MARWOOD GROUP

September 2018

A Beautiful Bind: Pricing strategy in a stable duopoly for medical devices sold to hospitals

Summary

Pricing in healthcare is far more complex than in many other sectors because of the variety of stakeholders involved in the purchasing/ selection process of a particular good or service, the varying levels of information they have about the prices and qualities of alternative options, and their incentives (or lack thereof) to make optimal price/ quality trade-offs in their selections. For a given device or type of therapy, a doctor generally recommends the type of treatment and may have a role in choosing among competing suppliers, likely without a view of comparative pricing; hospital procurement staff may also have a role in selecting a particular supplier, payors may have roles in approving therapy for a specific patient and approving pricing, and the end users/ patients may have a limited decision-making role.

In a recent engagement, Marwood evaluated the market, revenue, and pricing dynamics of a life science company offering a therapeutic device in a duopoly market by understanding the views of various decision-makers and influencers in the purchasing process. Marwood found the two competitors were favorably bound to one another in a Nash equilibrium. For price differentials between competing therapies that were below 10%, payors reported they would simply pay the differential with no likely impact on market share. The lagging supplier could attempt to capitalize on the gap and initiate a price war but would need to capture significant market share from price-indifferent customers to compensate for the value lost by an unfavorable price. Instead, the lagging supplier would be considerably more likely to respond to the leader's price increase by raising its own prices to capture the additional value inherent in its share of sales – a much more certain and profitable course of action. In a sense, the firms' prices move as if they are tied together by a rubber band – if the band stretches but does not break, the leader will naturally pull the follower along; if changes are too abrupt or too large, the band will snap. With invoice prices rising across the market, Medicare and commercial reimbursement would soon follow, raising value for both market participants. In the long run, the company faced a greater threat from the emergence of alternative therapies than from the pricing behavior of its rival, and for this reason, it found itself in "*a beautiful bind*": a stable duopoly with pricing power and every incentive aligned for its competitor to be tightly tied to every price increase.

Background

In a duopoly market, suppliers generally want to increase their prices up to the point just before customers drive significant purchasing volume to the alternative supplier. Marwood found that the company could capture additional value through frequent, small price increases.

The company under consideration is locked in competition with a single alternative supplier with therapies of comparable efficacy at a similar price point, making them largely interchangeable; each is protected by significant clinical and regulatory barriers to entry. The market share of each supplier

had been relatively constant over a long period. Institutional health care providers buy the treatments from the Company or its rival at established invoice prices, and are reimbursed by public and/ or private payors after administering the treatment. Medicare reimbursement for the therapy is based on a sample of the invoice prices; commercial payor reimbursement is benchmarked to the Medicare rate. This created a lag period between a supplier's invoice price increase and payor reimbursement increase, creating a profitability differential for hospital customers between therapies from the two suppliers. The client sought to understand the implications of these factors while considering more frequent and more aggressive price increases, while also considering the implications of the competition's response.

Prices for the two therapies had increased over a five to ten-year period in a nearly linear fashion, typically in parallel; as one supplier raised its price 2-3%, the other would typically follow after a variable interval, usually about six to twelve months. Price increases were sometimes initiated by the company, and sometimes by its competitor. Both firms thus enjoyed the benefits of fairly steady price increases every two to three years without disturbing the market share equilibrium.

Marwood found that faster and more significant price increases would not significantly impact market share and offer a better opportunity to optimize revenue than cutting price in a play for share. Clinicians and institutions were each more influenced by non-price factors such as ease of use, past training/ experience with particular therapy, and other variables related to institutions' capabilities in delivering care, rather than on the specific cost of the therapy.

Primary and secondary research…suggested that faster and more significant price increases would not significantly impact market share, and offer a better opportunity to maximize revenue than cutting price in a play for share

From a clinical standpoint, prescribers reported that treatment decisions were not merely price-insensitive; they were in fact often nearly completely price-agnostic. In discussing treatment approaches, clinical protocols were based on the patients' specific diagnoses and medical evidence about efficacy and tolerability was weighed, but cost was almost never mentioned at all, except when a patient's insurance coverage might expose them to direct financial responsibility for the treatment.

Even when the price and cost of the therapy were factored into the decision-making process, physicians generally had extremely poor knowledge of, and visibility into, both current price and price history. Most of the clinicians had only a vague sense of the list price of either of the therapies in question, and those who guessed at the price were generally unable to provide estimates within 10% of the actual price. Some clinicians had a slight sense of past price changes, imperfectly recalling when prices had been adjusted, or by how much, or by which firm, but most did not. In addition, when a specific price point was assumed as a baseline, clinicians were largely indifferent to price increases of 10% or less, provided that their patients were not likely to have direct financial exposure.

