# Master Degree in Automotive Engineering Management of industrial processes 



## Strategic Pricing

Standardization of procedures and tools for pricing activities

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#### Abstract

This thesis aims to illustrate the role played by pricing as a marketing lever, focusing the attention on its operative procedures.

As a first step in the pricing reality, the operative tasks of this department and its responsibilities will be explained, passing through the monitoring of competitiveness and the analysis of price proposals.

The attention will then be moved to the tools at disposal of each pricer, how they can be fully exploited and which are their advantages and disadvantages, considering the space available for improvement of standard procedures.


## Chapter 1

## Introduction

When a company is founded, specifically an automotive manufacturer, despite all the propaganda of good intentions and visions of a bright future, its main objective is to make profit. There are many possible solutions to pursue this aim, but in this essay, we are going to analyse one of the marketing levers at disposal of an international player of the automotive sector: the price.

What is the importance of pricing and how does it work?
The pricing department is the one in charge of being the pivot point around which the relationship between the markets and the HQ (head-quarter) rotates. This is because pricing is in a position between the business centre of the market, the product marketing department and the finance department, working with all these units and seeking common objectives, listening to markets' requests and communicating guidelines to be followed. The pricing works in a synergistic environment with the aim of strategically placing the range of products in each market and gain competitiveness, while monitoring the actions of the rival car makers. There will be a section for each of the abovementioned subjects, to thoroughly understand the role of pricing.

The next important question is: how to be competitive on all markets?
First, it's necessary to have knowledge of the market on which we are working, so we need a direct contact with the people responsible for the sales on that market, since only those who are on the field can give us good pieces of advice, knowing what the customers are looking for and what they are used to expect from a car sale in that country. It's the market who decides its promotions, always considering what the competitors are doing month by month. In this scenario, the pricing keeps an eye on
the competitiveness of our products on the market each month, ready to discuss and act, with the objective of gaining the desired strategic position.

In few words, the reason why each market has a different product offered at a slightly different price is because the car maker tries to satisfy the needs of that specific market, in terms of equipment, different taxation and regulations, while placing its products in strategic positions with respect to the competitors, meaning that it's the environment in which we are playing that defines the price of the product and the brand must stick to the rules to keep its competitiveness.

While monitoring its current situation and planning future moves, the car manufacturer must also deal with the threat of export and re-registration of vehicles, from markets where they are more convenient for customers to markets where cars are more expensive.

To sum up the complexity of positioning a range of products on different markets, the pricing has to avoid cannibalism between products in the same range and in ranges of different brands from the same group with a similar price, working together with the product department and offering consistent differences between products; but at the same time the price must position strategically our products with respect to competitors on all markets, while keeping limited the possibility of export from more convenient markets.

During the past six months, I have been working as an intern in the Fiat brand pricing office and my main task has been of helping my colleagues to take full advantage of the tools at their disposal for pricing activities, by analysing current procedures and proposing new standards for improving efficiency and effectiveness of work.

Let's deep dive in this world of strategies and numbers, where each move can change the company's fortunes and modify its possibility of movement on the international playground.


## Chapter 2

## What is Pricing?

Pricing is the process whereby a business sets the price at which it will sell its products and services, and may be part of the business' marketing plan.

While doing so, it is necessary to take into account the manufacturing cost, the market place, competition, market condition, brand value and quality of the product.

Pricing is also a fundamental aspect of the marketing mix, constituting one of the four Ps (Product, Place, Promotion and Price) and the only one that is revenue generating, since the other Ps are cost centers.

The two most tightly linked Ps of the marketing mix are Price and Promotion. The starting price is an important input to the customers while defining the level of the product. From there, a promotion is created depending on the competition of the market in which we are selling and most importantly, considering if the market has price elasticity, so if the demand is sensitive to price changes. This means that lowering the price for a short period of time is not always the answer to boost sales and generate more profit. But Pricing is the fastest of the 4 Ps and the most effective in answering to a competitor's move.

Pricing is the most impacting of the profit levers, as these values taken from "Managing Price, Gaining Profits" by Marn and Rosiello (2009) from a survey of 2463 companies in the Compustat aggregate show:

- increasing price by $1 \%$, the "operating profit" rises by more than $11 \%$
- a reduction of $1 \%$ in variable costs improves profits by $7,8 \%$
- a $1 \%$ increase in sales volume improves profit by $3,3 \%$ on average

More and more companies are building pricing departments, understanding their strategic importance and the profit they can generate.

But what is their role inside a multinational company?
The pricing department acts as an internal pricing consultant, that understands how to apply pricing concepts, as well as the pricing system used within the company, the objectives of the corporation and how pricing can contribute to achieve them.

What the pricing department is lacking is the understanding of the unique value proposition offered by each individual product. For this reason, pricing must work together with product specialists, who can help them setting the suitable strategy for each product line or individual good.

The pricing department takes part in defining, resourcing and implementing new pricing tools and processes; being specifically this my role inside the department there will be a deeper disquisition about these subjects.

The starting point of an effective pricing strategy is having a clear goal, since each company or product line can have different objectives, requiring completely different strategies to be implemented. Making profit quickly or penetrating the market to build a long-term, profit producing business require totally different pricing strategies and changing idea mid-way is not an option.

There is a zone in which the price must be set to generate profits:

- It must be higher than the product cost, which represents the price floor
- But at the same time, it must be lower than the price ceiling, which is the point beyond which there is no demand of the product, since each customer perception of value for the product is below that threshold.

The two main strategies for price setting are cost-based and value-based.
In the first strategy, the price is created starting from the cost of the product, adding a margin on it, considering the possible value perceived by customers. The average production cost drops with the experience, since lower defects will be present and new ways of scrap reducing will be implemented during the life cycle of the product.

In the second strategy, the process for setting the price goes in the opposite direction, starting from the customers to which the product is designed for and listening to their needs and value researched in the product. From there the price is set and the process of reverse engineering starts, trying to deliver the value requested at the price the customer expects, meaning that the production cost is set to a target even before the engineering of the product itself (target costing).

Break-even strategy is another approach to pricing, where the price is set exactly to cover the cost of making and marketing the product. A variation called target profit pricing means setting price to make a target profit, being unacceptable to just breakeven for the profit generating products.

Once the strategy has been chosen and implemented, the role of pricing doesn't lose its importance, because the new challenge is to monitor the pricing effectiveness and check the obtained positioning on the market, analyzing the competitiveness of its products.

It will follow a whole chapter on the competitiveness analysis, but just to give a first glance at it: the competitiveness can be summed up with a collection of information about our products and our direct competitors, with the aim of understanding the achieved positioning on the different markets with respect to the challengers; taking into account also all the short-term pricing strategies practiced by the players, which means tracking promotions and incentives.


The graph above shows the reasons for purchase for customers of different segments ( $\mathrm{A}, \mathrm{C}$ and E ). From the graph it is clear that pricing and value for money are among the most important reasons for customers of the small and medium segments, becoming of secondary importance while moving towards the higher segments.

Looking specifically at the Fiat Tipo reasons for purchase it is shown how the vehicle satisfies the customers exactly on those fields of interest for the customers.


Ironically, it's not usually the pricing department which sets the prices. The system used to take pricing decisions is set up by the pricing department and its role is to give all the tools and communicate head quarter guidelines to the markets, which working on the field day by day know how the local market will respond to different prices. It is therefore together with the markets that pricers create the price proposal, suitable for their specific needs and compliant with a broader scheme that comprehends a global positioning of the product.


Source: Oliver Wyman distribution cost data base

The pricing is therefore in charge of coming to an agreement with the market, to ensure a good profit for the head quarter even after the discounts offered from the dealer and positioning the product in the wanted spot. The amount of discount that the dealer is able to provide the customer is decided by the market but it's approved by the pricing department, in order to keep an eye on the operations of every dealer and limit their possibility of draining the profit just to push the sales. Being volumes driven could be a big problem affecting a car manufacturer, since bringing sales is a necessary and positive objective of a company, but if these sales are not profitable and each one represents a loss for the company, it could mean that despite a large market share, the strategy is unacceptable. The pricing department is in charge of avoiding this issue, ensuring that each sale performed following their price proposal will bring profit towards the targets that has been decided for that period of the year.

A very important tool used by the pricing department is the Pocket price waterfall, which enables pricers to see graphically how much money the company is keeping with each transaction.

After this brief excursus showing the importance of the transaction prices and their observation, it is even more clear the fundamental role that has a tool for the analysis of transaction prices. It has been developed by JATO and since the beginning of 2018 it is available for the Fiat brand, collecting information from a great number of dealers that share with JATO the specifications of the cars sold to the private customers and the real transaction prices. A chapter on this tool will be included in the thesis.

A quick recap of the tools at disposal of a pricer to effectively accomplish each task his job requires:

- Specification and volumes databases (these databases are provided by JATO and are consulted frequently by the pricers, in order to have a clear idea of the competitors and their offer on the different markets)
- Incentives database (another database offered by JATO where the incentives of the competitors are collected month by month, making possible to see what percentage of discount they are offering, on what they are proposing offers and for how long their offer is continued)
- Pocket Price Waterfall (it shows all the steps and falls that a price is subjected to, until arriving to the final customer and to the pockets of the company)
- Transactions Analysis (it is the last addition at the set of tools at disposal of the pricers in FCA. It gives the chance of knowing the real transaction prices and therefore the optional absorption of our and competitors' range)
- Competitiveness Report (it is a report of our positioning in terms of list price, equipment and offer price with respect to the competitors. The result of this tool should be the starting point for every decision of the product managers. The report is produced once a month, in order to have a trend of our positioning and to be able to react to every competitors' move)
- Price Proposal (it can be complete, with the aim of repositioning the range or a light one, used only to price an OPT, but whatever the shape it has, it is the official document on which the market and its pricer work together to reach a common goal)

In the following chapters, a detailed analysis of each tool and its potentialities will be conducted, but first, it is necessary to define the concept of value and to give an insight to the dynamics of companies' reactions towards competitors' moves.

## Chapter 3

## Value and price

Value and price are two concepts linked very tightly in the mind of a customer, but how can a company reflect this link in their pricing strategies?

It is important that the customer perceives the value of the good or service provided and accepts to pay the price decided by the company, being convinced that it's the right cost of the value delivered. For the companies it is not an easy task and it implies a perfect knowledge of both its competitors' offers and its target customers.

The management of this tradeoff between benefits and price has long been recognized as a critical marketing mix component. Marketers implicitly address it when they talk about positioning their product vis-à-vis competitors' offerings and setting the right price premium over, or discount under, them. Marketers frequently err along the two dimensions of value management, however. First, they fail to invest adequately to determine what the "static" positioning for their products on a price/benefit basis against competitors should be. Second, even when this is well understood, they ignore the "dynamic" effect of their price/benefit positioning-the reactions triggered among competitors and customers, and the effect on total industry profitability and on the transfer of surplus between suppliers and customers.

To illuminate the nature and magnitude of this missed value-management opportunity, value needs to be defined properly. Customers do not buy solely on low price. They buy according to customer value, that is, the difference between the benefits a company gives customers and the price it charges. More precisely, customer value equals customer-perceived benefits minus customer-perceived price. So, the higher the perceived benefit and/or the lower the price of a product, the
higher the customer value and the greater the likelihood that customers will choose that product.

