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Roger Best, Emeritus Professor of
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## THE



Measuring the impact and making the business case

Successful pricing creates value for customers and companies. The ROI of Pricing provides valuable strategic insights and guidelines, with practical examples that any manager can relate to.

Roger Best, Emeritus Professor of Marketing, University of Oregon, USA
With a wide variety of contributions from pricing experts and a thorough - yet detailed - list of topics, this latest book from Liozu and Hinterhuber will be an invaluable resource for those who are looking to increase their pricing knowledge and improve their company's profitability. This book addresses many of the important questions stemming from the renewed importance of the pricing discipline today.

Kevin Mitchell, President, The Professional Pricing Society
It is critical for pricing organizations to adopt a rigorous, investment-oriented culture around their efforts to build new capabilities. This book brings an important contribution to the pricing profession so that they can better compete for investment funds.

Andres Reiner, President and CEO, PROS Holdings

Measuring the impact of pricing projects and the pricing function is THE key to driving firm performance via pricing. Once calculated, the Executive Suite can see sustainable and immediate payback and justify investing in the tools, processes, and people to realize this value. This book by Stephan Liozu and Andreas Hinterhuber provides a framework and best practices on how to do this and is recommended reading for any pricing professional.

Todd Snelgrove, Global Manager, Value, SKF
Not a moment too soon! The ROI of Pricing is a timely and exciting contribution to our understanding of a pressing business issue - the ability to systematically justify and show the impact of pricing decisions. The authors tackle this issue with contributions from expert practitioners and leading academics and successfully manage to provide acute and critical insights with depth and rigour. As a niche area that contributes directly to the bottom line, this book is a must read for anyone managing pricing decisions or anyone with an interest in understanding the power of pricing! Dr Ben Lowe, Kent Business School, University of Kent, UK

Finally! A practical and intelligent explanation of pricing! This book describes the downstream consequences when firms get their pricing strategies right, as well as when they get them wrong. With detailed explanations and real-life examples, this book clearly explains the complexity of pricing. The reader will find everything they need to know about pricing strategies to enter new markets, beat their competitors, and ensure that they don't unwittingly cannibalize their own products.

Dr Richard Pech, Associate Professor of Management, La Trobe University, Melbourne Australia

The ROI of Pricing provides an excellent overview of contemporary research and practitioner thinking about the financial impact of strategic pricing. It provides evidence-based guidelines for how to evaluate such investments in pricing capability and motivate the expense within your organization by quantifying the returns.

Niklas L. Hallberg PhD, Senior Lecturer of Strategic Management, Lund University, Sweden

With today's macroeconomic and competitive market pressures, general managers push their business functions to deeper clarifications of the value that they contribute and the costs that they incur. As all this information culminates in the price decision, the logical next step is to quantify the contributions and costs of the pricing function itself. The ROI of Pricing brings together relevant insights in this topic and is therefore a must read for managers that want to stay ahead of competition. Readers will discover that pricing as the final step in the value creation process can be a major source of tomorrow's competitive advantage.

Paul Ingenbleek, Wageningen University, The Netherlands
As a practitioner in the "real" world trying to implement best-practice pricing in global organizations, I have several times seen the paradox hindering organizations to move from cost-plus to value-based pricing. On one hand, everyone see the rationale and agree that it makes sense, whereas, on the other hand, it is very difficult to get the organization to make the effort, or to get decision-makers to support the steps needed to make the transition. I believe this book will be a great help in this process, by giving compelling examples and evidence in a clear-cut and motivating way.

Berndt Berndtsson, Marketing Processes Director, Sweden

## THE ROI OF PRICING

As with executives and managers in so many other business functions, pricing specialists are being challenged more and more to substantiate the added value of their activities. Pricing is a core function of every business and needs not only to contribute positively to short- and long-term results but also to document its impact on the bottom line. A fundamental part of this is the pricing return on investment (ROI) calculations.

This book, edited by globally renowned thought leaders Stephan Liozu and Andreas Hinterhuber, is the first to outline contemporary theories and best practices of documenting pricing ROI and make the case for pricing investments. It provides proven methods, practices and theories on how to calculate the impact of pricing activities on performance. Marketing ROI is now a common concept: this collection aims to do the same for pricing.

Liozu and Hinterhuber introduce the concept of pricing ROI, documenting and quantifying the return on pricing activities and on the pricing function, which itself is of increasing relevance today and in the future, in times of budget constraints. Twenty world-class specialists explore the concept of pricing ROI from both a theoretical perspective and a managerial perspective to shed much-needed light on how to measure and increase pricing ROI.

This ground-breaking book will enlighten students and specialists of marketing and sales, pricing managers and executives alike.

Stephan M. Liozu is the Founder of Value Innoruption Advisors, based in the USA.
Andreas Hinterhuber is a Partner of Hinterhuber \& Partners, based in Austria.

# THE ROI OF PRICING 

Measuring the impact and making the business case

Edited by<br>Stephan M. Liozu and Andreas Hinterhuber

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# INTRODUCTION: PRICING - FROM FINANCE BACK TO FINANCE 

The coming of age of pricing ROI

Stephan M. Liozu and Andreas Hinterhuber

Pricing managers, marketing managers, product managers, marketing planners and other marketing personnel are increasingly challenged to substantiate the value added of the pricing function and of pricing activities. Pricing is a core function of every business which not only needs to contribute positively to short- and long-term results, but also to document its impact to the bottom line. This book aims to provide guidance.

A short history: With strong roots in economics and finance, pricing has evolved to include core concepts from marketing, operations research, production, consumer psychology and statistics. Pricing today, next to general management, is probably the broadest discipline, both for practitioners as well as academics, touching virtually every function of a company. With this, also the research in pricing has progressed: today, concepts such as "pricing capabilities" (Dutta et al. 2002), "CEO championing of pricing" (Liozu and Hinterhuber 2013a) and "innovation in pricing" (Hinterhuber and Liozu 2012) have firmly entered the mainstream.

What next? Pricing today and in the future will need to speak the language of finance. With this, pricing will have made a full-circle turn. Instruments to measure the contribution of the pricing function and of pricing activities to company profitability are largely lacking. In this respect the marketing function and marketing activities certainly provide illuminating reference points. Until only a few years ago marketing, even in the best managed companies, was an expense. General Electric may provide an example. In 2008 a reporter of a marketing magazine asked Beth Comstock, Chief Marketing Officer of General Electric about the specific approach the company used to determine the return on marketing expenses. Her answer: "I would say that we haven't figured it out yet." Today this answer would be unthinkable and would put the company at a serious risk of lawsuits from shareholders demanding accountability on multibillion marketing investments.

Thanks to substantial academic research in this area (Ataman et al. 2010; Mela et al. 1997, 1998; Pauwels et al. 2002; Slotegraaf and Pauwels 2008), the concept of marketing return on investment, especially an understanding of the financial return of price promotions, is well established nowadays.

Pricing today, like marketing in the past, is called to substantiate its contribution to the bottom line. In a first step, we have witnessed a wave of studies documenting the financial consequences of alternative pricing strategies. In the future we expect to witness a rising interest in the concept of pricing return on investment, i.e. a calculation that quantifies the financial return of the pricing function or of pricing activities.

## The financial consequences of alternative pricing strategies

The pricing literature studies the relationship between pricing approach and firm performance: Monroe (1990, p.24), for example, argues: "[. . .] the profit potential for having a value-oriented pricing strategy that works is far greater than with any other pricing approach." Similarly, Cannon and Morgan (1990, p.25) recommend perceived value pricing if profit maximization is the objective: "Perceived value pricing enables a company to select an optimal price/volume combination." Costbased pricing approaches, conversely, lead to sub-optimal profitability (Backman 1953; Myers et al. 2002).

