WHITE PAPER

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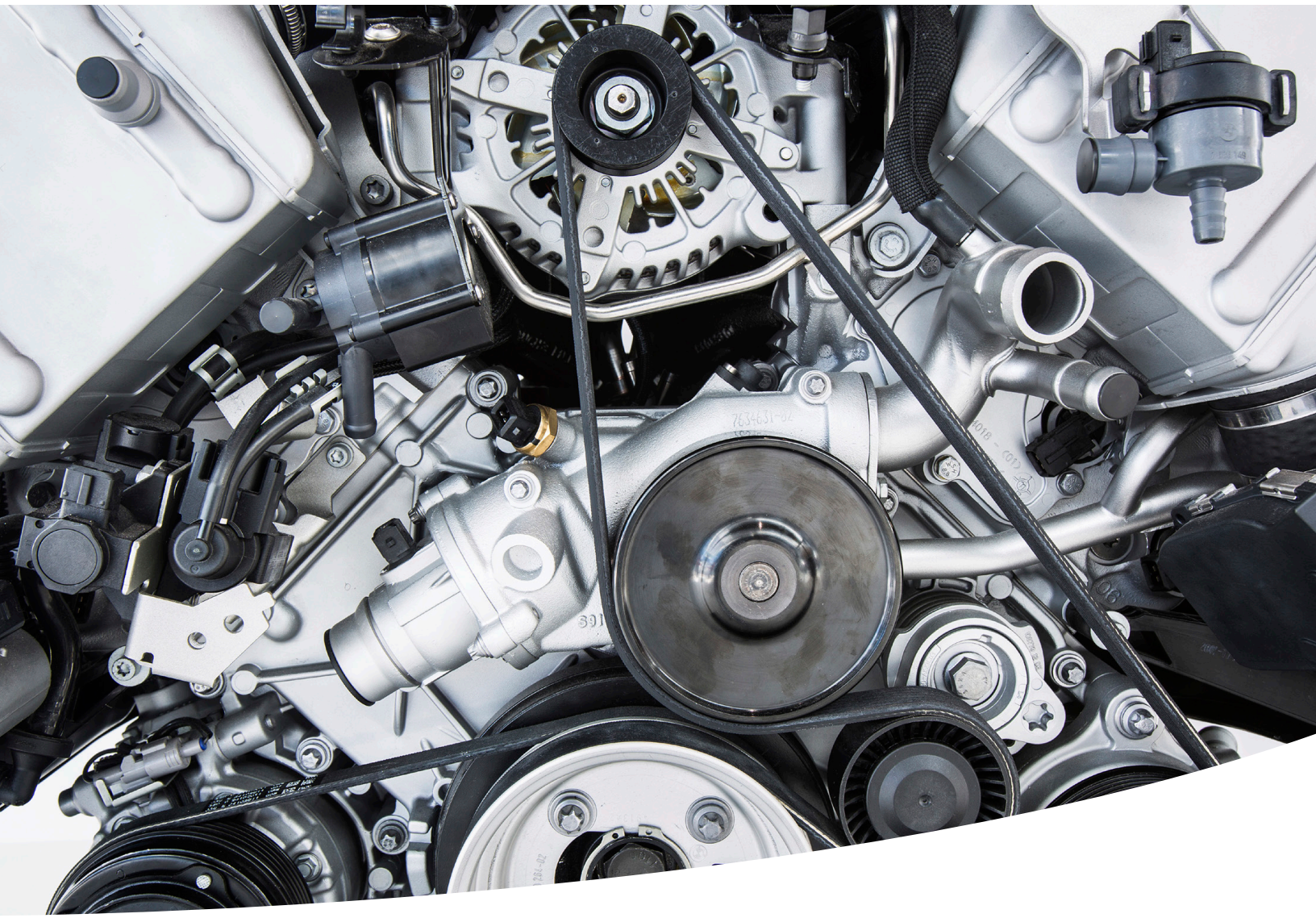
MARKET-BASED PRICING WITH COMPETITIVE DATA: OPTIMIZING PRICES FOR THE AUTO/EQUIPMENT PARTS INDUSTRY



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EXECUTIVE SUMMARY

The task of achieving optimal pricing in the automotive and equipment parts industry can be quite challenging.

Market-based pricing techniques---even with perfect information about competitor prices---are an attempt to meet the challenge. However, recent research conducted by PROS for an auto parts manufacturer indicates that new tools and techniques are required to overcome what can be described as a "market-based pricing credibility gap."