I will start discussing the "static value management", that is the strategic positioning of the product range of a company towards the competitors in the market with respect to the price/benefits ratio.

Many marketing and strategic assessments can be made by using a simple tool called a value map, and by considering how customers are distributed within the map for a given segment.


Customer value $=$ perceived benefits minus perceived price

The value map explores the way customer value and the price/benefit tradeoff work in real markets for a given segment. The horizontal axis quantifies benefits as perceived by the customer; the vertical axis shows perceived price. Each dot represents a competitor's product or service. Higher-priced, higher-benefit competitors are toward the upper right; lower-priced, lower-benefit competitors are at the lower left.

If market shares hold constant (and if you have the right measurement of perceived benefits and perceived prices), then competitors will align in a straight diagonal line called the value equivalence line (VEL). At any desired price or benefit level, there is a clear and logical choice for customers on the VEL. So competitors aligned on the VEL say in such a market that "you get what you pay for." The clarity of that choice almost defines a market in which shares are stable.


If, however, market shares are changing, then share gainers will be positioned below the VEL in what is called a "value-advantaged" position. Competitor A in the above figure is value-advantaged and should logically be gaining market share. If a customer is searching for a product in the benefit range of $A$ and $B$, then he or she would be more likely to choose A, since A provides the same level of benefits as B but at a lower price. Likewise, if a customer were searching for a product in the price range of $A$ and $C$, he or she would probably choose $A$ over $C$, since $A$ provides greater benefits than C but at the same price. So A , positioned below the VEL that B and $C$ reside on, offers more customer value than $B$ or $C$, and therefore more customers prefer it.

The opposite is true for competitor E, which finds itself in a value-disadvantaged position above the VEL. Competitor E will be a share loser if the value map has been constructed properly.

While the marketing concepts that underpin the value map are basic, advanced market research techniques allow an accurate quantification of the perceived benefit dimension and its tradeoff against price. These advances make the effective application of value maps easier than ever for marketers. That said, examples abound of costly positioning errors that could have been avoided through the use of this tool.

I will explain with a practical example the power of the value map and how getting it right is the basis for a good pricing strategy.

The Alpha Computer Company's experience illustrates the value map's power, even when applied in a simple, static fashion. Alpha Computer supplied minicomputers for use primarily as servers in network applications. Alpha prided itself on its engineering skills and ability to deliver high levels of technological performance at reasonable cost.


In an attempt to diagnose unexpectedly poor market acceptance of its new line of minicomputers, Alpha created a value map that reflected its perception of the price/benefit positioning of competitors Ace Computer and Keycomp, and itself.

Alpha believed customers chose minicomputers on the basis of two technological attributes: processor speed in MIPS (millions of instructions per second), and secondary access speed, that is, how quickly the computer accessed data from an external storage device such as a hard disk drive. Ace Computer was the premium competitor: it had the highest processor speed and secondary access speed, but also the highest price. Keycomp not only had slower processor speed and secondary access speed than Alpha but was also priced 10 to 15 percent higher. So, Alpha thought that Keycomp was value-disadvantaged and that Alpha itself was valueadvantaged.

If Alpha's perception of the value map in the above figure were correct, then Alpha should have been gaining market share and Keycomp losing it. The opposite was occurring, however, and Alpha's managers were baffled. They thought their product was superior to Keycomp's at a lower price, and they could not understand why it was not a huge success.

Alpha's problem was a common one. It did not understand the customerperceived attributes that really drove customer choice of minicomputers. Alpha's marketing department commissioned research to try to confirm its hypothesis that processor speed and secondary access speed were indeed the most important features. Sixty buyers were questioned about their criteria for selecting a network minicomputer supplier.

Much to Alpha's surprise, processor speed and secondary access speed ranked only fourth and sixth on their list. Software and hardware compatibility, perceived reliability, and quality of vendor technical support ranked above raw processor speed. Even quality of user documents (the manual that accompanies the hardware) ranked above secondary access speed.

As it turned out, processor speed was indeed important, but most customers had a minimum processor speed requirement that all competitors easily exceeded. However, the nature of most network applications made secondary access not that important. In fact, Alpha was understood by customers to be slightly better than Keycomp on processor speed and secondary access speed, but these features just did not matter that much to them.

The research also showed that Keycomp was highly rated on compatibility, reliability, vendor support, and user documents. Alpha, on the other hand, fell short on these. Its operating system software and hardware plug configuration created compatibility problems for many customers. Some remembered reliability problems with an earlier generation of Alpha's minicomputer that tainted their perception of its new product. Alpha's technical support was considered difficult to get hold of and its user documents were seen as the weakest in the industry.

This is the new value map, drafted after the market research was conducted:
Minicomputer value map


It showed that Keycomp performed so well on the attributes most important to customers that, despite its higher price, it was value-advantaged and therefore justifiably gaining market share. Conversely, Alpha performed so poorly on attributes most essential to customers that, despite its low price, it was still valuedisadvantaged and predictably losing share.

The insights from this properly constructed value map prescribed a clear course for Alpha. It mounted a crash program to correct the important attributes on which customers had rated it so poorly. A minor rewrite of operating system software and a simple redesign of the hardware plug configuration fixed the compatibility issue. The company then mounted an aggressive market information campaign to demonstrate the improved reliability of its latest model. Additional service representatives and toll-free access lines were put in place to enhance technical support, and user documents were redrafted.

All these actions brought to this new positioning:


In only six months, Alpha increased customer-perceived benefits so much that it was able to increase its price by 8 percent and still gain its fair market share. The price and volume increase more than doubled Alpha's operating profits.

The Alpha Computer case illustrates several important points about value management:

- The key to success often resides in gaining a clear understanding of the real attributes driving customer choice and their relative importance.
- "Softer," nontechnical attributes (perceived reliability, quality of vendor support, ease of doing business) are often as important as or more important than precisely measurable technical features.
- Trusting internal perceptions of which attributes drive customer choice can be a fatal mistake; rely on customers for this critical information.

The case also shows the opportunities value maps offer value-disadvantaged companies to understand their markets better. Another case, that of car maker Mazda's experience with its Miata (Mx-5 on our market) sports model, demonstrates the kind of opportunity that a value-advantaged company can easily forgo if it does not fully appreciate its position.


Introduced to the US market in 1990 at a manufacturer's suggested retail price of $\$ 13,800$, the Mazda Miata was a retro-sports roadster that captured the imaginations of ageing baby boomer car buffs who originally fell in love with the classic British roadsters of the 1960s and 1970s made by MG and Triumph. As much fun as its British predecessors but better built and more reliable, the Miata was an instant hit in the United States.

Mazda underestimated the appeal and the high perceived benefits of the simple but unique Miata. The price was disproportionately low for the perceived benefit. Mazda dealers, however, recognized this price/benefit imbalance and claimed the surplus for themselves in the form of \$2,000-3,000 "market price adjustments" that they added to the suggested retail price (and which customers gladly paid).

These examples showed the importance of understanding the benefits that are driving the choice of our target customers and positioning correctly on the Value Map.

But what does it mean "positioning correctly"? Are all positions equally attractive for gaining profit?

This is not the case. Even for a well-defined segment, customers are not spread evenly along the line; if they were, every competitor on the VEL could be expected to have the same market share. Sometimes this can be explained by historical reasons; mostly, however, it is due to the distribution of customers along the VEL (see the below figure).

Customer volume distribution


History plays an important role: how long a competitor has held its position with customers often explains large market share differences among companies with otherwise the same value proposition. This phenomenon, also called "order of entry," can be seen in its extreme form in deregulated utilities. A new competitor offering similar or even slightly better value than an incumbent telephone or electricity company will not provoke the significant changes in consumer purchasing that might be expected.

A more important and probably more common explanation of market share differences among competitors on the VEL is the distribution of customers along this line. Typically they are not distributed evenly, but clustered. There are several reasons for this. Sometimes consumers are not equally aware of the true nature and availability of competing products. Companies might use different channels to reach consumers, or their salesforces might not adequately communicate benefits to customers. If so, a gap can exist between customers' perceptions of a product's benefits and the benefits that it actually delivers.

Even in a perfect world, consumers would be unevenly distributed along the VEL because they do not necessarily view benefits and prices in a linear way. There are benefit-bracketed customers who explicitly want minimum or maximum benefit
levels and find positions on either side unacceptable. Market research shows that break-points exist for some products and services at which a small increase in the benefits offered will lead to a large increase in the value a customer perceives. Some buyers of automotive components, for example, will not accept delivery reliability below a minimum level. Some computer buyers, on the other hand, do not value additional memory beyond a certain level because existing memory more than satisfies their needs.

A second group is price-capped customers who are unwilling to spend more than a fixed amount for a particular product or service. The price of the average home PC has held at about $\$ 2,000$ for several years, even though performance has improved sharply. This could indicate that there are price-capped customers at around this level who are unwilling to spend more even if they could get more features. Only customers who fall into neither category, benefit-bracketed or price-capped, are actually willing to consider the full range of tradeoffs along the VEL.

Understanding volume distribution along the VEL is therefore crucial to making an intelligent decision about product position. In many cases, however, it is poorly understood, leading to wrong decisions. Typical mistakes are:

- Positioning an apparently competitive product at a low-volume part of the VEL and not getting the expected volume gains. A maker of metal-coating machinery positioned a new product technically half way between two competing products, hoping to pull in customers not entirely satisfied with these. What it had not realized was that there was no significant volume between the two extremes, because each answered a specific speed requirement of downstream customers. Failing to understand that there was no demand for a medium-speed machine, even one that was competitive on technical specification and price, forced the manufacturer to take a multimillion-dollar writeoff.
- Positioning a product too high or too low on the VEL, thereby inadvertently excluding a large portion of price-capped or benefit-bracketed customers. The
drastic fall in demand for one company's supercomputers is an example of this. Even though the company's ever more powerful machines remained on the VEL, there was no longer a customer imperative for all that processing power to be concentrated in one machine, as more broadly distributed processing had become preferred by most users.

Let's now discuss the dynamic positioning of a company on the value map.
Alpha Computer and Mazda Miata illustrate the pitfalls of failing to understand the "static" value positioning of a product or service. But getting a product to the right position on a static value map is only part of managing value effectively. Unfortunately, neither competitors' positions on a value map nor customers' perception of products and suppliers are frozen in time. Value maps are not static but dynamic, constantly changing in important and often predictable ways.

Any change in product positioning by one competitor, be it cutting price or improving features, will lead others to move, either to preempt shifts in market share or to react to them. We apply the term "dynamic value management" to the discipline of managing price/benefit positioning not just in a static fashion, but with explicit and thoughtful consideration of likely changes in competitive value positions and customer value perception. Companies that master this discipline can reap huge rewards and avoid equally huge pitfalls.

Another illustrative case can be the one of MTE, a manufacturer of high quality medical testing equipment. Its primary product was a blood diagnostic testing machine used in high-volume hospital laboratory applications. MTE was the recognized premium supplier (with the highest price and benefits) in a stable market that included three other leading competitors (Jackson, PZJTech, and Labco) positioned squarely on the VEL (as can be seen in the below figure).