Ingenbleek et al. (2003) find that value-informed pricing has the overall strongest positive effect on product performance. More recently, we have launched a stream of research linking pricing to firm performance (Liozu and Hinterhuber 2013a). In a large quantitative study with 1,812 respondents, we find a positive and strong link between value-based pricing and firm performance, whereas the relationship between competition-based pricing and firm performance is negative and significant (Liozu and Hinterhuber 2013b). In sum, we now know that value-based pricing strategies increase profits.

## Towards a concept of pricing ROI

From the macro-domain of performance consequences of pricing strategies we aim to move to the micro-domain of performance consequences of the pricing function or of pricing activities, i.e. to the pricing ROI. In this respect the well-established concept of marketing ROI provides a fruitful starting point. In the current literature we find two main approaches to measure marketing ROI: Best (2012) and Lenskold (2003). Both approaches can be modified to quantify the pricing ROI as shown in Table 0.1.

## The objectives of this book

It is our intent to advance the theory and practice of pricing ROI, i.e. of documenting the causal relationship between pricing activities or the pricing function itself and performance. Specifically, this book:

TABLE 0.1 Approaches to marketing ROI

|  | Best (2012) | Lenskold (2003) |
| :---: | :---: | :---: |
| Formula | Marketing ROI (\%) = <br> Net marketing contribution <br> $\overline{\text { Marketing and sales expenses }}$ | Marketing ROI (\%) = <br> NPV of incremental margin - |
| Whereas | Net marketing contribution $=$ gross profit (sales - COGS) <br> - marketing and sales expenses <br> Marketing and sales expenses $=$ all fixed expenses related to marketing and sales activities | NPV of incremental margin $=$ net present value of incremental margins related to marketing investment <br> Marketing investment $=$ cost of marketing investment (e.g. cost of campaign, promotional activity, etc.) |
| Key strength | Aggregate measure capable of analyzing the contribution of the overall marketing function | Narrow measure capable of analyzing the contributions of specific marketing activities to profitability |
| Open questions | Causal relationship of "Net marketing contribution" to "Marketing and sales expenses"; managerial relevance | Definition of "Incremental margin" versus baseline scenario. |

- provides a summary of current research on the impact of pricing;
- reports own research on tools firms currently use to measure pricing ROI;
- highlights how to calculate pricing ROI;
- illustrates the calculation of pricing ROI through case studies.


## The structure of the book

This book consists of 15 chapters from academia, practitioners and consultants in the field of value and pricing management. These 15 chapters, shown in Table 0.2, have been grouped into three major categories: pricing strategy, pricing tactics and pricing organization. Most chapters propose a definition or an approach for the measurement of pricing ROI while others focus on making the business case for pricing investments.

## Pricing strategy

The first five chapters focus on pricing at the strategic level. Roger Best and Peter Vomocil propose an essay on how value-based pricing improves pricing ROI. Andreas Hinterhuber addresses one of the most neglected subjects in pricing
TABLE 0.2 Chapter presentation and classification

| Chapter number | Authors | Short title | Focus |  |  | Measurement <br> of pricing ROI | Key findings and contributions |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Empirical | Conceptual | Literature review |  |  |
| 1 | Best and Vomocil | Value-based Pricing ROI | X |  |  | X | Value-based pricing improves pricing ROI. |
| 2 | Hinterhuber | Cannibalization | X |  | X | X | When and why cannibalization increases/ decreases profits. |
| 3 | Balan | Return on price promotions |  | X | X | (X) | Negative long-term return on price promotions. |
| 4 | Denicolai and Merli | Pricing in start-ups | X |  |  |  | Pricing contributes to performance of start-ups. |
| 5 | Liozu | The case for value-based pricing |  | X |  |  | Uses incremental approach in making the case. |
| 6 | Ruggiero and Haedt | Evaluating pricing actions |  | X |  | X | Sources of data and statistical measurement of effects are key. |
| 7 | Trevenen | VOC and product launch | X |  |  |  | Conjoint analysis can deliver pricing impact and avoid failure. |
| 8 | Liozu and Chenal | Power of quick wins | X |  |  |  | Use quick wins to document ROI and build confidence. |


| 9 | Sodhi | Stepwise price <br> measurement | X | X | Avoid roadblocks to measurement. |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 10 | Indounas | Break-even analysis | X | $\mathbf{X}$ | X |  |
| 12 | Dvorin and <br> Lennon <br> Arnold | Expected ROI and <br> resource allocation | The case for <br> organizational <br> collaboration | $\mathbf{X}$ | $\mathbf{X}$ | X |

discussions, i.e. cannibalization evaluation and how it might increase or decrease profits. Carmen Balan focuses on the impact of price promotions while Stefano Denicolai and Federica Merli propose a framework on how pricing contributes to the performance of start-up companies. Finally, Stephan Liozu proposes an essay on what main issues pricing professionals face in making the case for value-based pricing.

## Pricing tactics

This section of the book starts with a very practical paper from Antonio Ruggiero and Jered Haedt on where to find the right data for the measurement of pricing actions as well as on how to statistically calculate the incremental effect. Linda Trevenen makes the case for greater use of conjoint analysis to improve payback and avoid product failures. Stephan Liozu and Mathias Chenal propose the results of an informal controlled experiment and how quick wins can help make the case for greater investments and increase team confidence. Navdeep Sodhi also proposes a case study and an approach to avoid measurement roadblocks for pricing ROI. Finally, Kostis Indounas illustrates the need to calculate breakeven analysis to support pricing decisions instead on the traditional cost-based pricing approach used in the shipyard industry.

## Pricing organization

This section also offers five papers. David Dvorin and Vernon Lennon propose a framework to prioritize pricing projects across multiple divisions using the ROI of pricing calculation. Ed Arnold presents the results of a qualitative inquiry with several customers who have adopted value-based pricing collaborative cloud platforms and discusses the ROI of their implementation. Craig Zawada, Jeff Collins and Doug Fuehne list all relevant metrics to calculate the ROI of pricing software. We then present a unique interview with Robert Smith, one of the best pricing experts in the world. Robert discussed best practices on making the case for pricing investments and for a greater discipline in measuring the impact of pricing. Stephan Liozu then presents the state of the profession with the findings from a unique survey conducted among 313 pricing professionals. He highlights the current practices of the profession and the future areas for improvement.

This book is a unique compilation of concepts, methods and case studies related to the calculation of pricing ROI and to making the case for pricing investments. It is a first attempt to propose a holistic approach for these topics and is dedicated to the advancement of the pricing profession. We hope to generate a dialog among pricing professionals and to bring the tools necessary to help document the great impact they have on their organization's bottom line.

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## 1

## VALUE-BASED PRICING ROI

Roger J. Best and Peter J. Vomocil

Pricing arguably has the most dramatic and immediate impact on sales and profits. Yet, it is one of the most mismanaged areas of marketing management. Sixty percent of businesses default to using cost-based pricing-a pricing strategy wherein price is determined by a business's cost and margin requirements-with no real idea of the value their product, whether positive or negative (Cressman Jr. 1999; Noble and Gruca 1999). Since cost-based pricing ignores market intelligence, it often results in overpricing which lowers volume and profits; or in underpricing, which lowers gross profits despite higher volume. For example, a media tablet with a unit cost of $\$ 350$ would require a price of $\$ 700$ at a desired margin of 50 percent, as shown in Figure 1.1. At a desired margin of 30 percent, the cost-based price would be $\$ 500$.

A different approach would be to adopt a market-based price-a price based on the needs of target customers, competitors' product positions, and the strength of a business's product, service, or brand advantage. Based on an understanding of customers' willingness to pay at ten different price points (Retrevo 2009), a marketbased price of $\$ 600$ would be more desirable since it produces a higher level of gross profit. The market-based price of $\$ 600$ is close to the average selling price of the iPad when launched in 2010.

