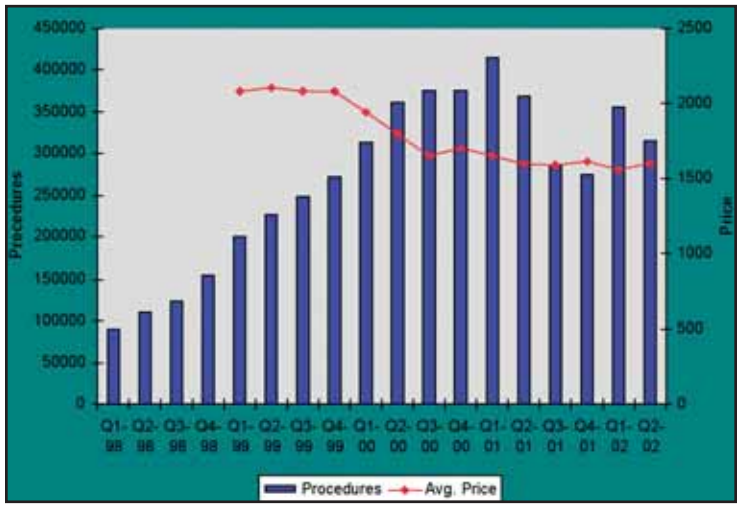
DOES PRICE PREDICT VOLUME?

When viewed as a whole across the nation, average retail prices for refractive surgery have declined, especially in the past 2 years. As the historical graphs in Figure 3 show, lower prices have not led to higher procedural volumes on a macroeconomic scale. The low correlation between low price and higher procedure volume has been confirmed via additional statistical regression analysis performed by Market Scope. In fact, the opposite appears to be true, as lower prices are associated with a lower volume of procedures. During the period from 1999 to 2000, procedural volumes increased significantly, while prices also rose. From mid-2000 to the present, both volumes and prices have decreased. This counterintuitive trend between price and volume suggests that a force other than procedural "affordability" is at work. That force may be the economic outlook held by consumers as a whole. In a separate analysis, overlaying procedural volumes with the consumer confidence index (Figure 4) shows a strong correlation between the demand for LASIK and consumer perception of economic strength.

It is important to distinguish between economic indicators and price regarding how each potentially influences demand for refractive surgery. As with most discretionary spending, the economy affects consumer-purchasing behavior. This economic effect often has little to do with the price of the product or service. The automobile industry provides a study: Even with sagging consumer confidence, most of the manufacturers have countered with low/no-interest financing. In the value equation, the auto industry has been able to improve perceived value by offering more attractive financial terms, rather than by lowering prices, in order to enhance the benefit for the consumer.

Price and Consumer Adoption

Another way to examine the impact of price in refractive surgery is to separate consumers and define



(Courtesy of Market Scope.)

Figure 3. Although average refractive surgery prices fell 20% by fall 2000, total quarterly procedures performed since then have mostly stayed flat or declined.

(Courtesy of Market Scope.)

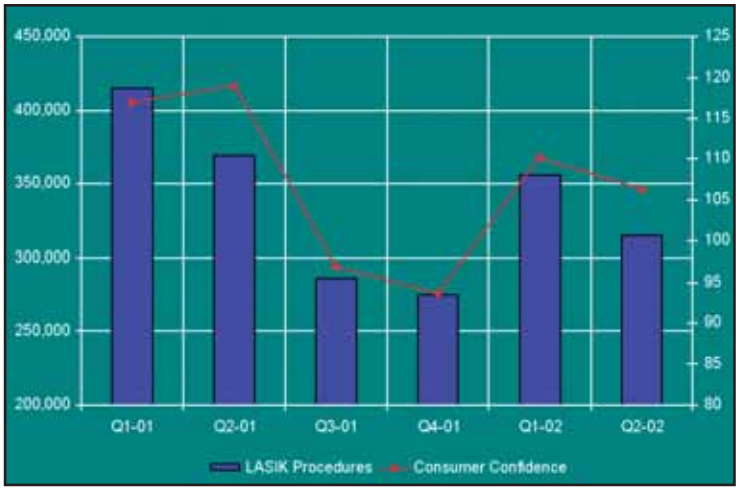


Figure 4. Willingness to undergo refractive surgery seems to track closely to consumer confidence in the economy.

them by when they tend to acquire or adopt new technology. The classic illustration of this approach is called the Consumer Technology Adoption Model, and it applies to refractive surgery when viewed as a new-technology alternative to spectacles and contact lenses. Figure 5 shows each major segment of consumers when classified by adoption patterns.