As is often the case, MTE, as the premium supplier, was the real innovator in this market. The improved version of its blood diagnostic testing machine was more accurate and had faster testing cycle times. But MTE was in a dilemma over how to price its terrific new model. Research showed the added benefits would justify a 10 percent price increase and still keep the model on the VEL-that is, MTE would hold its market share. But, equally, it could keep the price the same and position the new model in a highly value-advantaged position in the hope of gaining significant market share.

MTE decided on a compromise, raising its price by 5 percent, a meaningful increase that still kept it in a value-advantaged position (the dotted circle in the above figure).

The response was instant and positive. Customers recognized the 5 percent increase was a small premium to pay for enhanced accuracy and cycle times. The machine sold well and immediately increased MTE's share of the market.

This success, of course, was at the expense of Jackson, PZJTech, and Labco, none of which had the expertise or resources to introduce products to rival MTE's new model. Faced with falling sales, they took the only measure they could to defend their
market shares-they lowered their prices by at least 5 percent (below figure). The market shares of all four companies quickly returned to their previous levels, but at the lower prices. As the figure below shows, the VEL had simply shifted downward and MTE's value-advantaged position was essentially nullified. The lowered VEL was good for customers because they got more for their money, but the suppliers got less for their products. It represented a wholesale transfer of market surplus from suppliers to customers.


Dynamic value management


Could MTE have managed the value dynamics of this situation better? Possibly. If it had raised the price of its new model by 10 percent and positioned it on the existing VEL, it would have held its traditional share but at a 5 percent higher price. Jackson, PZJTech, and Labco, experiencing no loss of market share, would probably not have reacted at all. Industry prices would have been maintained, and MTE's profit would have risen significantly.

Marketing managers have two basic options for improving their products' position, regardless of whether they are in a proactive or reactive situation. They can reposition their product along the VEL, or move off it. These different moves
engender very different outcomes-different competitor and customer reactions and different prices, volumes, profits, and risks.

Repositioning a product along the VEL, usually a less aggressive move, requires a company to understand where customer clusters are on it, and how other competitors are positioned in relation to them. The decision of whether and how far to move should include the following steps:

1. Understanding and weighing the risks and opportunities. Repositioning a product is likely to lose some customers who preferred the old positioning. Equally, it will gain customers who prefer the new positioning. Failure to understand this tradeoff could lead a company to surrender a good customer franchise in exchange for a reduced, and probably more competitive, new franchise.
2. Being smart about choosing the right attributes to vary. Customers do not consider all product attributes to be equally important; there is therefore more "bang for the buck" in changing some attributes rather than others. The knack is to select the features that will attract new customers without losing old ones, that have the greatest impact on customers, and that the company can provide cost-effectively.
3. Knowing what price change is appropriate for a given attribute change. If the aim is to stay on the VEL, any change in benefits must be accompanied by a price change. Not increasing the price enough will force competitors to match the new positioning, leading to an unwanted industry price decline (as with MTE); raising the price too high will lead to a volume loss. Market research tools such as conjoint analysis can determine the magnitude of change required.
4. Choosing those changes least likely to provoke undesirable competitive reactions. If the repositioning is successful, or looks as if it will be,
competitors will react. The likeliest, and least desirable, reaction is a price cut, which often leads to price cuts across the industry and lower profits for all. One manufacturer of medical supplies always reacted to competitors' price cuts by improving benefits. Every time a competitor dropped its price, the supplier countered with an improved version of its product at the same price, but on the new VEL. In this way it gained a distinctive market position, offering increasingly superior benefits over competitors that chose to move only along the price dimension.
5. Choosing the new position along the VEL. There are two options: either to move to a new position within the extremes defined by current competitors, or to move to a new position beyond the current extremes. There are differences in risk and potential competitive moves between the two:

- The success of a new positioning within current competitive extremes depends on locating the right customer concentration and standing out from competitors. As this approach seldom expands a market, competitors will probably react to their declining sales.
- Moving to a new position along the VEL outside the existing extremes can expand a market. While the upside opportunities can be greater (and the threat of retaliation lower), success depends on a thorough understanding of the size and needs of the latent demand that the new product or service is designed to meet.

A move off the VEL into value-advantaged territory might seem attractive on the surface. As the experiences of many companies show, however, such a move requires an even better understanding of the dynamics, risks, and opportunities than do moves along the VEL.

What is different about moves off the VEL? A repositioning along the VEL is likely to threaten only one or two neighboring competitors currently on the line. Moving below
the VEL often threatens all competitors, because such moves usually define new and lowered VELs that force them to reconsider their own positions. Only rarely does the VEL move upward; to do so would require customers to accept the actual value reduction and most suppliers to move in the same direction.

When a product is repositioned below the VEL, its "horizon" of potential customers grows. Take, for example, an electric drill whose power was increased but which was sold for the same price. The new product appeals not only to customers who initially bought it, but also to those who had previously paid more for a drill with the higher power rating.


Just moving off the VEL to expand the horizon of customers does not guarantee success, however. Market research must first establish that the expanded horizon does indeed include new concentrations of customers, not just empty space.

In today's highly competitive markets, rivals seldom passively accept volume or market share losses. They usually react by trying to improve their products by selectively
adjusting attributes, or by dropping price. How they will react is a function of a number of parameters, including:

- The type of change that set the whole process in motion. The typical reaction to a competitor's move is to try to counter along a similar axis. If the salesforce reports massive price cuts by a competitor, they will want to reciprocate. If a competitor introduces a new service, the salesforce will want to offer something similar. A first mover's repositioning along the benefits axis tends to damage profits less than price reductions would. It is also easier to retract benefits that are rejected by the market or are uneconomic to provide, than to try to raise prices after a round of reductions.
- Competitors' strategic mindset. The degree of volume and profit pressure a competitor is under and its understanding of the economics of price changes (for example, how price and volume trade off against profit) will drive the type of reaction it makes.

Even in commodity-like industries, there are examples of manufacturers successfully improving their products and services rather than cutting prices. In a US specialty chemical segment, for example, the two leading companies have about 40 percent of the market. They and their customers recognize that there are no real technical differences between the two suppliers' products. So when one competitor increases its support services, the other improves its services too. While the industry is competitive, and the level of service high and rising, prices have also risen and profits have remained strong. In the past five years, neither leader has reacted to a competitor by reducing its price-a move that would surely have made the industry less profitable.

Competitors' behavior can actually shift the distribution of demand along the VEL (as can be seen in the below figure). As the line is shifted downward through improved combinations of price and benefit, it is not automatic that the "old" pattern of customer distribution follows suit. Some customers might be benefit-bracketed, others might use the changes to rethink their own price/benefit tradeoffs, and, finally, new offers could stimulate latent demand.

Repositioning off the value equivalence line


If the distribution of demand changes, a shift off the VEL will not always bring the desired volume increase. The established manufacturers in one consumer durable industry assumed most customers were price-capped, and therefore had not offered increased benefits. But when a new competitor introduced a new product at a significantly higher price, 30 percent of the volume shifted to that new product. Some consumers had been looking for more benefits after all.

A move off the VEL has to be large enough for customers to notice and attractive enough to make them want to try the repositioned product. Marginal moves often backfire. If consumers do not perceive enough difference to make them switch supplier, but competitors, which follow such moves closely, decide to copy it, the VEL can quickly drop without affecting market shares, but lowering price and profit.

In the case of a company that installed heating equipment, the information that its key competitor had cut the cost of installation labor by 5 percent led it to cut its own price too. Unfortunately, this company did not adequately consider the basis on which architects and contractors compare bids-that is, the total installed costs. The selective 5
percent drop in labor reduced the total installation cost by less than 1 percent-too slight a difference for the market to notice.

Moving off the VEL therefore requires two decisions about the direction and the distance:

- Direction. What are the customer volume elasticities of moves along the price axis and the benefit axis (by attributes)? Do I want to increase my benefits, lower my price, or both?
- Distance. How far do I have to move from the VEL to expand my horizon of customers sufficiently? How far do I have to move to differentiate myself from competitors in the eyes of a group of potential customers? How strong will competitors' reactions be? How many additional benefits can I afford to deliver and what price cut am I willing or able to absorb?

Moving below the VEL is always a risky strategy that can, if executed well, reap some benefits. In many cases, however, too little thought is given to what customers actually want, how competitors will react, and how demand might change as a result of competitors' moves. This negligence can lead to profit declines where once there were high hopes.

Dynamic value management can also be a powerful tool to help prescribe reactions to changes in competitive position or customer needs. A competitor's actions can set in motion the same set of dynamics. Dynamic value management is as useful in determining reactions to such moves as it is in initiating them.

Being on the receiving end of a competitive move demands an approach similar to the proactive stance above. It also requires a cool head. If the salesforce is sending panicky messages about competitive price cuts, pressure is created to act quickly. In most cases, the easiest lever to pull in the short term is price. And in all too many cases, this would be a mistake. A series of thoughtful decisions using the dynamic value-management approach can help formulate a more effective and less costly response. A set of questions should be answered:

- Do customers perceive the competitor's move as a move off the VEL? To find out, ask the customer. Too often this question is answered hastily and wrongly on the basis of hearsay from the field. If the move is not perceived to be a wholesale jump to a new VEL, there may be no need to react.
- If the competitor has moved off the VEL, has its "horizon" expanded sufficiently to draw in new customers? If market research shows it has not, again there is no need to react.
- If new customers are buying the competitor's offering, are they our customers or somebody else's? The answer to this question determines not the need for a reaction, but the speed and extent of it. If the primary threat is to somebody else's customers, let them react. All competitors will be likely to react eventually, but timing is important. A gradual cascade of reactions not only will prevent panicky overreactions, but can also create opportunities to observe informative customer buying behavior.
- If a reaction is needed, how strong should it be? Should it be a surgical strike on one product, channel, or market, or across the board? Should it entail price changes, benefit changes, or a combination of both?

What about the future of value mapping? Will it still be a powerful tool?

With product life cycles shrinking (measured in months rather than years in the computer industry, for instance), customers becoming more sophisticated and demanding, and tougher local and even global competitors emerging in most markets, value maps are shifting at faster rates than ever. Fortunately, advances in market research techniques make the execution of effective dynamic value management easier than ever.

The discipline of dynamic value management not only promotes sustainably improved market performance and profitability, but also yields a number of attractive side benefits, including:

- More genuine closeness to customers, thanks to a richer, more externally driven understanding of the benefit attributes that really matter to customers
- An enhanced understanding of competitors: their strengths in the eyes of customers, their strategies, and their likely reactions to price and benefit moves by your company
- More integrated product/market strategy formulation, where the linkages between price, benefit delivery to customers, competitor capabilities, and changing customer preferences are explicit.

The payoff for getting dynamic value management right has probably never been higher; the consequences of getting it wrong, never more devastating. For a growing number of companies, dynamic value management is providing a compass for navigating the increasingly unstable seas of change and uncertainty that challenge most marketers today.