We can take it one step further and employ a value-based pricing strategycharging a price that creates a meaningful difference between a fair-market price and a price for a certain level of performance. Value-based pricing requires an understanding of the value that a customer derives from a product, and how it compares to competing offerings. In this chapter, we will explore three value-based pricing methods and examine the corresponding Pricing ROI for each method.


FIGURE 1.1 Cost-based pricing vs. market-based pricing: media tablets

## Value-based pricing and net marketing contribution

There are several aspects of a successful value-based pricing strategy. The most important factor is that target customers perceive value that is clearly superior over competing products. Customer value is the difference between a product's fair price and the selling price. Superior value can be based on a meaningful advantage in actual or perceived performance; total cost of ownership; and preferences for certain price-performance combinations. Each of these sources of customer value will be demonstrated in the remainder of this chapter as we examine three different valuebased pricing methods.

Before we discuss Pricing ROI, we need to discuss the foundation of the Pricing ROI equation. Net Marketing Contribution (NMC) is a fundamental measure of marketing profitability. We will use NMC as a core element of the Pricing ROI calculation. It is defined simply as the contribution to profits after deducting marketing and sales expenses (Best 2013).

Higher customer value relative to competing products provides for premium prices

NMC $=$ Volume Sold $\times$ Net price $\times$ Percent Margin - Marketing and Sales Expenses

Higher value and premium prices improves percent margins for the same cost per unit
$\downarrow$


Marketing and sales expenses decrease with higher levels of customer retention

FIGURE 1.2 How value-based pricing impacts net market contribution

Regardless of how superior value is created, it has the potential to impact each area of performance in the NMC equation, as shown in Figure 1.2. Each of these potential impacts on NMC can contribute to a larger numerator in the Pricing ROI equation when a value-based pricing strategy is successful.

## Value-based Pricing ROI

Pricing ROI is a measure of the performance of pricing decisions and enables marketers to compare investments in various pricing opportunities. In order to accurately measure the Pricing ROI of a value-based price change, we need to capture the investment required to execute a new pricing strategy, in addition to measuring the impact on marketing profits. We propose to measure Pricing ROI based on the difference in NMC before and after a value-based price change strategy, divided by the investment needed to create, communicate, and deliver the valuebased pricing strategy.

This can be expressed as:

$$
\text { Pricing ROI }=\frac{\text { NMC (after) }- \text { NMC (before) }}{\text { Investment in Pricing Strategy }} \times 100 \%
$$

For example, the tablet in Figure 1.1 that is overpriced at $\$ 700$ would produce a NMC of $\$ 9.7$ million as shown below:

$$
\begin{aligned}
\text { NMC }= & \text { volume sold } \times \text { net price } \times \% \text { margin } \\
& - \text { marketing and sales expenses } \\
= & 42,000 \times \$ 700 \times 50 \%-\$ 5 \text { million } \\
= & \$ 14.7 \text { million }-\$ 5 \text { million } \\
= & \$ 9.7 \text { million }
\end{aligned}
$$

With an investment of $\$ 500,000$ for market intelligence and additions to the marketing budget to communicate the new market-based price of $\$ 600$, the following NMC is produced:

$$
\begin{aligned}
\text { NMC }= & \text { volume } \times \text { net price } \times \% \text { margin }- \text { marketing and sales expenses } \\
& - \text { pricing strategy expense } \\
= & 64,000 \times \$ 600 \times 41.7 \%-\$ 5 \text { million }-\$ 300,000 \\
= & \$ 16 \text { million }-\$ 5.3 \text { million } \\
= & \$ 10.7 \text { million }
\end{aligned}
$$

Pricing ROI is subsequently computed as shown below. With an incremental gain of $\$ 1$ million in NMC that required an investment of $\$ 300,000$, the Pricing ROI for this pricing strategy was 333 percent.

$$
\begin{aligned}
\text { Pricing ROI } & =\frac{\text { NMC (after) }- \text { NMC (before) }}{\text { Investment in pricing strategy }} \times 100 \% \\
& =\frac{\$ 10.7 \text { million }-\$ 9.7 \text { million }}{\$ 300,000} \times 100 \% \\
& =\frac{\$ 1 \text { million }}{\$ 300,000} \times 100 \% \\
& =333 \%
\end{aligned}
$$

## Investing in value-based pricing

Potential gains in marketing performance and profits are only possible with a true investment in the value-based pricing strategy. Value-based pricing requires time and investment to create, communicate, and deliver value that is meaningful to target customers. However, businesses often resist investing in pricing strategies because they are accustomed to simply changing a price and passively observing the resulting changes in performance. Let's looks at the requisite investment in pricing for these three steps in building a value-based pricing strategy.

## Creating value

For customer value to be meaningful it needs to be based on a superior and sustainable performance advantage that is valued by target customers. For most businesses, this means some level of customer research to determine the sources of advantage. For example, a producer of gas chromatographs found that its $\$ 50,000$ product has a lifespan of five years, while their competitor's similarly priced product has a lifespan of four years. On an annualized basis, the competitor's customer pays $\$ 12,500$ more. In this case there was an investment in competitive benchmarking to uncover a meaningful source of advantage.

The business also found that their gas chromatograph had superior performance, but the product was difficult to use. The difficulty of product use diminished the perceived value and had to be addressed in order to improve the customer experience. In this case an investment in customer intelligence and product engineering created a complete product that offered a higher value to target customers.

## Communicating value

Simply because a business creates superior customer value does not mean target customers will understand their value advantage. Marketing communication is often needed to illustrate how a product creates a superior value and how that value is an advantage to the customer.

In many value-based pricing situations, sales training and new sales collateral will also need to be created. The sales force may need to be trained how to communicate
the benefit of the customer value, thereby justifying the higher price of the product. This investment in the value-based pricing strategy is critical and the strategy will most likely fail without it, despite any value created.

## Delivering value

In order for the value-based pricing strategy to achieve the desired sales and profit objectives, the customer must recognize the value created and be willing to pay a premium for that superior value. This requires an additional investment in customer intelligence to determine the value realized and the strength of the customer's commitment to the business's product due to their value advantage.

Figure 1.3 illustrates two examples of communicating and delivering customer value. The recreation of an AirCap advertisement positions a typical customer application against a competing product to illustrate how AirCap could save a customer $\$ 0.65$ per shipment. The Kyocera advertisement challenges customers to understand their total cost of purchase, by utilizing the Kyocera TCO Tracker website (http://usa.kyoceradocumentsolutions.com/americas/jsp/Kyocera/tcotracker.jsp) to estimate the savings they would achieve over an average printer life using a Kyocera printer.

Let's now look at three value-based pricing methodologies, namely, price performance, total cost of ownership, and trade-off. In the following section, we will discuss each method and the corresponding Pricing ROI in detail.

## AirCap: Packaging Material

| AirCap vs. Corrugated Inserts |  |  |
| :---: | :---: | :---: |
| A manufacturer using corrugated inserts switched to AirCap and obtained the per shipment savings shown below. |  |  |
| Item | Corrugated Packaging | AirCap Packaging |
| Carton | \$.55 | \$.55 |
| Packaging | \$.80 | \$1.05 |
| Labor | \$.83 | \$.13 |
| Freight | \$2.60 | \$2.40 |
| Total Cost | \$4.78 | \$4.13 |
| Savings using AirCap...................... $\$ .65$ |  |  |

Kyocera: Printer


FIGURE 1.3 Demonstrating and communicating customer value

## Value-based pricing method \#1: price performance

Performance drives price, although not all potential customers will pay more for increased performance. As a result, there is a price-performance relationship that can be measured and managed to create a value-added price position. The question, of course, is whether the investment required to create a value-based price will yield a meaningful Pricing ROI.