This gap occurs because current methods of using only competitive data to determine a "market-based" parts price are incomplete and inadequate to the task. As a result, many parts manufacturers and distributors are experiencing far more uncertainty in market-based pricing analysis than they might initially realize. This also increases the likelihood that they are not optimizing prices for profitability, and it poses a greater risk that they are wasting money on competitive pricing research.

To close the "market-based pricing credibility gap," professionals today must explore new methods for pricing parts that incorporate more comprehensive scientific methods and automation through advances in software technology.

MARKET-BASED PRICING METHODS USING AVERAGE COMPETITIVE PRICE DATA

Over the past several decades, automotive and heavy equipment parts manufacturers and distributors have come to categorize their parts as either highly competitive, competitive, or captive.

A commonly recognized rule of thumb is that the highly competitive parts and competitive parts (typically 20%-30% of total inventory, combined) generate approximately 80 percent of revenue and are therefore very important to overall sales and profitability.

For the sake of efficiency, many pricing professionals have focused on that percent of parts that generate the vast majority of revenue, often using a market-based pricing approach. One common way to conduct market-based pricing is by using competitive pricing data (either purchased from a third party or compiled internally) of actual price points of competitors' parts in the market.

The logic behind this market-based pricing approach says, "if you want to price to the market, you should price to the average competitive price" for each part. In other words, if the part you manufacture has three different competitors manufacturing the same part, your task should be to determine the price of each of the three, take the average, and then set average as the base metric for pricing your part. If you believe the part should be priced at a premium, set the price above the market-based average. Likewise if you think the part should be sold at a

discount, you would price below the average. The average competitor price thus becomes a proxy for the market price for each part.

While the logic of market-based pricing to the average has the advantage of simplicity, according to our research, it is incomplete and not reflective of real world conditions. That's because it is very difficult to simply determine the average of prices in the highly diverse and complex world of auto or equipment parts. What price should a company use to calculate the average wholesale price, jobber price, or list price? Price before or after discounts and back-end kick-backs? Even as one answers these questions, other issues arise in determining how to implement market-based pricing. The most prominent concern describes a phenomena derived from the fact that not all competition is the same, creating what can be called a "pricing credibility gap."

RESEARCH INDICATES "PRICING CREDIBILITY GAP" FOR MARKET-BASED PRICING METHODS

Conducting research that analyzed actual prices for more than a thousand competitive auto parts, We discovered that only about one-third of the auto parts surveyed actually fall into the category of tight competition.

Tight competition occurs when prices for parts are always within a close enough range of each other that a reasonable estimate for setting a new price can simply use the average of the all the actual competitive prices. The fact that only one third of competitive parts fall into a tight competition category raises special concerns. That's because as many as 2 out of 3 parts fall outside of the tight competition range of prices and into what can be termed a loose competition category. Loose competition occurs when competitive prices are spread over too wide of a range for the average to be considered a reliable indicator of the optimal price your part can achieve in the market. *(See sidebar page 4)*

This research suggests that current market-based pricing methods do not always provide the best estimate for setting prices for competitive parts. The loose competition category suggests a "pricing credibility gap"

whereby competitive pricing techniques using averages should not be blindly trusted. The implication for parts manufacturers and distributors is more uncertainty in market-based pricing analysis, an increased likelihood that you may not be optimizing prices for profitability, and a greater risk wasting your money on competitive pricing research that is not as useful as you might assume it to be. While the average market price is a logical concept for parts in the tight competition category, it probably does not reflect additional complexities that need to be taken into account in order to establish an optimum price for parts in the loose competition category. Thus loose competition parts pricing must go beyond competitive data averages to include other critical factors such as parts availability, selling channels, perceived quality and historical purchasing behavior of an organization's own customers. To resolve the market-based pricing credibility gap posed by loose competition for competitive parts, a different approach and metrics are needed.

Research indicates that most of the revenue in parts organizations is generated from loose competition situations.

While highly competitive and competitive parts generate about 80% of a company's revenue, this revenue is skewed to come mostly from competitive parts. For this reason, determining how to price competitive parts is paramount to achieving optimal profitability.

An analysis of competitive pricing data for 1,235 competitive parts in the automotive industry found that *77 percent of the parts had competitive prices that were too wide or extreme a range* to provide decisive pricing direction using pricing methods that rely on using the average of its competitors' prices. Highly competitive parts were not included in this analysis because, by definition, they have "ultra" competition with frequent price wars and list prices that fall within a tight range of one another.