## Chapter 4

## Competitiveness Report

Now that the role of the pricing department has been explained, as well as its needs for tools of analysis of the market, it's time to start talking about one of the most important if not the most important tool able to show our competitiveness on each market.
The use of this tool makes possible a comparison between our selected model and its competitors on a specific market. The report generated is constituted by a set of "baskets", each one representing a version of our model as benchmark and the versions of the selected competitors that are comparable with ours. The selection of competitors and their specific versions to be represented in this analysis have to follow specific guidelines to ensure the final picture of the market has a good level of significance.
Starting from the choice of competitors to be represented: they must be the top players of the segment in the market that offer similar levels of equipment to our model, since they must be compared with a "like for like" strategy; This means that the vehicles chosen for this analysis must be as close as possible to our model offered in terms of:

- BODYSTYLE - it is compulsory to compare 5 doors only with 5 doors vehicles, sedans with sedans, coupés with coupés and so on
- POWETRAIN - match the closest engine power output possible and the same transmission type (more than 20 hp of difference starts to lose significance and manuals shouldn't be compared with automatic gearboxes)
- TRIM LEVEL - entry trim with entry, luxury trim with luxury and so on (always checking the equipment level is comparable, different products have different numbers of trims and it's not always clear which one to pick)

To be even more precise, the significance of the result is reached when the versions shown represent at least the $70 \%$ of the units sold in the market and the most sold version of competitors is represented.
The number of baskets or in other words the number of our versions presented as benchmarks can vary a lot, in order to reach the targets of representativeness, with a minimum number set to two. In fact, the baskets that must always be present are the "Entry" and the "Volume" ones. In the entry basket our entry version is represented and it's obviously compared with all the entry versions of the competition. In the volume basket, as the name suggests, our most sold version is compared to the most similar versions of the competition, which not always are the most sold ones. The next baskets, if any, are chosen to further represent versions important for the market in terms of volume of sales. For example it is useful to have a basket of diesel versions and one of the high level trims.

Now that the models and single versions to be compared have been chosen, it's time to explain what are the results of these comparisons.

The first index easily obtainable is the so called "Visual Index" and it represents how our version is positioned on the market considering only its list price. It is calculated with the following process:
Only the main competitors are used to calculate the average list price for the basket, to which our benchmark and all the other players compare their price.
This average price is considered having a 100 visual index and all the list prices of the single versions of vehicles in the basket are compared to this one, assigning indexes to everyone, indicating a more competitive price than the average with an index $<100$ and a more expensive price with an index $>100$. The formula is the following:

$$
\text { Visual Index }=\frac{\text { List Price }}{\text { Average Price of strategic competitors }} * 100
$$

The second index obtainable from the competitiveness report is the "Real Index". In few words, this index shows in a clear way how our model would perform versus competitors if they all had the same level of performance and equipment of our version.

In order to compute this index, it is required to attribute a value to each equipment and sum or subtract them to achieve a hypothetical price at which all the vehicles have the same level of equipment. The procedure could sound easy, but collecting this set of values requires a deep market analysis, divided by segments of vehicles, arriving to have a clear view of real values of equipment. We will get back to this topic in a following chapter, since during my internship I worked for simplifying this table of values and update it with an analysis on the newest features in car options. Once the so called Real Price are built using the table of values, the average of the strategic models of the competition is calculated and compared with all the real prices of the versions in the basket with the following formula:

$$
\text { Real Index }=\frac{\text { Visual Price } \pm \text { Equipment } \pm \text { Performance }}{\text { Average Real Price of strategic competitors }} * 100
$$

From here, the report on competitiveness takes a step further and starts to show its real capabilities. It doesn't only show us if we are competitive from a visual point of view and from the level of content offered, it enables also to understand if the promotions active during the month and on the versions represented are going to change our strategic positioning in the short term.
The promotions are tracked by Jato for FCA and updated monthly. They are the reason why the competitiveness report is always made with data referring to the previous month, since it's impossible to have data available on promotions of the current month.

There are several types of promotions and discounts taken into consideration for our analysis:

- Pure discount - simple discount offered to the private customer
- Trade in offer - overvaluation of the used car traded in for the new one
- Scrap offer - discount offered in case of a vehicle offered as scrap for the purchase of a new one
- Stock Over - discount offered in case of purchase of a stock vehicle of a certain age (it changes from market to market ranging from over 120 days to over 180 days)
- Stock Under - it's the discount offered in case of purchase of a vehicle belonging to the fresh stock (less than 120 days or less than 180 days, depending on the market policy)
- Loyalty - it's a particular case of trade in offer, where the vehicle traded is of the same brand or group of the vehicle that is purchased
- Conquest or Acquisition - it's a particular case of trade in, where the vehicle traded is of a particular targeted brand from the competition of the vehicle purchased

Jato communicates the value of each active promotion and their exclusions in order to avoid counting promotions that can't be taken together.
A set of weights for scrap, trade in and discounts is assigned to each model in each market, representing a hypothetical percentage of the total customers purchasing a vehicle that month that will take advantage of the single offers. Here it is an example of these weights:

|  | Promo Weight | $\mathbf{\%}$ |
| :--- | :---: | :---: |
| SCRAP |  | $18 \%$ |
| TRADE IN |  | $71 \%$ |
| DISCOUNT |  | $11 \%$ |

It doesn't end here, since in each category of promotion (scrap, trade in and discount) there must be hypothetical take rates that reflect the possibility of cumulative or exclusive promotions.
I'll try walking you through the procedure, so that showing an example will clear all the process.

If a trade in of $1000 €$ of value is tracked by Jato, we are going to insert it under the trade in category, that has its own weight, untouched and not modified by the pricer during the monthly report. Then, a take rate is assigned to this promotion, considering that if another promotion is available as trade in that is not cumulative with this promotion, the total take rate of the category must reach 100\%, indicating that all the customers choosing to purchase a new vehicle taking advantage of a trade in offer, will fall in one promotion or in the other, assigning the higher percentage to the most attractive promotion. Finally, the value of the promotion is weighted by its take rate and by the weight of its category. The result is then summed with all the other values for the promotions active on the vehicle, obtaining an average value of discount for the specific version of vehicle analysed.

This average value is then subtracted to the Visual Price, to obtain the Visual Promo Price; and subtracted to the Real Price to obtain the Real Promo Price.

At this point we are close to obtaining the deepest results of the report. To have a clear view of our positioning after having considered the promotions of the month for all the vehicles of the basket, the Visual Promo Index and the Real Promo Index are calculated with the following formulas:

Visual Promo Index $=\frac{\text { Visual Price }- \text { Average value of Promotions for the vehicle }}{\text { Average of Visual Promo Prices of strategic competitors }} * 100$

Real Promo Index $=\frac{\text { Real Price }- \text { Average value of Promotions for the vehicle }}{\text { Average of Real Promo Prices of strategic competitors }} * 100$

| Equipment + Performance | 7.700 | 11.150 | 7.800 | 8.250 | 8.300 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Equipment | 4.950 | 7.150 | 4.550 | 4.750 | 5.300 |
| Visual Price | 15510,0 | 20500,0 | 19075,0 | 19850,0 | 19110,0 |
| Visual Index | 82,7 | 109,3 | 101,7 | 105,8 | 101,9 |
| Real Price | 15.510 | 17.050 | 18.975 | 19.300 | 18.510 |
| Real Index | 87,9 | 96,7 | 107,6 | 109,4 | 104,9 |
| Promo Value | 2.644 | 5.751 | 6.268 | 5.618 | 6.507 |
| Promo Price Visual | 12.866 | 14.749 | 12.807 | 14.232 | 12.603 |
| Promo Index Visual | 98,2 | 112,6 | 97,8 | 108,7 | 96,2 |
| Promo Price Real | 12.866 | 11.299 | 12.707 | 13.682 | 12.003 |
| Promo Index Real | 107,5 | 94,4 | 106,1 | 114,3 | 100,2 |

Having created the complete report on competitiveness, it is now time to explain how this tool is used by pricers and other employees inside the Fiat brand. Looking at a single report gives a photograph of the current situation of the model in the market we are analysing, but it is possible to build a chart collecting the history of competitiveness in that market. Doing so, it is possible to see when our positioning has changed. Of course the request of the directors are always deeper than this, asking for an explanation on the reasons why our positioning has changed, summing up all the moves of competitors that caused fluctuations in the indexes.

With this analysis it is possible to review all the life cycle of a model in a market, its competitors changes and how it was positioned from the launch to the phase out, passing through the effects of mid cycle actions.

The report on competitiveness is very useful also to simulate what would happen if some variables are changed; for example if our model offered different contents as standard or if we are going to launch a new vehicle in the segment.

The tool is powerful and it is used for many simulations of future scenarios, but it must be used keeping in mind that a good positioning is only the starting point for a good market share. So many variables play a role in the choice of a customer that our positioning in terms of value and price could also not be perceived in the same way as we expect it to be. The report is based solely on contents, price and promotions but it doesn't give us our positioning in terms of perceived quality, reliability, dealer network and many other factors influencing the customer in its choice of vehicle.

## Chapter 5

## Price Proposals

The official document where the range of products, prices, costs, possible discounts and of course margins are discussed and approved is the price proposal.

Each price proposal (often abbreviated as PP) contains the range of one model and it is approved for one market. It means that every PP contains all the options, engines and trims and their possible combinations that will be available in the market on which it will be approved.

There are two types of price proposals: the classical full price proposal and the so called light PP, where the range cannot be modified or repositioned but it is useful for a quick approval procedure of a new optional or a price inflation, where the total margins are not a point to be discussed.

For a price proposal to be generated it needs two other documents, used as sources for the costs and the model range:

- The so called V99, which is the document coming from the finance department that contains all the costs
- The product grid, coming from the product marketing, that includes all the contents and features available from the factory

In the V99 the costs are requested by the finance department to the manufacturing and they are periodically revised in order to have the best possible approximation of them at the moment of approval. Specifically the costs are those of the base vehicle, all the available options, the transportation costs, the market specific costs and the local completion costs. All these data are necessary to calculate break even points
for each trim and engine combination, the contribution margin of the vehicles, as well as optional margins.

In the product grid all the engines and trims combinations are present, in particular also the availability of optionals for each trim is specified. To these contents a cost must be attributed, coming from the V99. It means that the two documents must be linked, to avoid having a content without a cost attributed that would lead to fake margins.

The price proposal is then the document in which the responsible of the product on the market and the pricer in the HQ analyse the competitors' offer and decide how to price the vehicles. Certainly the HQ will divulgate guidelines to be followed by markets, but a certain freedom still remains, since each market has its own needs and competition that must be taken into account when building a new price proposal.

Let's see the structure of a typical full price proposal.
The price proposal is basically an Excel file, that works using macros for collecting and interlacing data from the two source files. The document is exchanged between HQ and the business centre of the market, until an agreement is reached. It has many sheets, some of which are hidden and can be modified only by the pricers.