The performance of competing products can be measured in a variety of ways. One recognized performance rating system is created by Consumer Reports. Consumer Reports rates products on a five-category scale that ranges from poor to excellent for different aspects of performance. We can utilize this data to create a performance index with scores on a zero to 100 -point scale. A score of 50 would be considered average, while scores above 50 would be above average on overall performance.

The product performance ratings for ten digital cameras and their associated retail prices are shown in Figure 1.4. The ten digital cameras in this example range from 50 to 90 points, with an average of 72 . Retail prices range from $\$ 130$ to $\$ 300$ with an average price of $\$ 206$.

## What is a fair price?

When these ten digital cameras are graphed based on performance and price we can see some obvious variance in this relationship, as shown in Figure 1.4. For example, the four digital cameras rated at 70 in performance vary in price from $\$ 130$ to $\$ 230$. The "Fair Price Line" in Figure 1.4 is a least-squares regression estimate of the relationship between price and performance (Gale 1994; learn much more at www.cval.com). The Fair Price Line represents the price one would expect to pay for a product based on performance. All Fair Price Lines run through the average of price and performance. For example, the Canon A580 is priced at $\$ 180$ with a performance rating of 80 . The fair price would be $\$ 226$ for this level of performance.

| Digital <br> cameras | No. | Performance <br> rating | Product <br> price | Fair <br> price | Customer <br> value |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Casio EX-29 | 1 | 79 | $\$ 150$ | $\$ 202$ | $\$ 52$ |
| Casio EX-280 | 2 | 50 | $\$ 180$ | $\$ 155$ | $(\$ 25)$ |
| Canon A580 | $\mathbf{3}$ | $\mathbf{8 0}$ | $\$ 180$ | $\$ 226$ | $\$ 46$ |
| Canon SD870 | 4 | 80 | $\$ 280$ | $\$ 226$ | $(\$ 54)$ |
| Canon SD790 | 5 | 90 | $\$ 300$ | $\$ 250$ | $(\$ 50)$ |
| Fuji J10 | 6 | 70 | $\$ 130$ | $\$ 202$ | $\$ 72$ |
| Kodak M1033 | 7 | 75 | $\$ 200$ | $\$ 214$ | $\$ 14$ |
| Kodak V1073 | 8 | 60 | $\$ 230$ | $\$ 179$ | $(\$ 51)$ |
| Nikon P60 | 9 | 70 | $\$ 230$ | $\$ 202$ | $(\$ 28)$ |
| Pentax M50 | 10 | 70 | $\$ 180$ | $\$ 202$ | $\$ 22$ |
| Average |  | 72 | $\$ 206$ | $\$ 206$ | $\$ 0$ |



FIGURE 1.4 Price performance, fair value, and customer value-digital cameras

## What is the customer value?

Customer value is the difference between a product's fair price and the selling price. For example, the Canon A580 has a positive customer value of $\$ 46$ with a fair price of $\$ 226$ and a selling price of $\$ 180$ as shown below:

$$
\begin{aligned}
\text { Customer value (Canon A580) } & =\text { fair price }- \text { selling price } \\
& =\$ 226-\$ 180 \\
& =\$ 46
\end{aligned}
$$

The five digital cameras above the Fair Price Line all have negative customer values, as their selling prices exceed their fair price based on performance. Manufacturers with a negative customer value are overpriced for their level of product performance. The five digital cameras below the Fair Price Line each have a positive customer value that ranges from $\$ 22$ for the Pentax M50 to $\$ 72$ for the Fuji J10.

We do not have sufficient information to estimate the actual Pricing ROI for this Canon value pricing strategy. However, to illustrate a value-based Pricing ROI we offer the following example.

As shown in Figure 1.5, a value-based price of $\$ 190$ is $\$ 10$ higher than the current selling price of $\$ 180$. While this price increase lowers the customer value by $\$ 10$, the resulting customer value of $\$ 33$ is still sufficiently large to be meaningful in attracting potential customers.

At this new price of $\$ 190$-and assuming volume is unchanged-the product sales and gross profits each increase by $\$ 8$ million. The marketing and sales budget also increases by $\$ 3$ million in order to communicate the price performance and value of the product. The result of this pricing strategy is a $\$ 5$ million increase in NMC. When this incremental gain in marketing profits is divided by the $\$ 3$ million invested in the value-based pricing strategy, the resulting Pricing ROI is 167 percent.

| Performance (millions) | Current <br> pricing | Value-based <br> pricing | Change |
| :--- | :---: | :---: | :---: |
| Selling price | $\$ 180$ | $\$ 190$ | $\$ 10$ |
| Customer value | $\$ 43$ | $\$ 33$ | $(\$ 10)$ |
| Volume sold (units) | 1.0 | 1.0 | 0.0 |
| Net price | $\$ 144$ | $\$ 152$ | $\$ 8$ |
| Sales | $\$ 144$ | $\$ 152$ | $\$ 8$ |
| Unit cost | $\$ 100$ | $\$ 100$ | $\$ 0$ |
| Unit margin | $\$ 44$ | $\$ 52$ | $\$ 8$ |
| Gross profit | $\$ 44$ | $\$ 52$ | $\$ 8$ |
| Marketing and sales budget | $\$ 20$ | $\$ 23$ | $\$ 3$ |
| Net marketing contribution | $\$ 24$ | $\$ 29$ | $\$ 5$ |



FIGURE 1.5 Price-performance value-based Pricing ROI

## Value drivers and value creation

In the digital camera example, we presented an overall measure of performance, which masked important individual sources of value creation and value reduction. The overall performance score can be disaggregated into more definitive sources of performance. Figure 1.6 illustrates an example of competing industrial products rated on four aspects of performance, service quality, and company reputation (Sullivan 2008). These influences on overall performance are weighted to further delineate the importance of different aspects of performance.

In this example, competitors $\mathrm{C}, \mathrm{F}$, and H offer the best customer values, while competitors A, E, and G offer the poorest values. Competitor A is high-priced and would have to work to improve areas of performance to offer a fair value. Competitor B could work on improving below-average areas of performance to build a positive value and could then raise their price to $\$ 125$. However, this strategy would require a determination that the value-based Pricing ROI warrants this investment.

## Value-based pricing method \#2: total cost of ownership

For many consumer, industrial, and hi-tech products, price is only one consideration in the total cost of ownership (Forbis and Mehta 1981; Snelgrove 2012). For

| Performance drivers | Weight | A | B | C | D | E | F | G | H | AVG. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Product performance |  |  |  |  |  |  |  |  |  |  |
| *Reliability | $20 \%$ | 75 | 45 | 50 | 80 | 35 | 80 | 85 | 60 | $\mathbf{6 4}$ |
| ${ }^{*}$ Throughput | $20 \%$ | 80 | 67 | 50 | 85 | 40 | 75 | 80 | 65 | $\mathbf{6 8}$ |
| Product life | $20 \%$ | 60 | 50 | 35 | 80 | 30 | 60 | 85 | 65 | 58 |
| Maintenance | $10 \%$ | 50 | 40 | 40 | 75 | 30 | 60 | 75 | 55 | 53 |
| Service quality | $20 \%$ | 30 | 55 | 40 | 80 | 25 | 65 | 75 | 55 | 53 |
| Company reputation | $10 \%$ | 67 | 50 | 35 | 70 | 20 | 75 | 75 | 50 | 55 |
| Overall performance | $100 \%$ | $\mathbf{6 1}$ | 52 | 43 | 80 | 31 | 70 | 80 | $\mathbf{6 0}$ | $\mathbf{6 0}$ |
|  |  |  |  |  |  |  |  |  |  |  |
| Price |  | $\$ 165$ | $\$ 120$ | $\$ 65$ | $\$ 155$ | $\$ 95$ | $\$ 120$ | $\$ 200$ | $\$ 95$ | $\$ 127$ |