The first people who try out a new technology are known as "innovators" (eg, these consumers bought the Commodore 64 computer). They were the first to own CD players in 1983 (at a cost of $1,000 a unit). In relation to refractive surgery, the innovators underwent RK in the late 1980s, took part in laser clinical trials in the early 1990s, or traveled abroad to have their vision corrected before the procedure received FDA approval. These patients were highly motivated and willing to pay. Cumulatively, they account for the first 1% to 2% of procedures in the refractive surgery category.

Early Adopters

Compared with the innovators, the early adopters are not risk takers, and they wait for innovators to validate that the product works before they jump in and buy it. In refractive surgery, this group comprises patients who have undergone laser vision correction since it was first approved; nearly every patient sought out and listened closely to an innovator who had already undergone the procedure.

This market shift to the early adopters did not happen automatically. It took innovators' strong, positive "word of mouth" and an improved product offering augmented by the validation of FDA approvals, wider availability through hundreds of fixed and mobile lasers, and the promise of a faster recovery via LASIK. These factors combined to create the environment needed for the early adopters to jump on the bandwagon. Although they do not have the extreme motivation of the innovator, who will pay any price for the solution, the early adopter is generally not price-sensitive and places a higher priority on the quality of the product and service provided.

While refractive surgery's long-term market potential remains strong, the industry is still working at penetrating the early-adopter group. To date, 3 million cumulative US LASIK patients represent just more than 5% of the 57 million suitable candidates for laser vision correction with today's approved technology. In Figure 6, a Market Scope forecast that incorporates growth in the overall population shows that a projected cumulative 26.5 million patients treated by 2015 represent 21% of the population that requires vision correction (those requiring vision correction are roughly one-half of the total population). Clearly, market penetration will evolve over time. In order to "crack" the early and late majority segments of patients, it will require improvements in the offering (just as it did for the early adopters). These improvements will likely include the achievement of "perfect" results that incorporate more qualitative aspects of vision (eg, point spread function) and the elimination of complications.

With increased market penetration into the two middle groups, retail price points will then become more of an issue with consumers. Along with the previously mentioned product improvements, product costs and

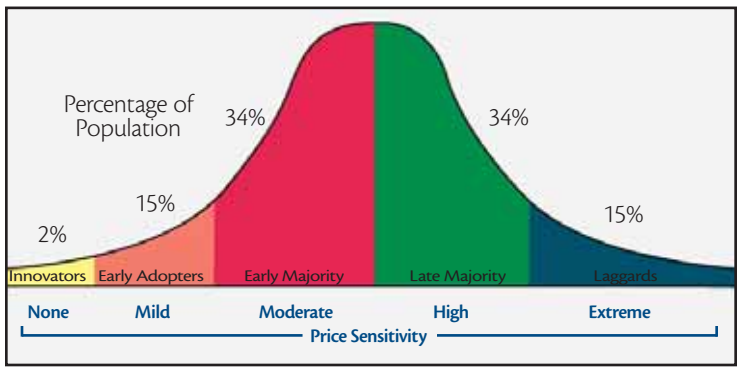
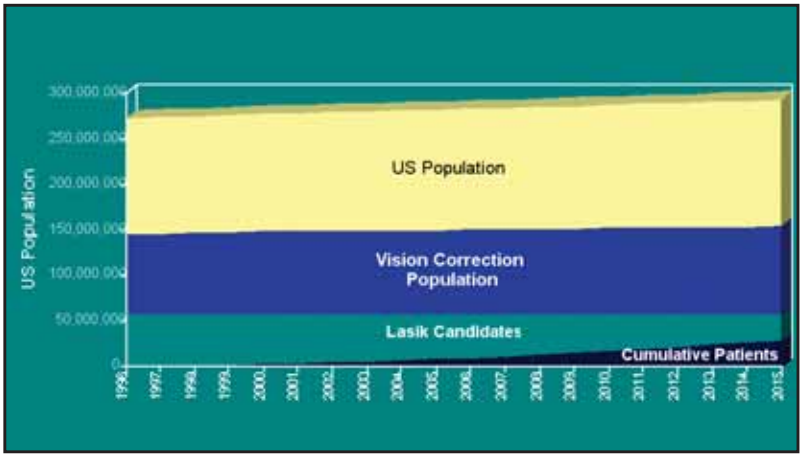