- COVER - it's the first sheet of the PP and it sums up the content of the document, indicating for which market the proposal is being discussed and for which model the range is being revised
- PARAMETERS - comprehends all the parameters that have been used to create the PP, such as the \% of taxation on the options or the exchange rate for the markets with a currency different from Euros.
- OLD VERSION LIST and NEW VERSION LIST - in these two sheets are presented the old range of the model with trim and engines combinations and the new range that with the price proposal is being issued for the approval.
- TOTALS - here the contribution margin is calculated in the local currency, considering all the voices of costs, all the discounts and mixing all the versions available on the market from the approval of the PP with a prevision of volumes for the model, summing and weighting all the sales channels
- DEALER PRIVATE - in this sheet the contribution margin is calculated considering only the dealers channel. In addition, it is possible to see if an option is or is not available on a version of the vehicle or if it is mounted as mandatory equipment.
- FLEET and DEMO - contribution margins are calculated for the different channels, assigning a weight to each channel based on the sales volume forecast
- INCOME STATEMENT - it is present only in markets where the local currency is different from Euro and it is basically the TOTALS sheet converted into Euro. A discrepancy can be noticed when euro born costs are converted into local currency which are then summed or subtracted to local currency costs and finally transformed into euro with a different exchange rate. This is because costs use an exchange rate that is fixed for all the year and revenues use an exchange rate that is updated each quarter of the year. This is a point that could be fixed and it is more evident in markets where the currency oscillates a lot during the year
- OPT - there are 3 big tables: the first contains all the prices for the options on all the versions of the vehicle, the second contains all the so called mixes, so
the percentages of the vehicles sold that will mount that option, and in the third table there are the costs of all the options on each version
- OPT MLU - all data present in the OPT sheet are used to calculate the margin for the options of the vehicle, in order to arrive to an average margin for each option and an average total options margin per each trim
- RANGE PROPOSED VS CURRENT - the old and the new range are compared in this sheet, in particular all the codes of options that are set as mandatory are clearly visible
- PRICEWALK PROPOSED VS CURRENT - here all the price steps are presented in a simple and understandable way; the pricer must check that to a growing level of engine it corresponds a growing price and that all the trims have a correct price step, that is compatible with the dispositions coming from the product managers in terms of range identity and positioning of trims
- CUSTOMER ADVANTAGE - in the last sheet it is possible to calculate the customer advantage in choosing a higher trim with respect to selecting all the options starting from a base trim. It is useful to understand if the logic with which the options and the trim levels were priced can work from the customer point of view

The market business centre is informed of a new version, a mid-cycle action or a completely new model by the product managers. The market then decides if it is interested in the communication and contacts the pricing team, asking to open a new price proposal. The pricers will generate the PP following the product guidelines and will send it to the market. The business center will decide its prices and send back the PP to the HQ. The pricing department will then analyse the proposal of the market and check if it follows all the guidelines and the large-scale strategy of the brand for what concerns positioning and budgeted targets for the market.

When the two entities reach an agreement, the price proposal is sent to the finance department of the HQ that checks the numbers at which the proposal lands.

This operation is done through an online tool which is accessible by both the pricing and the markets and where all the price proposals are stored. Each PP has an owner that is the physical person working on it at the moment and the sending of a price proposal corresponds to a change of the owner's name with the person that has to work on it. The owner can then modify it and upload a new version of the price proposal, so that a history of the evolution of the proposal is stored in the system.

In the end, the final version of the price proposal passes through the approval procedure of the system, where the pricing director, the finance pricing controller and the chief financial officer of the business centre can check if the proposal is correct and coherent with the strategy that the head quarter is working to follow.

Now that the full cartellinas have been discussed, let's talk briefly about the light ones.

In the light price proposals the sight is limited, not being present the entire range of the vehicle nor the average contribution margin, it means that each change to the range that is implemented using a light PP will not have a traceable effect on the contribution margin. So why are they used?

Since they do not contain all the information present in a normal price proposal, they are a light file, easy to work on and with a limited number of macros behind them. They are useful for a change in the options proposed, that could be the addition of an option or the opening of an already existing one on a trim where previously it was closed or it is possible to perform an inflation of all prices of the range, without modifying its logic and positioning on the market.

## Chapter 6

## Specifications and Volumes databases

FCA, as well as almost all vehicles manufacturers, has a business agreement with Jato, the most important company of automotive databases.
The two main databases to which FCA has access are the specifications database and the volumes database.

The Specifications (or Specs) one has data about all the product ranges of vehicles sold in the world, but being in EMEA, the group of markets of our interest is limited to Europe, Middle East and North Africa.

What kind of data are included in the specs database?
A very long list of information for each vehicle is available, from the most basic ones like engine specifications and dimensions, to the most specific like number of speakers or cup-holders.
Questioning the database it is possible to compare specifications of different vehicles, comprehending also the options available and their price on the market.


Items:


The specs database does not contain the history of the car model, but it shows what nowadays is available for purchase on the market. The main capabilities of this database are the competitors content analysis, the value analysis (that differs from the first one since a value is assigned to each content and it is possible to understand the level of equipment of each vehicle) and the possibility to create userdefined vehicles, with which simulations of competitiveness can be conducted. The main reports are the Option Viewer, the Ladder Report and the Value Analysis summary.
In the Option Viewer it is possible to view all the optional information of the version of a competitor, comprehending the contents of the packs.


The second output of the database is the Ladder Report, where each version of each model is placed on a price ladder that can be then compared with the competitors ranges.


## The third output is the Value Analysis summary.



In this view it is possible to compare the equipment level of different versions of vehicles. This represents the insight of a potential customer when deciding its vehicle of choice, considering contents versus price.

As I mentioned earlier, it is also possible to compare existing vehicles to those created by the users (called UDVs - User Defined Vehicles).

In the Volumes database, the number of vehicles sold in a market is at disposal of the users. With this number it is possible to perform analysis on volumes and on mix of versions.

The main output for this analysis is the Bubble Chart, with which it is possible to compare versions of different models by prices and volumes.


While the specification database gives a snapshot of the actual market offering of competitors, the volume database works as a register of the vehicles sold in the past. For this reason, it is possible to create an output called Weighted Average and Changes, where it is highlighted what kind of changes the model has undergone
through its lifespan and questioning the database it will be clear how they affected its volumes of sales.

| Model | Yr_12 | \% Change | Yr_13 | \% Change | Yr_14 | \% Change | Yr_15 | Overall Movement | Weighted Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 206 | 13.148,00 | -13,12\% | 11.422,50 | 13,81\% | 13.000,00 | 5,38\% | 13.700,00 | 4,20\% | 12.652,50 |
| $206+$ | 13.644,42 | 0,72\% | 13.742,28 | 4,79\% | 14.400,00 | -16,32\% | 12.050,00 | -11,69\% | 13.647,02 |
| 207 | 16.325,96 | 9,86\% | 17.934,97 | 4,07\% | 18.665,00 |  |  | 14,33\% | $16.395,20$ |
| $207+$ |  |  | 14.019,92 | 0,58\% | 14.101,39 | 1,83\% | 14.360,00 | 2,43\% | 14.030,60 |
| 208 | 16.103,20 | -1,34\% | 15.887,72 | 1,45\% | 16.117,78 | 1,58\% | 16.372,81 | 1,67\% | 16.128,22 |
| A1 | 21.150,08 | 2,30\% | 21.636,09 | 0,79\% | 21.807,73 | -1,01\% | 21.587,44 | 2,07\% | 21.523,97 |
| AVEO | 12.853,42 | 3,49\% | 13.302,02 | -0,20\% | 13.275,65 | 2,90\% | 13.660,00 | 6,28\% | 13.000,08 |
| C2 | 14.883,33 | -8,49\% | 13.620,00 |  |  |  |  | -8,49\% | 14.093,75 |
| C3 | 15.303,52 | 2,25\% | 15.647,91 | 3,99\% | 16.271,70 | 2,79\% | 16.726,32 | 9,30\% | 15.913,30 |
| C3 PLURIEL | 16.802,50 |  |  |  |  |  |  | 0,00\% | 16.802,50 |
| CHARADE | 14.044,54 | 1,24\% | 14.219,05 |  |  |  |  | 1,24\% | 14.063,33 |
| CLO | 15.397,91 | 3,70\% | 15.966,94 | 1,80\% | 16.253,95 | 2,02\% | 16.582,17 | 7,69\% | 16.142,11 |
| CLUBMAN |  |  |  |  |  |  | 27.114,85 | 0,00\% | 27.114,85 |
| CORSA | 15.850,85 | 0,36\% | 15.794,43 | 2,91\% | 16.253,44 | 3,50\% | 15.685,17 | -1,05\% | 15.881,24 |
| DR2 | 9.898,34 | 1,65\% | 10.061,43 | -2,80\% | 9.780,00 |  |  | -1,20\% | 9.913,26 |
| DS 3 |  |  |  |  |  |  | 20.168,31 | 0,00\% | 20.168,31 |
| DS3 | 18.418,18 | 4,24\% | 19.199,87 | 0,33\% | 19.264,00 |  |  | 4,59\% | 18.926,64 |
| FABIA | 14.001,86 | 6,33\% | 14.888,13 | 1,48\% | 15.108,40 | 6,67\% | 16.115,40 | 15,09\% | 15.114,31 |
| FIESTA | 14.277,41 | 3,05\% | 14.712,66 | 3,29\% | 15.197,17 | 0,74\% | 15.309,64 | 7,23\% | 14.867,65 |
| FOX | 10.125,00 | 0,00\% | 10.125,00 | -10,89\% | 9.022,00 |  |  | -10,89\% | 10.096,72 |
| GETZ | 11.720,00 |  |  |  | 10.870,00 |  |  | -7,25\% | 11.436,67 |
| 120 | 13.111,80 | 3,78\% | 13.607,33 | 0,25\% | 13.641,71 | 15,70\% | 15.783,12 | 20,37\% | 14.290,55 |
| 13 |  |  | 39.697,80 | -0,08\% | 39.667,04 | 1,59\% | 40.298,09 | 1,51\% | 39.971,45 |
| IBIZA | 14.773,59 | 3,56\% | 15.299,12 | -1,81\% | 15.021,56 | 2,05\% | 15.329,32 | 3,76\% | 15.080,65 |
| IGNIS | 13.970,00 |  |  |  | 13.220,00 |  |  | -5,37\% | 13.720,00 |
| INDICA | 10.740,47 | 3,36\% | 11.100,97 | 0,35\% | 11.139,87 | 3,77\% | 11.560,00 | 7,63\% | 10.961,52 |
| JAZZ | 15.665,03 | -2,35\% | 15.296,44 | 2,91\% | 15.740,97 | 1,36\% | 15.954,80 | 1,85\% | 15.627,96 |
| KA | 9.850,00 | -9,64\% | 8.900,00 | 20,12\% | 10.690,66 |  |  | 8,53\% | 9.813,55 |
| KALOS | 12.550,00 |  |  |  | 11.780,00 |  |  | -6,14\% | 12.036,67 |
| LOGAN | 12.824,15 | -6,02\% | 12.051,79 | -5,56\% | 11.381,72 | 5,29\% | 11.983,87 | -6,55\% | 11.908,55 |
| MAZDA2 | 13.916,55 | 0,59\% | 13.998,96 | -2,23\% | 13.686,52 | 18,68\% | 16.243,75 | 16,72\% | 14.655,54 |
| MICRA | 13.500,83 | -1,96\% | 13.236,42 | -1,11\% | 13.089,37 | -1,83\% | 12.849,63 | -4,82\% | 13.140,99 |
| MINI | 20.159,29 | -0,25\% | 20.108,23 | 6,57\% | 21.429,06 | 0,42\% | 21.519,90 | 6,75\% | 20.972,87 |
| MITO | 18.548,20 | -1,36\% | 18.296,84 | 0,59\% | 18.405,46 | 0,40\% | 18.479,28 | -0,37\% | 18.438,22 |
| POLO | 15.702,03 | -0,30\% | 15.654,69 | 1,17\% | 15.837,19 | 2,68\% | 16.261,35 | 3,56\% | 15.878,48 |
| PUNTO | 15.648,45 | -2,56\% | 15.247,54 | 1,06\% | 15.409,35 | 1,29\% | 15.607,63 | -0,26\% | 15.479,89 |
| PUNTO CLASSIC | 11.769,44 | -1,33\% | 11.612,50 | -4,35\% | 11.107,14 | 6,97\% | 11.881,25 | 0,95\% | 11.575,00 |
| PUNTO EVO | 15.783,33 | 4,30\% | 16.461,43 | 4,49\% | 17.200,00 |  |  | 8,98\% | 15.802,14 |
| RIO | 13.508,58 | 1,92\% | 13.768,08 | 2,50\% | 14.111,90 | 4,35\% | 14.725,29 | 9,01\% | 14.031,02 |
| S1 |  |  |  |  | 32.093,44 | 0,97\% | 32.405,35 ${ }^{\text { }}$ | 0,97\% | 32.261,53 |
| SANDERO | 11.353,24 | 0,18\% | 11.373,26 | 0,59\% | 11.439,91 | 1,20\% | 11.577,57 | 1,98\% | 11.452,42 |
| SIRION | 11.518,60 | -5,72\% | 10.860,00 | 6,63\% | 11.580,00 | 18,18\% | 13.685,00 | 18,81\% | 11.507,95 |
| SWIFT | 15.298,22 | 0,95\% | 15.443,73 | 3,22\% | 15.940,38 | 1,45\% | 16.172,30 | 5,71\% | 15.677,65 |
| Voleex C20R | 13.503,33 | -9,81\% | 12.178,73 | 5,42\% | 12.838,60 | 1,23\% | 12.997,00 | -3,75\% | 12.583,30 |
| YARIS | 15.447,88 | 3,77\% | 16.029,68 | 4,23\% | 16.708,49 | 1,73\% | 16.997,81 | 10,03\% | 16.330,68 |
| YPSILON | 14.779,44 | 1,75\% | 15.038,22 | -1,42\% | 14.825,38 | 0,76\% | 14.937,91 | 1,07\% | 14.896,86 |
| ZOE |  |  | 23.302,94 | -1,78\% | 22.888,46 | -1,38\% | 22.572,10 | -3,14\% | 22.860,54 |