Industrial product

| Product | Performance <br> rating | Product <br> price | Fair <br> price | Customer <br> value |
| :---: | :---: | :---: | :---: | :---: |
| A | 61 | $\$ 166$ | $\$ 130$ | $(\$ 36)$ |
| B | 52 | $\$ 120$ | $\$ 112$ | $(\$ 8)$ |
| C | 43 | $\$ 65$ | $\$ 95$ | $\$ 30$ |
| D | 80 | $\$ 155$ | $\$ 166$ | $\$ 11$ |
| E | 31 | $\$ 95$ | $\$ 72$ | $(\$ 23)$ |
| F | 70 | $\$ 120$ | $\$ 147$ | $\$ 27$ |
| G | 80 | $\$ 200$ | $\$ 166$ | $(\$ 34)$ |
| H | 60 | $\$ 95$ | $\$ 128$ | $\$ 33$ |
| Average | 60 | $\$ 127$ | $\$ 130$ | $\$ 0$ |



FIGURE 1.6 Price-performance value pricing with performance drivers
example, the average selling price of a Subaru Forrester is $\$ 20,051$ (Sullivan 2008), but the cost to own this vehicle over its five-year life is significantly higher when all the costs of ownership are considered. These expenses include the cost of fuel, maintenance, repairs, insurance, taxes and fees, and depreciation (Edmonds.com 2011). These additional costs result in a total cost to own of $\$ 41,901$ over five years, as shown in Figure 1.7. The resale value of this car after five years is $\$ 10,714$. Taking into consideration the price paid, resale value, and cost to own yields a total cost of ownership of $\$ 51,238$.

A comparable SUV like the Toyota RAV4 has a selling price of $\$ 24,084$ and higher total cost of ownership equal to $\$ 45,273$. However, the RAV4 also has a higher resale value. When all factors are considered, the total cost of ownership is $\$ 55,697$. The difference of $\$ 4,459$ is the value Subaru offers customers considering the two SUVs. Subaru could raise the price of the Forrester by $\$ 1,000$ to capture more of this value for the company and would still offer a positive customer value of $\$ 3,459$.

Next, consider an automotive component that has a list price of $\$ 10.00$ and sells for $\$ 8.00$ after normal discounts. Shown in Figure 1.8 is the total cost of purchase for the company's product and a competing product. In this industry, purchasing agents will not accept premium-priced products without justification. This is where an investment in a Total Cost of Ownership Pricing starts. If the company believes its product can save the customer money, they need to prove it.

While both products have a net price of $\$ 8.00$, the total cost of purchase for the competitor's product and the company's product when fully installed and tested are $\$ 14.50$ and $\$ 11.00$ respectively. This is largely due to a lower installation cost, but there are other customer savings as well. These individual savings produce an overall customer savings of $\$ 3.50$ per unit installed. This results in a savings of $\$ 3.5$ million per year for every million units installed.

Subaru Forrester

| Cost of ownership | Purchase | 5-year expenses |
| :---: | :---: | :---: |
| Price paid | \$20,051 |  |
| Fuel |  | \$13,950 |
| Maintenance |  | \$5,466 |
| Insurance |  | \$7,565 |
| Repairs |  | \$1,472 |
| Taxes and fees |  | \$2,133 |
| Financing |  | \$1,978 |
| Depreciation |  | \$9,337 |
| Resale value | (\$10,714) |  |
| Ownership costs |  | \$41,901 |
| Total cost to own | \$41,901 |  |
| Cost of ownership | \$51,238 |  |

Toyota RAV4

| Cost of ownership | Purchase | 5-year <br> expenses |
| :--- | :---: | :---: |
| Price paid | $\$ 24,084$ |  |
| Fuel |  | $\$ 13,371$ |
| Maintenance |  | $\$ 4,291$ |
| Insurance |  | $\$ 11,314$ |
| Repairs |  | $\$ 887$ |
| Taxes and fees |  | $\$ 2,321$ |
| Financing | $(\$ 13,660)$ |  |
| Depreciation |  | $\$ 45,273$ |
| Resale value | $\$ 45,273$ |  |
| Ownership costs | $\$ 55,697$ |  |
| Total cost to own |  |  |
| Cost of ownership |  |  |

FIGURE 1.7 Total cost of ownership-automobiles
Note: Both 4 door SUV 2.5L 4 cylinder

| Total cost of ownership <br> (per unit) | Benchmark <br> competitor | Company | Customer <br> savings | Total cost of ownership <br> (per unit) | Benchmark <br> competitor | Company | Customer <br> savings |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| List price | $\$ 10.00$ | $\$ 10.00$ | $\$ 0.00$ | List price | $\$ 10.00$ | $\$ 11.50$ | $\$ 0.00$ |
| Discounts | $(\$ 2.00)$ | $(\$ 2.00)$ | $\$ 0.00$ | Discounts | $(\$ 2.00)$ | $(\$ 2.00)$ | $\$ 0.00$ |
| Net price | $\$ 8.00$ | $\$ 8.00$ | $\$ 0.00$ | Net price | $\$ 8.00$ | $\$ 9.50$ | $\$ 0.00$ |
| Ownership costs |  |  |  |  |  |  |  |
| Ownership costs |  |  |  |  |  |  |  |
| Shipping and handling | $\$ 1.00$ | $\$ 0.50$ | $\$ 0.50$ | Shipping and handling | $\$ 1.00$ | $\$ 0.50$ | $\$ 0.50$ |
| Installation cost | $\$ 4.50$ | $\$ 2.00$ | $\$ 2.50$ |  | Installation cost | $\$ 4.50$ | $\$ 2.00$ |
| Quality control | $\$ 0.50$ | $\$ 0.20$ | $\$ 0.30$ |  | Quality control | $\$ 2.50$ |  |
| Re-work | $\$ 0.50$ | $\$ 0.30$ | $\$ 0.20$ | Re-work | $\$ 0.50$ | $\$ 0.20$ | $\$ 0.30$ |
| Ownership costs | $\$ 6.50$ | $\$ 3.00$ | $\$ 3.50$ | Ownership costs | $\$ 6.50$ | $\$ 3.00$ | $\$ 3.50$ |
| Total cost of ownership | $\$ 14.50$ | $\$ 11.00$ | $\$ 3.50$ | Total cost of ownership | $\$ 14.50$ | $\$ 12.50$ | $\$ 2.00$ |

FIGURE 1.8 Customer total cost of ownership-automotive component product

| Performance (millions) | Current pricing | Value-based pricing | Change | $=\frac{\text { NMC (post) }- \text { NMC (pre) }}{\text { price strategy investment }} \times 100 \%$ |
| :---: | :---: | :---: | :---: | :---: |
| List price | \$10.00 | \$11.50 | \$1.50 |  |
| Selling price | \$8.00 | \$9.50 | \$1.50 |  |
| Customer value | \$3.50 | \$2.00 | (\$1.50) |  |
| Volume sold (units) | 1.0 | 1.0 | 0.0 |  |
| Sales | \$8.0 | \$9.50 | \$1.50 | $\$ 1.85$ million - $\$ 1.0$ million |
| Unit cost | \$6.00 | \$6.00 | \$0.00 | $=\frac{\$ 1.05}{\$ 650,000} \times 100 \%$ |
| Unit margin | \$2.00 | \$3.50 | \$1.50 | = $131 \%$ |
| Gross profit | \$2.00 | \$3.50 | \$1.50 |  |
| Marketing and sales budget | \$1.00 | \$1.65 | \$0.65 |  |
| Net marketing contribution | \$1.00 | \$1.85 | \$0.85 |  |

FIGURE 1.9 Total cost of ownership value-based Pricing ROI

To capture more value for the company, the list price could be increased to $\$ 11.50$ with a net price of $\$ 9.50$, a $\$ 1.50$ price premium. The customer savings at this price would still be $\$ 2.00$ per unit installed and $\$ 2$ million per year. With this value proposition the business would expect to maintain their current volume of one million units but would hope to increase their share of the automotive component manufacturing business (Nagle and Hogan 2006; Smith and Nagle 2005).