Hospital procurement personnel likewise were generally indifferent to moderate price increases. This is also sensible, given they are generally passing through the costs to the third-party payors who ultimately reimburse the providers for the treatments. Although the buyers were cost-aware, "minor" price differences of less than 10% were outweighed by switching costs (e.g., negotiating new supply contracts with a competitor) and opportunity costs (e.g., time taken to focus on a small discrepancy where much larger procurement issues take priority). Certainly, this was influenced by the relatively low volume of treatment utilization compared to many common medical treatments; respondents indicated that the greater the volume of use, the more concerned they would become about smaller differences in price. In addition, hospital procurement directors typically did not consider the costs of

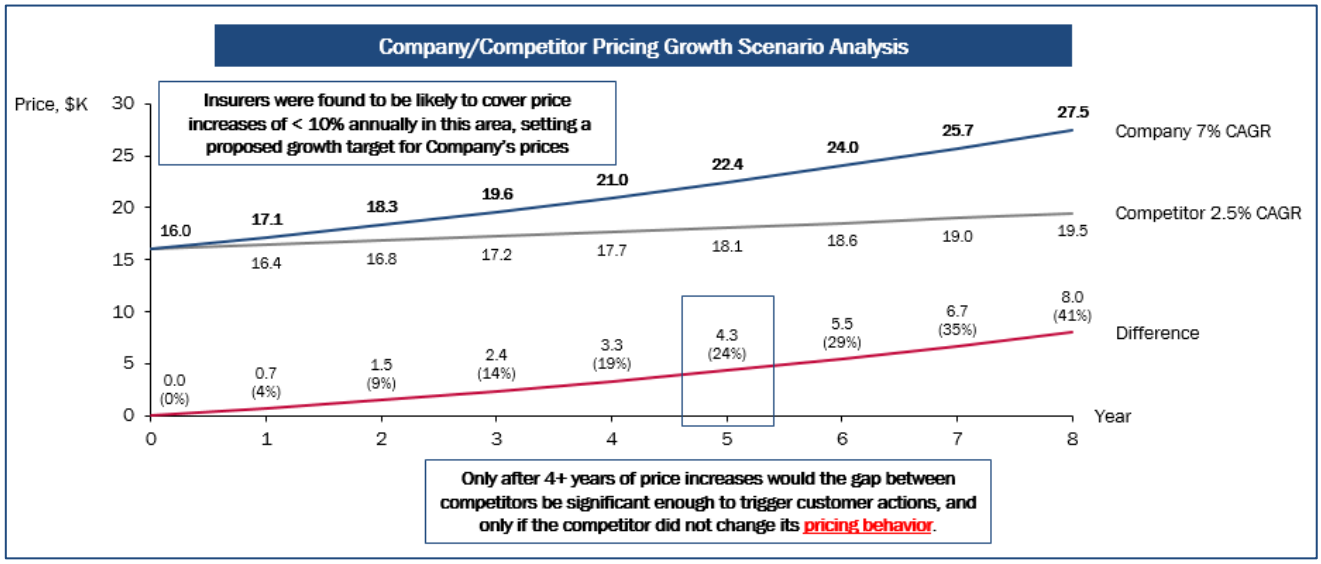
a particular therapy relative to alternative clinical options, but rather relied on clinicians to identify appropriate treatment options.

Furthermore, both hospital administrators' and clinicians' willingness to absorb price increases were influenced by secondary motivations for providing the clinical service, such as a desire to develop a more robust research program, support a specialty clinic, demonstrate a broader commitment to a disease area, or to differentiate themselves from local alternative providers.

Commercial payors reported that for this treatment, they were largely insensitive to moderate price increases. Approximately half of the payors Marwood surveyed indicated price was not a factor in triggering coverage or utilization management decisions, given the fairly similar pricing to competitive therapies and the relatively low utilization of these therapies. Of those, the majority indicated unit price increases of 20% or more would be cause for revisiting their policies.

> *Price-agnostic or price-indifferent behavior…[and] flexibility of payors…strongly implied that more robust price increases would almost certainly be tolerated by the market, but did not determine how the competitor might respond…*

These factors all came together to influence the duopoly pricing game faced by the company: the price-agnostic or price-indifferent behavior of the prescribing physicians, the price and cost insensitivity of the company's customers due to pass-through pricing and willingness to accept lower margins, and the flexibility of payors to absorb moderately large price increases. This strongly implied that more robust price increases would almost certainly be tolerated by the market, but did not determine how the competitor might respond to faster, more substantial price increases.



Contact Information - For more information on any of the content in this publication or to learn more about Marwood Group Advisory's capabilities, we encourage you to please contact us.

Lee Alvarez
Senior Managing Director
Office: 212-532-3651
lalvarez@marwoodgroup.com

Nayan Ghosh
Head of Life Sciences Business Development
Office: 212-532-3651
nghosh@marwoodgroup.com

About the Authors

Jennifer Yaggy MBA is Director of Strategy and Adam J. Flisser MD FACOG is Senior Vice President of Strategy in New York.

Marwood Group is a healthcare advisory firm offering strategic consulting services. Marwood advises life sciences companies on growth strategies and new business models, product lifecycle management, commercialization and pricing strategies, and legislative and regulatory concerns, with expertise in the U.S., E.U., and Asian markets.