These two databases are fundamental for every analysis and check conducted by the pricing team of each automaker. These are only their main features but having to work with them a little will make you understand how important and problem-solvers they are. It exists a third database, used only for the 5 major markets in Europe that I shall now talk about in the next chapter.

## Chapter 7

## Incentives database

The third database purchased from Jato is the incentives database for the 5 major markets (Italy, France, Germany, UK, Spain).
This database, updated monthly, contains all the incentives and offers of the car companies selling on these markets. The pricing uses these data to compare its promotions with those of the competitors.
In particular, it is interesting to note which are the products on which the strongest promotions are present and their evolution. Compare our positioning in the markets after the promotions have been applied.
Having these data and our clear positioning, it is important to check the trend of offers and the levers our competitors are pulling to gain market share. In some markets a zero percent interest finance could be the key to attract customers while in others a strong communicated and transparent price could be more effective.


## Chapter 8

## Pocket Price Waterfall

In today's world, managers might think it mad to talk about raising prices. Yet nothing could be further from the truth. It is not about raising prices across the board; quite often, the most effective path is to get prices right for one customer, one transaction at a time, and to capture more of the price that you already, in theory, charge. In this sense, there is room for price increases or at least price stability even in today's difficult markets.

Such an approach to transaction pricing was first described twenty-five years ago. The idea was to figure out the real price you charged customers after accounting for a host of discounts, allowances, rebates, and other deductions. Only then could you determine how much money, if any, you were making and whether you were charging the right price for each customer and transaction.

A simple but powerful tool helps them diagnose and capture opportunities in transaction pricing: the pocket price waterfall, which shows how much revenue companies really keep from each of their transactions. In this chapter, let's revisit that tool to see how it has held up through dramatic changes in the way businesses work and in the broader economy.

The increase in the number of companies selling customized products and solutions or bundling service packages with each sale, for instance, means that assessing the profitability of transactions has become much more complex. The pocket price waterfall has evolved over time to take account of this transition.

Today, it is more critical than ever for managers to focus on transaction pricing; they can no longer rely on the double-digit annual sales growth and rich margins of the 1990s to overshadow pricing shortfalls. Moreover, at many companies, little cost-cutting juice can easily be extracted from operations. Pricing is therefore one of the few untapped levers
to boost earnings, and companies that start now will be in a good position to profit fully from the next upturn.

Pricing right is the fastest and most effective way for managers to increase profits. Consider the average income statement of an S\&P 1500 company: a price rise of 1 percent, if volumes remained stable, would generate an 8 percent increase in operating profits (next figure)—an impact nearly 50 percent greater than that of a 1 percent fall in variable costs such as materials and direct labor and more than three times greater than the impact of a 1 percent increase in volume.


Source: Compustat; McKinsey analysis

Unfortunately, the sword of pricing cuts both ways. A decrease of 1 percent in average prices has the opposite effect, bringing down operating profits by that same 8 percent if other factors remain steady. Managers may hope that higher volumes will compensate for revenues lost from lower prices and thereby raise profits, but this rarely happens; to continue our examination of typical S\&P 1500 economics, volumes would have to rise by 18.7 percent just to offset the profit impact of a 5 percent price cut. Such demand sensitivity to price cuts is extremely rare. A strategy based on cutting prices to increase volumes and, as a result, to raise profits is generally doomed to failure in almost every market and industry.

Many companies can find an additional 1 percent or more in prices by carefully looking at what part of the list price of a product or service is actually pocketed from each transaction. Right pricing is a more subtle game than setting list prices or even tracking invoice prices. Significant amounts of money can leak away from list or base prices as customers receive discounts, incentives, promotions, and other giveaways to seal contracts and maintain volumes.

The experience of a global lighting supplier shows how the pocket price, what remains after all discounts and other incentives have been tallied, is usually much lower than the list or invoice price. This company made incandescent lightbulbs and fluorescent lights sold to distributors that then resold them for use in offices, factories, stores, and other commercial buildings. Every lightbulb had a standard list price, but a series of discounts that were itemized on each invoice pushed average invoice prices 32.8 percent lower than the standard list prices. These on-invoice deductions included the standard discounts given to most distributors as well as special discounts for selected ones, discounts for large-volume customers, and discounts offered during promotions.

Managers who oversee pricing often focus on invoice prices, which are readily available, but the real pricing story goes much further. Revenue leaks beyond invoice prices aren't detailed on invoices. The many off-invoice leakages at the lighting company included cash discounts for prompt payment, the cost of carrying accounts receivable, cooperative advertising allowances, rebates based on a distributor's total annual volume, off-invoice promotional programs, and freight expenses. In the end, the company's average pocket price, including 16.3 percentage points in revenue reductions that didn't appear on invoices, was about half of the standard list price (see below figure).

Money in your pocket


Over the past decade, companies have tried to entice buyers with a growing number of discounts, including discounts for on-line orders as well as the increasingly popular performance penalties that require companies to provide a discount if they fail to meet specific performance commitments such as on-time delivery and order fill rates.

By consciously and assiduously managing all elements of the pocket price waterfall, companies can often find and capture an additional 1 percent or more in their realized prices. Indeed, an adjustment of any discount or element along the waterfall, either onor off-invoice, is capable of improving prices on a transaction-by-transaction basis.

The pocket price waterfall is often first created as an average of all transactions. But the amount and type of the discounts offered may differ from customer to customer and even order to order, so pocket prices can vary a good deal. We call the distribution of sales volumes over this range of variation the pocket price band.

At the lighting company, some bulbs were sold at a pocket price of less than 30 percent of the standard list price, others at 90 percent or more: three times higher than those of the lowest-priced transactions (above figure, B section). This range may seem exaggerated, but it is not very unusual.

It would be a mistake, though, to assume that wide pocket price bands are necessarily bad. A wide band shows that neither all customers nor all competitive situations are the
same, that for a whole host of reasons, some customers generate much higher pocket prices than do others. When a band is wide, small changes in its shape can readily move the average price higher of a percentage point or more. If a manager can increase sales slightly at the high end of the band while improving or even dropping transactions at the low end, such an increase comes within reach. But when the price band is narrow, the manager has less room to maneuver; changing its shape becomes more difficult; and any move has less impact on average prices.

Although the lighting company was surprised by the width of its pocket price band, it had a quick explanation: the range resulted from a conscious effort to reward highvolume customers with deeper discounts, which in theory were justified not only by the desire to court such customers but also by a lower cost to serve them. A closer examination showed that this explanation was actually wide of the mark (next figure): many large customers received relatively modest discounts, resulting in high pocket prices, while a lot of small buyers got much greater discounts and lower pocket prices than their size would warrant. A few smaller customers received large discounts in special circumstances (unusually competitive or depressed markets, for instance) but most just had long-standing ties to the company and knew which employees to call for extra discounts, additional time to pay, or more promotional money. These experienced customers were working the pocket price waterfall to their advantage.


The lighting company attacked the problem from three directions:
First, it instructed its sales force to bring into line the smaller distributors getting unacceptably high discounts. Within 12 months, 85 percent of these accounts were being priced and serviced in a more appropriate way, and new accounts had replaced most of the remainder.

Second, the company launched an intensive program to stimulate sales at larger accounts for which higher pocket prices had been realized.

Finally, it controlled transaction prices by initiating stricter rules on discounting and by installing IT systems that could track pocket prices more effectively. In the first year thereafter, the average pocket price rose by 3.6 percent and operating profits by 51 percent.

In addition to these immediate fixes, the lighting company took longer-term measures to change the relationship between pocket prices and the characteristics of its accounts. New and explicit pocket price targets were based on the size, type, and segment of each account, and whenever a customer's prices were renegotiated or a new customer was signed, that target guided the negotiations.

For companies that not only sell standard products and services but also experience little variation in the cost of selling and delivering them to different customers, pocket prices are an adequate measure of price performance. Today, however, as companies seek to differentiate themselves amid growing competition, many are offering customized products, bundling product and service packages with each sale, offering unique solutions packages, or providing unique forms of logistical and technical support. Pocket prices don't capture these different product costs or the cost to serve specific customers. For such companies, another level of analysis is needed to reflect the varying costs associated with each order: the pocket margin. The pocket margin for a transaction is calculated by subtracting from the pocket price any direct product costs and costs incurred specifically to serve an individual account.

One North American company, which manufactures tempered glass for heavy trucks and for farm and construction machinery, sharply increased its profits by understanding and actively managing its pocket margins. Each piece of the company's glass was customdesigned for a specific customer, so costs varied transaction by transaction. Other costs differed from customer to customer as well. The company's glass, for example, was frequently shipped in special containers that were designed to be compatible with the customers' assembly machines. The costs of retooling and other customer-specific services varied widely from case to case but averaged no less than 17 percent of the target base price.