The investment in this case included production engineering tests and sales force training on how to sell using value-based pricing. The incremental investment in this example was $\$ 500,000$ and the incremental gain in NMC was $\$ 1$ million as shown in Figure 1.9. This produced a value-based Pricing ROI of 131 percent.

## Value-based pricing method \#3: trade-off analysis

Not all customers will want the same combination of performance and price. A "price buyer" will use price as their primary value driver and then seek the best performance based on various different types of performance (Morton and Devine 1985). Using trade-off analysis (conjoint analysis) we can see how customers tradeoff different levels of price with different levels of performance (Axelrod and Frendberg 1990; Green and Srinivasan 1990; Page and Rosenbaum 1987; Wittink and Cattin 1989).

A "quality buyer" treats price as an important factor, but prioritizes desired levels of quality and performance ahead of price. Among quality buyers there can be many variations in customer needs for performance. This creates different priceperformance segments, each with different value drivers. Using trade-off value-based pricing we can determine the degree to which price and value segments exist (Gale and Swire 2006).

Let's consider the market for fiber cement siding. The product is guaranteed to last 30 years and is resistant to fire, dry rot, and bug infestation. While the retail price at $\$ 1.00$ per square foot was acceptable to most customers, 30 percent would pay considerably more for a higher quality paint finish and higher quality trim items. This led to the following product positioning considerations:

- Retail price: $\$ 1.00, \$ 2.00, \$ 3.00$
- Paint finish: None, Primed, Color Plus
- Finish trim: None, Limited, Full

From these nine factors there are 81 possible combinations. By utilizing a Latinsquare design, the number can be systematically reduced to a representative subset of nine combinations. In Figure 1.10 we show how these nine combinations were ranked in order of buyer preference for a "price buyer." When these preferences are processed they can be represented by the customer preference curves shown in the lower left of the figure. As shown, price was the most important factor and accounted for 75 percent of the price buyer choice variance. The other 25 percent went to paint finish.

## Price buyer value index

For the "price segment," the company's current positioning is the most attractive product offering of the three shown in Figure 1.11. This yields the highest value index for price buyers (1.83) as shown below. This is computed using the preference curve values for the price buyer and the positioning shown in Figure 1.11. Also shown in Figure 1.11, the other two strategies produced a lower value index. The premium strategy for the price segment has the lowest value index (1.17).

$$
\begin{aligned}
\text { Value index }(\text { current })= & \text { paint finish (none) }+ \text { finish trim (none) } \\
& + \text { price }(\$ 1.00 \text { per sq. ft.) } \\
= & 0.33+0.50+1.00 \\
= & \mathbf{1 . 8 3}
\end{aligned}
$$

## Quality buyer value index

Quality buyers ranked the same nine combinations differently. Notice how differently they ranked their first three preferences for the product bundles presented in Figure 1.10. They placed more importance on paint finish (43 percent) and finish
FIGURE 1.10

| Product <br> bundles | Price <br> segment | Quality <br> segment |
| :---: | :---: | :---: |
| A | 3 | 8 |
| B | 5 | 7 |
| C | 7 | 6 |
| D | 9 | 9 |
| E | 2 | 4 |
| F | 4 | 2 |
| G | 6 | 5 |
| H | 8 | 3 |
| I | $\mathbf{1}$ | 1 |

Quality segment





| Option A | 3 | Option B | 5 |
| :---: | :---: | :---: | :---: |
| Paint finish | None | Paint finish | Primed |
| Finish trim | None | Finish trim | None |
| Price per sq. ft. | \$1.00 | Price per sq. ft. | \$2.00 |
| Option D | 9 | Option E | 2 |
| Paint finish | None | Paint finish | Primed |
| Finish trim | Limited | Finish trim | Limited |
| Price per sq. ft. | \$3.00 | Price per sq. ft. | \$1.00 |
| Option G | 6 | Option H | 8 |
| Paint finish | None | Paint finish | Primed |
| Finish trim | Full | Finish trim | Full |
| Price per sq. ft. | \$2.00 | Price per sq. ft. | \$3.00 |


Prime segment

| Features | Current | Plus | Premium |
| :--- | :---: | :---: | :---: |
| Paint finish | None | Primed | Color finish |
| Finish trim | None | Basic trim | Full trim |
| Price per sq. ft. | $\$ 1.00$ | $\$ 2.00$ | $\$ 3.00$ |
| Value index | 1.83 | 1.50 | 1.17 |

Quality segment

| Features | Current | Plus | Premium |
| :--- | :---: | :---: | :---: |
| Paint finish | None | Primed | Color finish |
| Finish trim | None | Basic trim | Full trim |
| Price per sq. ft. | $\$ 1.00$ | $\$ 2.00$ | $\$ 3.00$ |
| Value index | 0.77 | 1.77 | $\mathbf{2 . 3 1}$ |

FIGURE 1.11 Trade-off value-based pricing strategy and value index
trim (40 percent). Price accounted for only 17 percent of the product preferences. For this segment of customers ( 30 percent) the premium product offering provided the highest value index (2.31). The current product offering is the least attractive to quality buyers with a value index of 0.77 .

## Trade-off value-based Pricing ROI

The company has used the current strategy for the past ten years with the results shown in Figure 1.12. The trade-off value-based pricing strategy would retain the current offering for price buyers ( 70 percent of their customers) but would offer a second value-based strategy as an option for quality buyers. As shown in Figure 1.12, sales would grow from $\$ 600$ million to $\$ 870$ million. More importantly, gross profits would grow from $\$ 200$ million to $\$ 320$ million. Clearly, these are impressive performance gains.

But what about marketing and sales expenses? As shown, these expenses would have to increase to adequately communicate the new value proposition. This valuebased pricing strategy would require new communications channels, new messaging, and more frequent communications to adequately reach and influence the buyers

| Performance (millions) | Current pricing | Value-based price segment | Pricing quality segment | Strategy total | Change |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Served market | 100\% | 70\% | 30\% | 100\% | 0\% |
| Selling price | \$1.00 | \$1.00 | \$2.50 | \$1.45 | \$0.45 |
| Customer value index | 1.63 | 1.83 | 2.31 | 1.97 | 0.34 |
| Net Price (*) | \$0.60 | \$0.60 | \$1.50 | \$0.87 | \$0.27 |
| Volume sold (units) | 1,000 | 700 | 300 | 1,000 | 300 |
| Sales | \$600 | \$420 | \$450 | \$870 | \$270 |
| Unit cost | \$0.40 | \$0.40 | \$0.90 | \$0.55 | \$0.15 |
| Unit margin | \$0.20 | \$0.20 | \$0.60 | \$0.32 | \$0.12 |
| Gross profit | \$200 | \$140 | \$180 | \$320 | \$120 |
| Marketing and sales budget | \$90 | \$60 | \$75 | \$135 | \$45 |
| Net marketing contribution | \$110 | \$80 | \$105 | \$185 | \$75 |
| (*) Net price after retailer disco |  | Pricing ROI$\begin{aligned} & =\frac{\$ 185 \text { million }-\$ 110 \text { million }}{\$ 45 \text { million }+\$ 11 \text { million }} \\ & =134 \% \end{aligned}$ |  | $\times 100 \%$ |  |
| Non-marketing and sales investment (\$million) |  |  |  |  |
| Product R\&D | \$1 |  |  |  |
| Plant and equipment | \$10 |  |  |  |
| Total | \$11 |  |  |  |

FIGURE 1.12 Market segmentation and value-based Pricing ROI
in the quality segment. This would result in an increase in the marketing and sales budget from $\$ 90$ million to $\$ 135$ million, as shown in Figure 1.12.