Figure 5. Consumers can be segmented by their willingness to adopt new technology as well as their price sensitivity. Refractive surgery is still in the early-adopter stage, as 5% of suitable candidates have been treated.

marketing costs should correspondingly decrease—a situation allowing the industry to maintain profitability.

As for the last segment of consumers, known as technology "laggards," they typically only acquire new technology when it is embedded within another offering. For example, this type of consumer might purchase a VCR that is built into the TV set. In refractive surgery, the laggards will only come forward when they see that almost everyone else has had their vision corrected and its cost is fully covered by their insurance plan.



(Courtesy of Market Scope.)

Figure 6. By 2015, a total of 26.5 million patients undergoing refractive surgery will represent 21% of all corrective lens wearers. If achieved, this penetration rate is equal to that achieved by contact lens manufacturers.

Does Value-Pricing Work in Refractive Surgery?

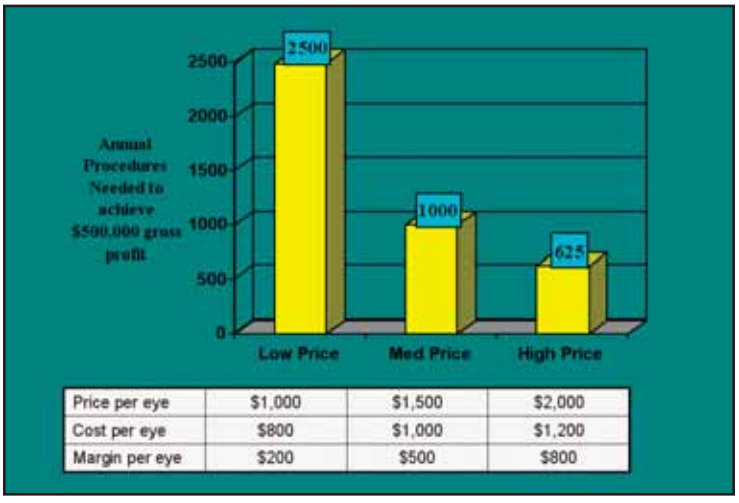
By separating potential refractive surgery patients into segments, rather than considering them as a single group, it's easier to evaluate the impact of value pricing (ie, discount LASIK). In theory, a lower price should have attracted the more price-sensitive "majority" of consumers. By the middle of 2000, more than one in every 10 refractive surgeons was offering LASIK at prices under $1,000 per eye, with many starting at under $500 per eye. The vertical bars in Figure 1 represent the high-to-low range of price in the US. Overall procedural volume did not grow, which would have been expected if the majority of consumers were ready to climb aboard. My theory is that the value-pricing message was delivered too early in the evolution of the market. It was aimed at the "majority" consumers but only reached the early adopters.

Early adopter behavior shows that they tend to value quality well above price (confirmed by survey questions in Figure 2); the value pricing that began in late 1999 worked to confuse potential early adopters and caused them to question the quality of the procedure. In hindsight, value pricing attempted to force adoption among the majority of potential patients before they were ready. This premature effort went against a deeply held consumer belief that "you get what you pay for," a motto of the early adopter segment. For these people, high price and high quality go hand-in-hand, and the heavy focus on price promotion violated this perception.