As with pocket prices, a fuller picture emerges when a company examines each account and creates a pocket margin band. The glass company's pocket margins ranged from more than 60 percent of base prices to a loss of more than 15 percent of base prices (section B of the above figure). When fixed costs were allocated, the company found that it required a pocket margin of at least 12 percent just to break even at the current operating level. More than a quarter of the company's sales fell below this threshold.

Traditionally, the pricing policies of the glass company had focused on invoice prices and standard product costs; it paid little attention to off-invoice discounts or extra costs to serve specific customers. The pocket margin band helped it identify which individual customers were more profitable and which should be approached more aggressively even at the risk of losing their business. The company also uncovered narrowly defined customer segments (for example, medium-volume buyers of flat or single-bend door glass) that were concentrated at the high end of the margin band. In addition, it evaluated its policies for some of the more standard waterfall elements to ensure that it had clear objectives, accountability, and controls for each of them (for instance, it decided to base volume bonuses on stretch performance targets and to charge for lastminute technical support). By focusing on and increasing sales in profitable subsegments, pruning less attractive accounts, and making selective policy changes across the waterfall elements, the company pushed up its average pocket margin by 4 percent and its operating profits by 60 percent within a year.

The game of transaction pricing is won or lost in hundreds, sometimes thousands, of individual decisions each day. Standard and discretionary discounts allow percentage points of revenue to drop from the table one transaction at a time. Companies are often poorly equipped to track these losses, especially for off-invoice items; after all, the volumes and complexity of transactions can be overwhelming, and many items, such as cooperative advertising or freight allowances, are accounted for after the fact or on a company-wide basis. Even if managers wanted to track transaction pricing, it has often been impossible to get the data for specific customers or transactions. But some recent technical advances have helped remove this obstacle; enterprise-managementinformation systems and off-the-shelf custom-pricing software have made it easier to keep tabs on transaction pricing. Managers can no longer hide behind the excuse that gathering the data is too difficult.

## Chapter 9

## Transactions Analysis

Since January 2018, a new tool has been provided from Jato to the FCA EMEA pricing department: the transactions analysis tool.

As the name suggests, it allows the analysis of the real transactions data that are collected from dealers all over Europe. Understanding how transactions are closed and their volume distributions in each market gives the insight on our real positioning and earnings that was missing. Before the advent of this tool, the HQ had to base its strategic decisions solely on volumes sold and price proposals that were approved, but real transactions are the closest to the customer we can get and having data on all the competitors give valuable information about each market positioning.

In this chapter I will give an insight on the tool output, explaining its potentialities.
The first output given is the so called "price and option summary", that can be seen by segment, model or trim. I will explain an example with a view by model. In this section a first comparison view is given, where to each model are assigned two columns: one for the average retail price with the average option price on top, the second for the average retail price and the average discount on top of it.


At a first glance it is possible to see which are the premium players and which the mainstream ones. But this is just a view of average values, it is interesting to see how we landed to these values, so the tool gives a view of the price distribution in terms of volumes sold.

From this it is possible to transform the output in \% of vehicles sold, in order to have a view of transaction prices positioning on the market, without considering the volumes sold by each model.


With this output it is possible to see where the most cars are sold along the price line. It is like seeing the result of all the actions performed in the last 2 years about the vehicle prices and contents, since the volumes of all the main players of the segment are on display, as well as their transactions in each price segment. We could also define a winner for each price bundle and check if our real positioning is what we were trying to achieve or if a change of strategy is needed.

Data on market share is very important, but it doesn't say how cars are being sold with the aim of keeping volumes high.

The distribution of prices in the graph above is available also in terms of retail prices, option prices and discounts.



Another interesting output provided by the tool is the trend view, where the same 4 average data of transaction, retail, option prices and discounts can be viewed with respect to time, so that each significant delta could be noted from the graph.


In a different section of the tool it is possible to see the "option/package comparison", that provides a \% of the absorption of the options or packages, their average price based on transactions and the value added on the average transaction price of the model, by simply multiplying the percentage of the vehicles sold with the equipment by its average price.

The most useful view of this output is the comparison between models, like the one shown below:



Or extracting the output, the view is less pleasant to the eye but with the same content:

| Option | Fitment Rate | Avg Retail Price | Value | Added |
| :--- | ---: | ---: | ---: | ---: |
|  |  |  |  | $\mathbf{3 0 4 4}$ |
| Mini Spare Wheel | $84 \%$ | 150 | 127 |  |
| Alloy Look Roof Rails | $70 \%$ | 250 | 175 |  |
| Metallic Paint | $55 \%$ | 730 | 405 |  |
| Sync 3 Touch Navigation And Rear Camera | $47 \%$ | 1032 | 485 |  |
| Titanium Pack | $29 \%$ | 984 | 288 |  |
| Kuga Pack | $26 \%$ | 500 | 130 |  |
| St-Line Pack | $18 \%$ | 992 | 182 |  |
| Power Foldable Door Mirrors | $18 \%$ | 100 | 18 |  |
| Gloss Paint | $17 \%$ | 532 | 92 |  |
| Sony Navigation System With Sync 2 | $16 \%$ | 1007 | 164 |  |
| Sync 3 Touch Navigation | $15 \%$ | 1546 | 237 |  |
| Mica Paint | $15 \%$ | 727 | 108 |  |
| New Titanium Pack | $13 \%$ | 749 | 97 |  |
| Sync 2 With Touch Navigation | $11 \%$ | 504 | 54 |  |
| Privacy Glass | $10 \%$ | 250 | 26 |  |
| Front Panoramic Sunroof | $8 \%$ | 1000 | 82 |  |
| Smoker Option | $8 \%$ | 50 | 4 |  |
| Rear Spoiler | $7 \%$ | 250 | 19 |  |


| Option | Fitment Rate | Avg Retail Price | Value Added |
| :---: | :---: | :---: | :---: |
|  |  |  | 1484 |
| Metallic Paint | 98\% | 559 | 546 |
| 18" Spare Wheel | 68\% | 149 | 102 |
| Privacy Glass | 48\% | 211 | 102 |
| Connectivity Pack | 34\% | 362 | 125 |
| Dynamic Machined 36/2" $17{ }^{\prime \prime}$ Alloy Wheels | 23\% | 400 | 94 |
| Chromed Roof Rails And Windows Surround | 16\% | 353 | 55 |
| Park Assist | 13\% | 458 | 61 |
| Top View Camera | 11\% | 550 | 61 |
| Sport Seats Alcantara Black | 11\% | 100 | 11 |
| Warranty Extension 2years $/ 80.000 \mathrm{Km}$ | 10\% | 400 | 39 |
| Performance Machined 36/2 18" Alloy Wheels | 9\% | 400 | 37 |
| Handsfree Boot | 7\% | 490 | 34 |
| Advanced Driving Assistance Pack | 6\% | 711 | 40 |
| Towing Hook | 4\% | 742 | 33 |
| Audio Pack | 4\% | 450 | 19 |
| Winter Pack | 3\% | 381 | 13 |
| 19" Exclusive Machined Alloy Wheels | 3\% | 820 | 27 |
| Anti-Theft Protection | 3\% | 281 | 8 |

The third output of the transactions analysis tool is the Item Analysis.


This output is focused on a particular feature and it is very useful when analyzing an optional absorption or the competitors that offer it as standard. With this view, coming from transactions, it is possible to see exactly which are the most requested options by segment or model.

By looking at the premium segments trend of options' absorption, it is clear which features will become at first available and then standard on mainstream models. The task of being innovators is usually reserved to premium models and mainstream
ones are those who follow and in the near future will offer the same features, without the same refinement level, at a more accessible price.

Another output given by the transactions analysis tool is called "Feature Analysis" and although at a first glance it is similar to the "Item Analysis", the information provided is quite different.

With this third output it is possible to conduct an analysis on a feature that could be offered standard and as an option in the same segment and see its absorption versus time, in order to have a history of fitment rate and to forecast a future trend.
STANDARD 19.4\% OPTION 27.6\% TOTAL 47.1\%


Moreover it gives another view of the analysis of the feature: as visible from the graph below, the fitment rate versus average transaction price. This view is very interesting to understand if the option is exclusive for the higher segments of the market or if it is chosen also by mainstream customers.

I have provided a graph showing a widespread option, fitted to vehicles belonging to all segments and for this reason, it becomes quite compulsory for the higher segments with almost the totality of vehicles fitted with the item.


On the opposite side, the following is a graph of an option considered to be only for premium vehicles:


But, as we know, it could become an interesting option also for mainstream players, depending on its trend of fitment.

The last output of the tool is the "Colour Analysis".
The information given, as the name suggests, regards the colours of both exterior and interior of vehicles. This view is useful to understand customers' tastes depending on segments of vehicles and markets.

It is sufficient to think that once the free colour was usually white, but after an increase of the fitment rate of this paint, the free colour is shifted to be the less attractive one, with the aim of forcing customers to choose a different colour and this, of course, at a price, helping manufacturers to increase their margin per vehicle sold.

I

| E | 100\% | 28\% | 23\% | 16\% | 9\% | 5\% | 7\% | 6\% | 2\% | 2\% | 1\% | 1\% | 0\% | 0\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| R | 51\% | 16\% | 13\% | 9\% | 4\% | 3\% | 2\% | 3\% |  | 1\% | 0\% | 0\% | 0\% |  |
| N | 24\% | 6\% | 5\% | 3\% | 2\% | 2\% | 4\% | 0\% | 2\% | 0\% |  | 0\% | 0\% |  |
| A | 12\% | $3 \%$ | 2\% | 2\% | 2\% | 0\% | 1\% | 1\% |  | 0\% | 0\% |  |  |  |
| L | 7\% | 2\% | 2\% | 1\% | 1\% | 0\% | 0\% | 1\% |  | 0\% |  |  |  |  |
| C | 2\% | 0\% | 0\% |  | 1\% |  | 0\% | 0\% |  |  |  |  |  |  |
| 0 | 2\% | 1\% | 0\% | 0\% | 0\% |  |  |  |  |  |  |  |  |  |
| L | 2\% | 0\% | 1\% | 0\% | 0\% |  |  | 0\% |  |  |  |  |  |  |
| 0 | 1\% | 0\% | 0\% |  | 0\% |  |  |  |  |  |  |  |  |  |

In conclusion, this newly arrived tool it is just at its first steps into the pricing department and its potentialities are already clear to everyone here. It will help giving the best possible insight into the real playground of the markets, also for us staying at the headquarter, far from the field. Decisions will be taken basing all the reasoning on this tool, so it will have a key role in the future of the company. For now, as you will read in the following chapters, I have started pointing out some interesting points of debate, but its real power has yet to be exploited.

## Chapter 10

## Call to Action monthly report

With this chapter it starts a section of the thesis where I explain some of the macrotasks that I have taken care of during my stage in the Fiat pricing team.

All communications from the manufacturer to their potential customers can be grouped under the name of call to action (abbreviated to CTA). The name indicates that the car company is giving some offer with the aim of boosting sales.