The company would also have to invest $\$ 1$ million in product and process $\mathrm{R} \& \mathrm{D}$ (research and development) and $\$ 10$ million in new plant and equipment to manufacture these new product features. Thus, the total investment would be significant at $\$ 56$ million. Given a potential incremental gain in NMC of $\$ 75$ million, this strategy produces a Pricing ROI of 134 percent as shown in Figure 1.12.

## Managerial summary

We have highlighted three value-based pricing methods that have the potential to produce higher levels of marketing profits, measured as NMC. For each application, current marketing performance can be measured with respect to price, customer value, margin, marketing and sales expenses, and NMC. With this data we can use the following steps to select the appropriate value-based price method and measure the resulting Pricing ROI.

## Step 1: Method selection

Determine which value-based pricing method is appropriate for your product or service. Selecting the right method for your product-market is discussed in the next section (Guidelines for managers).

## Step 2: Customer value

Using the value-based pricing method selected in Step 1, determine the degree to which your product has a positive customer value. If there is negligible or negative customer value, then there is no room for improving prices. The focus should not be on price but how to improve performance and value.

## Step 3: Value pricing

If you have a considerable value advantage, the next step is to determine how much you can increase price and still maintain an attractive customer value. This is shown in Figure 1.13 for each of the value-based pricing methods.

## Step 4: Investment

Next, determine if the unit cost will change and how much additional marketing and sales budget is needed to communicate your value advantage to target customers.

| Performance (millions) | Price-performance |  | Total cost of ownership |  | Trade-off analysis |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Application | Digital cameras |  | Automotive component |  | Building materials |  |
| Strategy | Current | Value-based | Current | Value-based | Current | Value-based |
| Customer value | \$43 | \$33 | \$3.50 | \$2.00 | 1.63 | 1.97 |
| Net price | \$144 | \$152 | \$8.00 | \$9.50 | \$0.60 | \$0.87 |
| Percent margin | 30.6\% | 34.2\% | 25.0\% | 36.7\% | 33.3\% | 36.8\% |
| Marketing and sales | \$20 | \$23 | \$1.00 | \$1.65 | \$90 | \$135 |
| Net marketing contribution | \$24 | \$29 | \$1.00 | \$1.85 | \$110 | \$185 |
| Investment |  | \$3.0 |  | \$0.65 |  | \$55.0 |
| Pricing ROI |  | 167\% |  | 131\% |  | 134\% |

FIGURE 1.13 Summary of value-based Pricing ROI applications

## Step 5: Profit impact

With Steps 3 and 4 completed, estimate the proposed strategy NMC. If the difference is sufficiently large, this strategy should be seriously considered. If the gain is negligible or negative, the strategy lacks the profit potential to make the investment risk tolerable.

## Step 6: Pricing ROI

Pricing ROI is a good index for evaluating investment risk. Divide the change in NMC by the investment in marketing and sales expenses to measure Pricing ROI. In the applications summarized in Figure 1.13, the Pricing ROIs ranged from 131 percent to 167 percent. These ROIs would have to be compared with other opportunities to determine if they are sufficiently attractive to pursue.

## Guidelines for managers

Recognizing that most managers use cost-based pricing, we are hopeful that the value-based pricing methods presented offer an incentive for managers to re-evaluate their products with respect to value pricing. In this section we will present guidelines and resources to aid in the planning and execution of the value-based pricing methods we have examined in this chapter.

## Price-performance value-based pricing

Price-performance value-based pricing requires ten or more competing products that vary in price and performance. If there is little product differentiation in price and performance, this method will not work. Some applications where this valuebased pricing method works best are summarized below.

- Consumer: Cars, appliances, electronics, home and garden, babies and kids, services and health
- Business: Office equipment, earth-moving equipment, cutting tools, small motors, industrial adhesives, and chain saws

To get started we recommend using price-performance value mapping (Tool 4.2) as shown in Figure 1.14. Using this resource, you can modify the example data to see how the customer value changes with changes in price and performance. You can also enter and save your own data and perform your own value-based pricing analysis. For a more in-depth experience we recommend creating a table like the one shown in Figure 1.6.

Then have your sales force and/or management team rate your performance and nine competitors on each criterion to create an overall performance index. Use the average results to create a value map to get a consensus view of your customer value and competitive position. If promising, the next step would be to collect the same data from a sample of 30 customers and perform the same analysis. It is also very useful to see how much agreement or disagreement there is between company and customer perceptions of performance.

## Total cost of ownership value-based pricing

This value-based pricing method is best used in situations where the ownership costs are equal to or greater than the purchase price. This is often the case for products that have a multi-year life like a car or machinery. These products have a variety of ownership costs that are often less obvious to sellers as shown in Figure 1.15. Some areas of application are shown below:

- Consumer: Cars, printers, computers, solar energy systems, household paint, siding and roofs, major appliances, gas BBQs, water heaters
- Business: Turbines, electronic instruments, medical diagnostic equipment, large earth moving machines, industrial machinery, food processing equipment, robotic equipment, conveyor systems

| Value pricing method <br> considerations | Price-performance | Value based pricing methods <br> Total cost of ownership |  |
| :--- | :---: | :---: | :---: |
| Type of data required | Price and performance | Price and cost to own | Price-performance levels |
| Minimum data requirements | 10 or more products | One competing product | Price and performance |
| Application example | Flat screen TVs | Farm machinery | Airlines |
| Customer value metric | Dollars | Dollars | Numerical index |
| Measures price importance | No | \% Total cost to own | \% Price use in choice |
| Identifies value-drivers | No | Yes | Yes |
| Competitor position | Yes | Yes | Yes |
| Value pricing tools (*) | 4.2 Price-performance <br> value mapping | $\mathbf{8 . 1}$ Value in-use <br> pricing | $\mathbf{8 . 3}$ Performance-based <br> value pricing |

(*) These resources can be accessed at www.MBM-Best.com
FIGURE 1.14 Manager guidelines for value-based pricing tools


FIGURE 1.15 Ownership costs are often less visible
To get started with this value-based pricing method, we recommend using value in-use pricing (Tool 8.1), as shown in Figure 1.14. Using your best estimates, input the price for a company product and identify areas of customer ownership costs. Next, estimate your product life and the ownership costs for each product (see Figure 1.7). Then repeat this step for a benchmark competitor. Then evaluate your customer value as presented in Step 2 in the previous section.

This exercise will provide a feel for this value-based pricing method and how it can uncover sources of competitive advantage and opportunities to communicate how your products create customer value in the form of customer savings.

To take this application a step further, identify a customer you have a strong relationship with and ask to setup a side-by-side analysis of the two products. Customers may see costs of ownership that you did not consider as well as assess those costs for the two products differently. Adding more customer applications will further enhance and expand your understanding of your product's customer value and opportunities to improve pricing.

## Trade-off value-based pricing

This value-based pricing method is best used for products and services that have few key performance drivers (2 or 3) and price. Trade-off analysis requires customers to make trade-offs between price and different levels of performance and is powerful for understanding how important price is relative to performance. As a result, this method is also excellent for discovering market segments.

3 M is a perfect company for trade-off value-based pricing tools. 3 M 's roughly 20,000 products are mostly value-added products that command a premium price
based on some aspect of superior performance. Obviously, price buyers are going to like the 3 M performance but may not be willing to pay for it. Other consumer and business applications are summarized below:

- Consumer: Services such as airlines, banks, hotels, golf courses, restaurants, gas stations, toothpaste, household consumables, vacation packages, schooling, etc.
- Business: Industrial adhesives, electronic controls, security systems, electronic components, plastics, silicone and epoxy applications, graphic design, financial services, etc.