Figure 1: Highly Competitive Parts

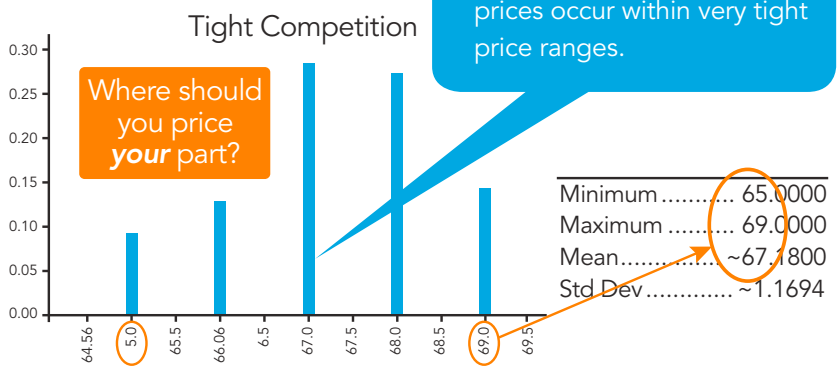


Figure 1 illustrates that highly competitive parts have tight competition. An effective way to implement market-based pricing is to price these parts to the average of competitors' prices.

Figure 2: Competitive Parts

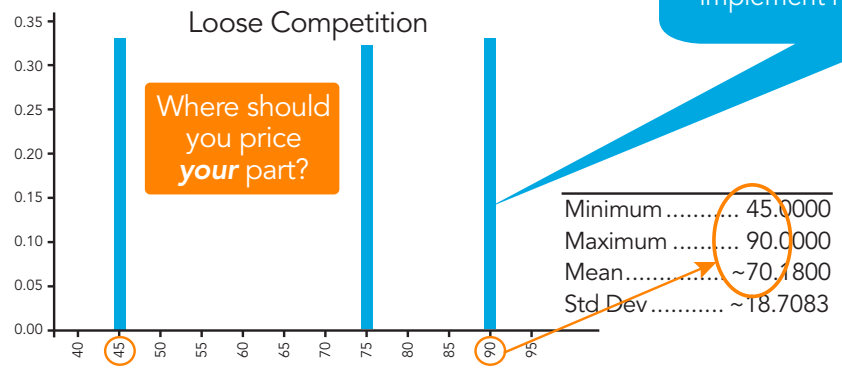


Figure 2 illustrates that competitive parts are more likely to have loose competition. Parts that fall into a loose competition category, therefore should not rely upon the average competitive price even when the data is completely accurate. In order to price the vast majority of parts that exist in loose competition situations, companies need other methods to establish optimal pricing.

PRICING AT THE NEXT LEVEL: COMBINING INTERNAL SEGMENTATION OF PRICE AND SALES HISTORY WITH EXTERNAL COMPETITIVE PRICE DATA

If pricing strategies should not rely solely on current market-based pricing techniques, where do we go from here?

Fortunately, there are sophisticated scientific methods and formulas that can be used to calculate an optimal target price for each part. To describe in detail how these formulas and methods work is beyond the scope of this article. However, scientific analysis is available today, with the help of sophisticated pricing software, to enable an organization to segment its internal and historical data to produce Pricing Guidance. Because the process is managed by software, it is now possible to segment parts data at a highly granular level which would be impossible using manual methods.