Although value pricing has failed to expand consumer demand, it has succeeded in teaching all consumers to shop around for price among local providers. As a consequence, providers have reported being bombarded by price-sensitive inquiries, and many have responded by engaging in price competition. Discounts, special offers, two-for-one deals, bring a friend promotions, and other tactics helped lower refractive surgery's average retail price over the past 18 months. Those consumers who took advantage of better pricing had, for the most part, already decided to undergo the procedure. In other words, providers left a lot of money on the table, cannibalizing the profitability of all their earlier investments in market development. Perhaps it was better for the consumers, but not for providers. A calculation of total annual retail revenue generated by US refractive procedures (determined by multiplying the total procedures by the average retail price) shows a decline from $2.5 billion in 1999 to $2.2 billion in 2001. If the second half of 2002 is equal to the first half, this year will show a slight decline once again from the previous year. In short, lower pricing has not served to expand market revenue. Given the decline in price and procedure volume, it's safe to assume that profit levels have declined even more precipitously than revenue on a national basis.

For some practices, the value-pricing model has proven successful, but they are the exception rather than the rule. Data from local markets suggest that these providers have not significantly expanded the demand in their local market but have successfully converted interested candidates who had previously considered undergoing refractive surgery with competing providers. Low-price providers had to overhaul their staff and space requirements to accommodate the higher volume they achieved through prices that were significantly lower than other local providers as well as their own prior fee schedule. While there are certain

efficiencies gained through economies of scale, these providers are working much harder to achieve profitability comparable to another practice with lower volumes but a higher retail price. As Figure 7 shows, a low-price provider who charges half the fee of a high-price provider has to do four times the number of procedures in a year (2,500 vs. 625) in order to achieve the profitability of a high-price provider. This effort takes a significant increase in time, space, staff, and marketing costs.



Price per eye	$1,000	$1,500	$2,000
Cost per eye	$800	$1,000	$1,200
Margin per eye	$200	$500	$800

(Data from Market Scope.)

Figure 7. Using realistic cost numbers and economies of scale, the low-price provider still has to work four times harder to achieve the profitability of a high-price provider and 2.5 times harder than a medium-price provider. Low-price providers, however, have not succeeded at expanding the overall market size and instead have taken market share from other providers.

Price and Marketing

Marketers of premium products and categories have proven that consumers are willing to pay more when they perceive a product or service as more valuable than that of other providers. Much of this value extends beyond the traits and quality of the product itself. This is especially true for refractive surgery, which cannot easily be sampled, tested, or otherwise evaluated in advance of purchase by the potential customer. They are buying a promise of future results, which is why refractive surgeons must pay much more attention to their own marketing and branding efforts. Branding helps consumers make choices; to date, most refractive surgeons have done an inadequate job of investing in their brand, which may be another factor contributing to lower procedural volumes. Marketing dollars spent per procedure have declined 16% in the past 2 years, from $156 to a current level of $130.

Does this mean you should start advertising now? Not necessarily, as advertising is just one item in a marketing mix that should encompass other external efforts (direct mail, public relations, community relations), but only after exhausting internal efforts (office environment, appropriate staffing and customer service training, educational opportunities for patients, multiple types of patient communication materials, lead tracking, and patient follow-up). It is the combination of all the internal and external marketing efforts that work to create value for your marketing brand. With consistency on the providers' part, consumers will increasingly recognize and pay for the value you have created in your brand. This fact alone should motivate providers to invest more today in patient marketing, which will attract patients now and in the future.

Investments in new technology should be viewed as a form of marketing when the rationale for purchase is to attract additional patients to the practice. While technology is a legitimate marketing investment, its return suffers if that investment is made prior to similar investments in staffing and internal marketing. As with the survey results on price, consumer research data continue to confirm that consumers choose to undergo LASIK with doctors they trust, regardless of the equipment used. And, as has been seen with the case of the "low-price" message, the "technology" message often confuses consumers and further delays the decision-making process. The most effective message you can deliver is through superb customer service. You will stand out from the crowd, and consumers will indeed pay more for better service.