To get started we recommend using the performance-based value pricing tool (Tool 8.3), as shown in Figure 1.14. Start with your own analysis following the instructions presented. Interpret the results to determine if this tool provides some new insights to customer value and pricing. The next step would be to have your management team and sales force rank the same nine choice options, then compare and discuss the results. A lot can be learned with just this inside-company application. Obviously, if your team sees value in doing this, the next step is to include customers in the ranking of these choice options.

## Future research considerations

Recognizing the value-based pricing methods and Pricing ROI examples presented, it is important to look forward to additional research to extend our knowledge and application of these pricing methods. Three areas of research that would add to our knowledge in this area are presented.

## Total cost of purchase vs. total cost of ownership

Past research on the total cost of ownership has looked at this as a transaction. This would be appropriate for single transactions. Southwest Airlines demonstrates and communicates its total cost of purchase with advertisements that show the price and added costs of a competing ticket to the same destination as shown in Figure 1.16. Value-based pricing focused on single transactions should be referred to as the total cost of purchase.

Total cost of ownership should be used when ownership costs occur over several years, such as in the purchase and use of cars as presented in Figure 1.7. Because these ownership costs occur over time, we should utilize a net present value approach to determining the total cost of ownership.

For example, in Figure 1.17 are two gas chromatographs, one priced at $\$ 50,000$, the other at $\$ 55,000$. However, the competing product has a four-year life and the company's product has a five-year life. Using a 15 percent discount rate, the company product is a better buy with a customer value of $\$ 5,028$ in today's dollars.


FIGURE 1.16 Total cost of purchase

| Product life (years) | Price | 1 | $\mathbf{1}$ | $\mathbf{3}$ | 4 | 5 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Competitor (4-year product life) | $\$ 50,000$ | $\$ 12,500$ | $\$ 12,500$ | $\$ 12,500$ | $\$ 12,500$ |  |
| Company (5-year product life) | $\$ 55,000$ | $\$ 11,000$ | $\$ 11,000$ | $\$ 11,000$ | $\$ 11,000$ | $\$ 11,000$ |
| Discount rate | $15 \%$ |  |  |  |  |  |
| Present value factor |  | 0.870 | 0.756 | 0.658 | 0.572 | 0.497 |
| Competitor present value | $\$ 41,902$ | $\$ 10,870$ | $\$ 9,452$ | $\$ 8,219$ | $\$ 7,147$ | $\$ 6,215$ |
| Company present value | $\$ 36,874$ | $\$ 9,565$ | $\$ 8,318$ | $\$ 7,233$ | $\$ 6,289$ | $\$ 5,469$ |
|  |  |  |  |  |  |  |

FIGURE 1.17 Total cost of ownership
Total cost of ownership as net present value has not been presented as a method for assessing customer value. Issues that would need to be addressed are: 1) What types of products lend themselves to this method? 2) What is the appropriate discount rate? 3) How should investment in marketing communications be incorporated into this method to allow businesses to communicate their value advantage story? 4) How should Pricing ROI be calculated?

## Value advantage and cost of marketing and sales

A business with a value advantage should find it easier to attract new customers and retain existing customers when the value is clearly communicated to consumers. Product A in Figure 1.18 should have a higher level of customer retention than


FIGURE 1.18 Customer value and marketing and sales expenses

Product C. That means that Product C has to spend more on marketing and sales to acquire new customers to replace lost customers to maintain the same level of sales. This would suggest that Product A has a lower cost of marketing and sales as a percent of sales.

Likewise, Product A is more likely to have a higher Net Promoter Score than Product C since Product A offers a greater customer value. This means customers of Product A are more likely to tell people about Product A than customers of Product C. This should lower Product A's new customer acquisition expenses. In Figure 1.18 we present this hypothesis as an area for future research. If proved to be true, products with a value advantage are even more profitable in the long run due to higher levels of marketing productivity.

## Emotional value and value-based pricing

The Converse Chuck Taylor sneaker was conceived as a basketball shoe that provided performance advantages that competing shoes did not have. But, the Chuck Taylor is now a symbol of status and fashion that has even greater value to both athletes and non-athletes, as shown in Figure 1.19. Current value pricing methods do not capture this aspect of "Emotional Value."

While consumers can readily list rational purchase considerations, customers also weigh emotional factors (Aaker 1997) such as perceived safety, belongingness (group identity), and status (does the product enhance my image to others?). For products that offer a desired emotional value, the value is underestimated using the current methods of value pricing. Future research should focus on how this aspect of customer value can be included in customer value measurement and value-based pricing.


FIGURE 1.19 Converse is more than an athletic shoe

## Summary comments

In this chapter, we explored three value-based pricing methods and examined the corresponding Pricing ROI for each method. Since most businesses employ costbased pricing or some form of reactive pricing, there are significant opportunities for companies to evaluate alternate pricing methods when developing pricing strategies.

The first step in executing any value-based pricing strategy is to understand value drivers. The next steps can be much more expensive and can involve product and packaging redesign, new marketing communications, and sales force trainings to create, communicate, and deliver your premium price value proposition. These are all elements of an investment in the value pricing strategy that need to be considered in determining your value-based Pricing ROI.

Value-based pricing strategies require pricing intelligence and courage because the investment stakes are high. But, if analyzed with adequate pricing intelligence, a business can easily estimate the Pricing ROI based on projected gains in marketing profits and required investment. We measure the numerator of the Pricing ROI equation as the incremental gain in NMC that the value-based pricing strategy produced over the current pricing strategy. This delta in NMC is then divided by the investment required to accomplish these outcomes, resulting in a measure of value-based Pricing ROI.

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With a wide variety of contributions from pricing experts and a thorough - yet detailed - list of topics, this latest book from Liozu and Hinterhuber will be an invaluable resource for those who are looking to increase their pricing knowledge and improve their company's profitability. This book addresses many of the important questions stemming from the renewed importance of the pricing discipline today. Kevin Mitchell, President, The Professional Pricing Society
This book brings an important contribution to the pricing profession so that they can better compete for investment funds.
Andres Reiner, President and CEO, PROS Holdings
Measuring the impact of pricing projects and the pricing function is THE key to driving firm performance via pricing. Once calculated, the Executive Suite can see sustainable and immediate payback and justify investing in the tools, processes, and people to realize this value. This book by Stephan Liozu and Andreas Hinterhuber provides a framework and best practices on how to do this and is recommended reading for any pricing professional.
Todd Snelgrove, Global Manager, Value, SKF
As with executives and managers in so many other business functions, pricing specialists are being challenged more and more to substantiate the added value of their activities. Pricing is a core function of every business and needs not only to contribute positively to short- and long-term results but also to document its impact on the bottom line. A fundamental part of this is the pricing return on investment (ROI) calculations.
This book, edited by globally renowned thought leaders Stephan Liozu and Andreas Hinterhuber, is the first to outline contemporary theories and best practices of documenting pricing ROI and make the case for pricing investments. It provides proven methods, practices and theories on how to calculate the impact of pricing activities on performance. Marketing ROI is now a common concept; this collection aims to do the same for pricing.

Liozu and Hinterhuber introduce the concept of pricing ROI, documenting and quantifying the return on pricing activities and on the pricing function, which itself is of increasing relevance today and in the future, in times of budget constraints. Twenty world-class specialists explore the concept of pricing ROI from both a theoretical perspective and a managerial perspective to shed much-needed light on how to measure and increase pricing ROI.

This ground-breaking book will enlighten students and specialists of marketing and sales, pricing managers and executives alike.

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