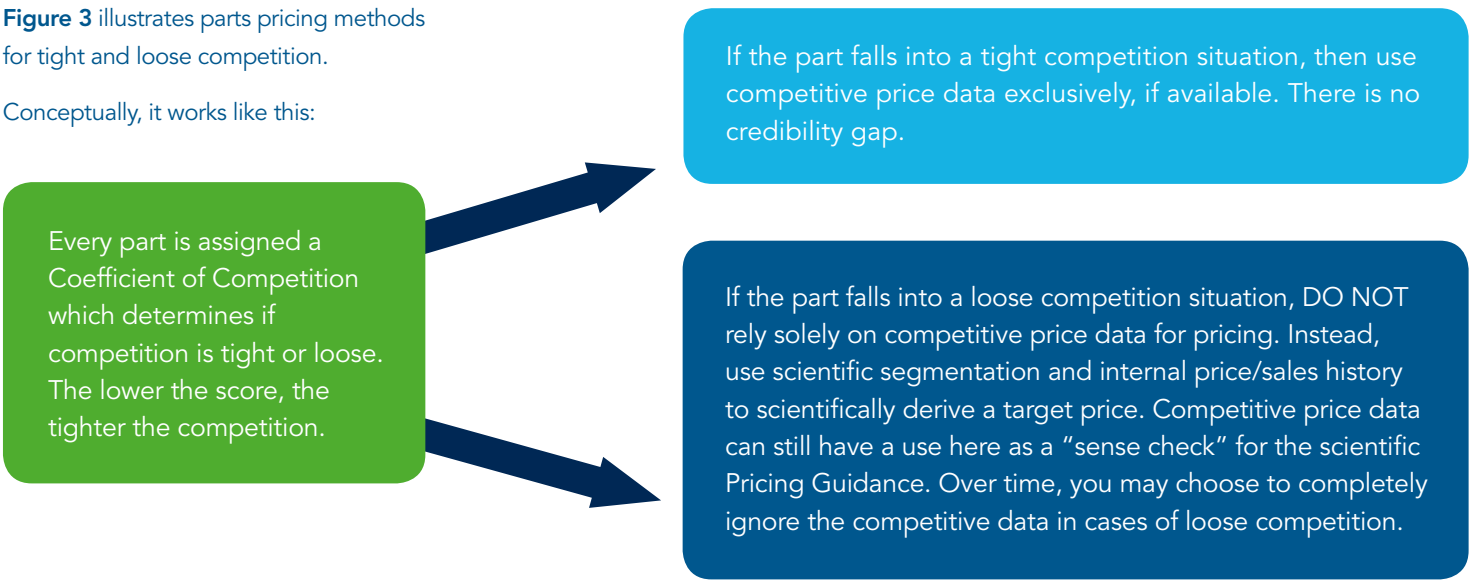
The rigorous scientific analysis and calculations incorporated into Pricing Guidance help to close the "pricing credibility gap" and overcome the limitations of competitive price data under loose competition. Thus Pricing Guidance provides a new level of pricing sophistication designed not to replace market-based pricing (which still applies to tight competition), but to more precisely assess and recommend optimal pricing for the larger category of loose competition.

But how does one determine if a part falls into a tight or loose competition bucket? Fortunately, again, advanced scientific methods have helped to quantitatively determine the difference between tight and loose competition. By calculating a Coefficient of Competition for a grouping of competitive parts, one can get a single metric that distinguishes tight from loose competition. With that distinction clear, pricing professionals can then use competitive price data appropriate for tight competition situations, and Pricing Guidance as a more accurate and complementary method of pricing for parts in loose competition situations.

The Coefficient of Competition is expressed as a number that typically falls between 1 and 50 (theoretically it can go higher, but this rarely occurs), where the higher the number, the looser the competition, and the lower the number, the tighter the competition. Due to the way it functions, the Coefficient of Competition can be integrated with external competitive pricing data to determine the optimal price point for any individual part. As shown in Figure 3 (*page 7)*, the Coefficient of Competition of any part determines its status as belonging to tight or loose competition, which, in turn, dictates the most appropriate pricing method. Tight competition parts use competitive price data. Loose competition parts rely primarily on Pricing Guidance.

Figure 3 illustrates parts pricing methods for tight and loose competition.

Conceptually, it works like this:



Note that since the Coefficient of Competition is a number (versus the visual representation of tight/loose competitive price range shown graphically in the sidebar), the Coefficient of Competition for any part can be operationalized or plugged into a formulaic price strategy, and automated by the same software that utilizes advanced scientific analysis (Pricing Guidance) to produce a target price.

EXAMPLES OF THE NEW PRICING MODEL FOR TIGHT AND LOOSE COMPETITION SITUATIONS

Shown below are examples of pricing for automotive parts that utilize the Coefficient of Competition metric and then integrate competitive pricing data and Pricing Guidance to suggest an optimal price.

Keep in mind that the reasons for Pricing Guidance recommendation depend on a vast array of granular data that has been processed through highly sophisticated analysis and formulas and automated by software technology.

In Example A shown here, four competitor prices are listed for an auto filter part. Because competitor prices are relatively close to each other, the suggested part price seems obvious. This is confirmed when calculating a Coefficient of Competition of 7 (a relatively low number), indicating this part belongs in the tight competition category. Using the competitive pricing data, it would be appropriate to price to the competitive average (CA) at $4.66.

Example B shows four competitor prices for an electronic component that vary over a wide range. Choosing an optimal price is much less obvious in this situation. Note that the Coefficient of Competition for the electronic component parts is 39, a relatively high number, indicating this part belongs in a loose competition category. Using the competitor average price method would suggest a price of $260.70. But, by applying granular segmentation and analysis according to specific attributes for this part, (a much more sophisticated, automated process), organizations can determine a price much closer to its real value to customers. In this case, using Pricing Guidance shows a recommended price of $325.82---much higher than the average competitive price. Without Pricing Guidance, an organization could be foregoing as much as $85 for every electronic component part it sells if it defaults to using only the competitor average price.