Patient Financing: A Secret Weapon?

A solid example of better service is to make financing easy and available. It is rare to find a laser center or provider that does not offer some type of patient financing as part of their internal marketing efforts. It is also rare to find a provider that has truly leveraged patient financing to grow procedural volume and revenue. To date, I have found that most practitioners believe that patient financing represents approximately 10% of their overall patient volume. In practices where it is fully integrated, patient financing represents more than 30% of revenue. These 30% practices have figured out that financing—rather than price—was a barrier to growth in procedural volume. Financing works on several levels, including that it takes the buyer's focus away

OTHER DEMOGRAPHIC TRENDS IN REFRACTIVE SURGERY

Market Scope's quarterly surveys have helped the industry track trends in the demographics of which percentage of the population is undergoing refractive surgery. Some key variables that show trends from the last two years are level of refractive error, education, age, and income.

Refractive Error

FDA approvals have expanded to include virtually all levels of refractive error. Low myopes make up nearly 60% of the refractive surgery candidate population (when including hyperopes in this number), but still fewer than 50% of procedures performed. The trend is improving, from 38% (2000) to 48% of all procedures last year. Marketing to low myopes is difficult. Their lower refractive errors makes them less visually handicapped, and messages such as, "being able to see the alarm clock when you wake up" don't resonate with this group. Qualitative survey data have shown that low myopes are less concerned about bad outcomes (because they've seen the procedure work with their more myopic peers) yet have more stringent requirements on safety and precision (they want vision that's as good or better than their current best-corrected vision). If current data reported for customized ablations continue to hold up, the low myopes might respond in much greater numbers than before.

Hyperopes, which make up 35% of the refractive candidates, still only represent about 12% of procedures. This is a slight increase from the previous year.

Education

More than half (50.5%) of LASIK patients have college degrees, down somewhat from the 56% reported in 2000 but still well above the national average. If this trend continues, it suggests that LASIK's popularity is increasing among mainstream Americans.

Age

The average age of LASIK patients dropped from 41 years old (2000) to just over 39 years of age last year. Significant increases from the prior year mix were seen in the 21 to 30 year old age groups. Long-term population forecasts show that the target refractive population (21 to 65 years of age) will continue to grow for at least the next 10 years, when the first baby boomers will be approaching retirement age.

Income

LASIK patients continue to be significantly more affluent than the average American. The trend, however, shows that the average income of LASIK patients is falling from $93,200 (2000) to $81,600 last year. Financing should work to attract patients with less disposable income and help stimulate growth in LASIK procedures.

from price by converting the large dollars to a monthly payment. Mortgage brokers, department stores, and (of course) auto dealerships have greatly increased consumer spending by offering to finance purchases. I predict that the more effective use of financing will help providers maintain or even increase retail pricing in refractive surgery over the next several years.

SUMMARY

Using low prices to expand demand for refractive surgery does not work. LASIK providers would be much more profitable today if they would accept that price is simply one component of a fairly complex decision-making process facing prospective refractive surgery patients. The retrospective analysis of pricing and volume fails to show any correlation suggesting that demand increases when price decreases. Rather, the market demand for LASIK seems to fit the consumer adoption model, which segments consumers into groups that reflect their willingness to pay for and acquire new technology.

While competition can be a very good thing, competing on price is the opposite. Providers cannot gain a competitive advantage by lowering their price; someone else can (and will) go even lower (although I have not yet seen LASIK below $299 per eye). The real competition is for the disposable income of LASIK candidates, and every provider would do well to examine each aspect of their refractive surgery offering. By striving to improve customer service as well as surgical skill, refractive surgeons are likely to see positive results in spite of a shaky economy. Providers who take this challenge seriously will be handsomely rewarded when the economy does indeed turn around. ■

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