EXAMPLE A

FILTER	PRICE
Competitor 1	$4.25
Competitor 2	$4.63
Competitor 3	$4.68
Competitor 4	$4.99
Coefficient of Competition	7
Average Competitor Price	$4.66
Our Suggested Price (CA)	$4.66

EXAMPLE B

ELECTRONIC COMPONENT	PRICE
Competitor 1	$169.19
Competitor 2	$216.55
Competitor 3	$253.79
Competitor 4	$403.25
Coefficient of Competition	39
Average Competitor Price	$260.70
Our Suggested Price (PG)	$325.82

Example C shows four competitor prices for a cylinder head part. Again, the wide range of competitive prices for this part makes determining a target price much more difficult. Calculating a Coefficient of Competition value of 22 indicates a loose competition situation. Using the competitor average price method would suggest a cylinder head price of $427.91. However, the Pricing Guidance suggested price is lower at $395.83. Pricing this part based on the competitor average, therefore, risks overpricing the cylinder head and losing sales and market share.

By using advanced pricing technology, organizations can now analyze and distinguish tight vs. loose competition prices using the Coefficient of Competition. Armed with the coefficient of competition number, manufacturers and distributors can automate the sorting of pricing data so that competitive information is used for tight competition situations, while more rigorous analysis is applied to loose competition situations. The result is much more confidence in determining optimal prices and margins for competitive parts.

It's important to recognize that the previous examples illustrate the value of the Coefficient of Competition for only a few manual observations. Imagine, being able to use Pricing Guidance as part of an automated process that would allow you to produce target prices for thousands of parts in a matter of minutes. And imagine the increased profit and improved market share you would gain from using this advanced pricing technology.

EXAMPLE C

FILTER	PRICE
Competitor 1	$295.64
Competitor 2	$430.50
Competitor 3	$473.59
Competitor 4	$511.91
Coefficient of Competition	22
Average Competitor Price	$427.91
Our Suggested Price (CA)	$395.83

Risks from Extrapolating Competitive Price Data

A common error pricing professionals often make when using competitive price data stems from how they extrapolate the competitive price information to parts that were not properly researched or not known. For example, let's say that Part #123 and Part #124 are from the same product family (i.e., they are rotors but fit for different vehicles, therefore they are given different part numbers). A pricing professional would research Part #123 and find four competitive prices to derive the average competitive price. If the average price is 20% higher than Part #123, he would then extrapolate that the average competitive price for Part #124 is 20% higher than the price for Part #124. This is a common technique to save on research costs but it is very risky. That's because it only adds another layer of uncertainty to the pricing equation since we don't know whether or not Part #123 has loose or tight competition. And without that distinction, we don't know if using the competitive price average is appropriate. In fact, we can actually end up worse off than before.

PROS LEADS A NEW ERA IN ADVANCED SCIENTIFIC ANALYSIS FOR AUTO AND EQUIPMENT PARTS PRICING

With the introduction of new scientific analyses from PROS pricing software, we are entering a new era that encompasses current market-based pricing where appropriate for tight competition situations. But we can now get much more pricing accuracy using advanced scientific analysis (powered by automated software technology) for loose competition pricing situations. The result will help keep automotive and equipment manufacturers and distributors from leaving money on the table, improve their margins, and close the pricing credibility gap when implementing pricing strategies. In addition, PROS' strategic partnership with TLG Research means that money being spent for competitive pricing data can be used much more effectively, and in some cases costs may actually be reduced.

To learn more about advanced methods for pricing visit PROS website at www.prospricing.com.

ABOUT THE AUTHOR

Sean Duclaux serves as PROS Director, Industry Marketing. He is responsible for the development of the company's go-to-market strategy, and positioning of its Service Parts pricing and revenue management product portfolio.

Prior to joining PROS, Duclaux held leadership positions in enterprise software companies, including AspenTech, BMC Software and Empirix. Throughout his career, he has worked in diverse roles, from product management, marketing, program management, R&D and operations, where he developed a strategic vision to define market-focused solutions and executed go-to-market programs.

Duclaux earned an MBA from the University of Houston; an M.S. in computer science from the University of New Orleans and a B.S. from Spring Hill College.

About PROS

PROS Holdings, Inc. (NYSE: PRO) is a big data software company that helps customers outperform in their markets by using big data to sell more effectively. We apply years of data science experience to unlock buying patterns and preferences within transaction data to reveal which opportunities are most likely to close, which offers are most likely to sell and which prices are most likely to win. PROS offers big data solutions to optimize sales, pricing, quoting, rebates and revenue management across more than 40 industries. PROS has completed over 800 implementations of its solutions in more than 55 countries. The PROS team comprises approximately 1,000 professionals around the world.

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