The communicated message can be a price offer, a finance offer or a more general advantage up to a certain amount of money under specified conditions, usually not present in the communication to simplify the message and bring customers to the dealers. Once customers come into the dealers, half of the game is done, so even if now the offer is presented in all its characteristics and it isn't as intriguing as on the ad, the customer is convinced by the highly skilled salesmen.

Here are some examples of call to action from different car manufacturers:

an example of the communication of a financing offer

an example of the communication of advantages up to a certain amount

and an example of communication of a starting price.
There are also communications on special offers on warranty or equipment of the vehicle

and the possible channels of communication are all those available for advertisements: radio, television, websites, billboard advertising and so on.

For simplicity, in the pricing department where I've worked, the focus is on the web communication. This is done for many reasons, but above all, it is a matter of availability of information: being located in Turin, it is difficult knowing all radio, tv and billboards advertisements present in each European market, but manufacturers websites are accessible from everyone everywhere.

It is then requested a monthly report on all the web communications done by the competitors in the 5 major European markets.

My task has been of developing a new template, to be filled in by the market business centers and sent back to us, who will prepare a presentation that shows our communicated positioning versus the competitors, in terms of financing offer and price point.

Before this task was accomplished, the monthly report of the CTA consisted in a series of screenshots taken from the websites of all competitors, showing the communication of the competition. It was done by the pricers themselves, each one for its markets of competence and it was a quite easy and straightforward operation, but the reading of the results was tricky and our positioning was not underlined sufficiently. Here it is an example of report with the previous method:


Some manufacturers would communicate the price point and some the financing offer, while others both. In this way more than one screenshot was necessary and reading the report was even more difficult.

The improvement over the old CTA report was done with the objective of gaining significance and clearness.

First of all, a table for financing offers and a table for price offers were created, where each line represented a player of the vehicle segment under investigation. Not all rows have to be filled, only in case of a communication of that type from the competitor represented in the row.


| O FRANCE - A seg. CTA - Promo Prices ticen |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Vehicle |  | Promo | Price |  |  |
| make | Model | Version | $\begin{gathered} \text { Lowest } \\ \text { vlsual } \\ \text { prike } \end{gathered}$ | $\begin{array}{\|c\|c\|} \hline \text { avs } \\ \text { prev } \\ \text { month } \end{array}$ | Note |  |
| fat | panoa | 12 mm | 7.9906 | . | $\begin{gathered} \text { Pure discount } \\ 1700 € \end{gathered}$ |  |
| стroen | ${ }^{1}$ | the | - | . |  |  |
| peugeot | 108 | kese onestintims | . | . | 2006 trast in |  |
| peugeot | 108 | 20wispap eces: | 8.640 E | - | - |  |
| renaut | twingo | 105567000 inimes | 11.200€ |  |  |  |
| mmi | MINI | 1277 men an | 16.700¢ | . |  |  |
| opel | adam | 12 गrovinimize | 11.800¢ | . |  |  |
| ppet | канL | 2079 p tertio | 7.9906 | - |  |  |
| hrundal | 10 | 128 mp create | $15.400 €$ | . |  |  |
| hrunoai | 10 | 2056 phice | ${ }^{\text {8.950 }}$ | . | (160cestrunt |  |
| кıa | picanto | 12067 p vetion | 10.500 E |  |  |  |
| suzuki тоуота | IGNIS AYGO |  | $\begin{aligned} & 10.690 € \\ & 10.240 € \end{aligned}$ | : |  |  |

Then these tables are sent to the business centers that fill them with the information requested. This task is not performed by pricers, because it is not anymore just a cut and paste, but requires knowledge of the competitors in the market and although every good pricer has it, who better than the market itself knows the threats it has to face every day? Plus, this is a job that the business centre performs also for itself, meaning that it isn't an added load to their job.

Each month the tables are updated with the new communications of the manufacturers and are sent back to the HQ. Here the pricing team prepares a slide for each of the major markets like the one below:


Here the vision is much clear than in the old version of report, and our positioning in terms of financing offer and price point is highlighted by the yellow colour. For what concerns the financing offers, the pure instalment doesn't tell the whole story, but usually it is the communicated number and the most significant one, however clicking on the icon of information will bring to the table with all the details of the financing. This new way of reporting the call to action in the major markets provide a faster and easier understanding of our web communications and show our positioning with respect to the competitors.

## Chapter 11

## Competitiveness Representativeness

As I explained in chapter 4, the competitiveness report represents the basis for each strategical decision inside the brand and it's the tool of choice for monitoring competitors' activities. For this reason, it's very important that the report gives the right pieces of information and that it is built on correct data.

To ensure this, I have been instructed to check the representativeness of the competitiveness report of a given month, with the scope of finding possible enhancement and provide suggestions of improvement.

Specifically, the task was to check if the report of each market were made representing at least the $70 \%$ of our vehicles sold and at least the most sold versions of the main competitors.

Each model in our range requires one report per market each month, so I had to look at the volumes sold in each market in the last 6 months in order to locate the most sold versions of both our models and of competitors and compare them with the competitiveness reports in my possession, to check for their presence.

The sum of the volumes of all the versions of our model present in the report should exceed the $70 \%$ of the total vehicles sold of our model in that market. Unfortunately, it was not always the case, but the reasons behind it were usually of company policy. For example, it has been decided to not represent automatic versions, nor $4 \times 4$ ones. That is because not all competitors have a comparable version with ours, but in this way, especially for markets like Switzerland and Netherlands, the representativeness of the report could be below the recommended threshold.

After the volumes check, together with my responsible, we have made a list of suggestions divided by market and model with what could be improved over the
actual situation. It has often been advised of adding a basket to represent the most sold version of a key competitor, if this was not matching with our most sold one and if we had a comparable version. Below you will find a couple of examples with some suggestions that we addressed to the pricers responsible of the markets.


With this check on representativeness, the monthly report on competitiveness has certainly gained of significance and although the integration of automatic transmission and all-wheel drive versions is still a work in progress, many improvements have been made.

## Chapter 12

## Jato Take-rate Analysis

The next task I have received was an analysis of the attractiveness of the promotions suggested by Jato.

As I explained in the dedicated chapter, in the incentive database each promotion is given an attractiveness, indicating the percentage of hypothetical customers that would choose to take advantage of that offer.

Since it is necessary to estimate the percentage of customers that would be interested in the promotion in order to arrive at an average promo value, used to create a correct competitiveness report, each pricer responsible for a different market has created its own rules on how to do it with different weights given to the different typologies of promotions.

For the fulfilling of my request, I had to collect all these rules that varied market by market.

At first, I collected all the rules with which the promotions in the competitiveness report are filled in and as second step I collected all the weights of the different promotions attributed to each model in each market.

| BY MARKET | \& | BY MODEL |  | 500 | PANDA | PUNTO | TIPO | 500L | 500X | QUBO | DOBLO' | 124 SPIDER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ITALY |  |  | SCRAP | 20\% | 28\% | 30\% | 18\% | 12\% | 12\% | 18\% | 18\% | 1\% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| P |  |  | TRADE-IN | 55\% | 44\% | 54\% | 71\% | 67\% | 69\% | 71\% | 71\% | 71\% |
| $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | DISCOUNT | 25\% | 28\% | 16\% | 11\% | 21\% | 19\% | 11\% | 11\% | 28\% |

At this point the easy part was over and I have started working with the incentive database source file to create a history of the attractiveness of the promotions. What it means is that for the five major markets I have created a trend of the attractiveness
of the different type of offers: stock under, stock over, scrap, trade-in, loyalty and conquest.

The first aim of this analysis is to check if the weights attributed to scrap, trade-in and pure discount were at least comparable to those suggested by Jato.

Secondly, it has been done also to check if the rules with which the promotions were filled in the competitiveness report were similar to the attractiveness calculated by Jato.

The analysis has been conducted from the source files of each month of year 2017 of the incentive database, where a sheet of calculus has been added. There, I have used formulas to extract the average values of attractiveness from each promotion active on each model traced by all of our competitiveness reports, dividing them in 3 segments: small, compact and medium.

For each month and in each market the final output of the analysis was an average of attractiveness values for the three segments, created from the average values of each model which in turn were calculated from the average of all the promotions' attractiveness active in that month for that model.

| Segment <br> SMALL | Models | STOCK UNDER | STOCK OVER | SCRAP | LOYALTY | ACQUISITION | TRADN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | PANDA | - | - | 17,5\% | - | - | 37,5\% |
|  | FIAT500 | - | - | 14,7\% | - | - | 32,1\% |
|  | C1 | - | - | 26,2\% | - | - | 33,6\% |
|  | 108 | - | - | 15,6\% | - | - | 34,1\% |
|  | TWINGO | - | - | 19,0\% | - | - | 39,0\% |
|  | MINI | - | - | 5,0\% | - | - | 10,0\% |
|  | FORTWO | - | - | 16,3\% | - | - | 51,8\% |
|  | AYGO | - | - | 33,3\% | - | - | - |
|  | PICANTO | - | - | 11,3\% | - | - | 31,5\% |
|  | ADAM | - | 30,2\% | 30,9\% | - | - | - |
|  | UP | - | - | - | - | - | - |
|  | 110 | - | - | - | - | - | - |
|  | KARL | - | - | 35,4\% | - | - | - |
|  | IGNIS | - | - |  | - | - | - |
|  | AVG SEGMENT | - | 30,2\% | 20,5\% | - | - | 33,7\% |
|  | WEIGHTED AVG SEGMENT | 0 | 30,2\% | 17,9\% | 0 | 0 | 35,4\% |



Having obtained all average values for the three segments for all months, I created a summary excel file, where the values were displayed and used to create graphs, one for each market.

Some of the values were stable during the year:

and some others were not:


Giving that our values to create the competitiveness reports couldn't change month by month, an average of the year Jato attractiveness values has been made, in order to compare it with our values.

From this comparison some cases emerged were the difference were noticeable, but remembering that also Jato values are not the real take-rates of the promotions, we simulated how the competitiveness report would have changed if we used those values. In this way we didn't overlook possible scenarios.

In the end, a new way of filling the promotions sheets in competitiveness is still under investigation from my colleagues on one side and ICT on the other side, since the goal is to create an automated system that finds case by case the best approximated values for the take-rates, with the aim of predicting customers' behaviours with respect to offers and counterattack on the promotions side.

## Chapter 13

## New Value Tables

As I mentioned in previous chapters, to compare different vehicles, the same features are applied to everyone, with the goal of obtaining the real price. But how can we determine the value of each feature attributed to vehicles?

We could add the options offered by the automakers to arrive at a similar equipment, but from a customer point of view, what would be the value of the features present on the vehicle?

To answer this question, a huge research is conducted periodically with the scope of finding the right value for each equipment available on a vehicle. There could be different approaches and it doesn't exist a universally recognized right one. It must also be pointed out that prices for options are not equal in every angle of the world, so an analysis by market and derivative markets must be conducted, but for simplicity some automakers don't do it and accept as tolerable the differences between markets options prices.

The most common practice to build a value table for a segment in a market is to locate the main players of the field and calculate the average price of their features. An issue occurs for features that are not available as single options but are only available inside a pack or even worse, they are specific of the trim level and not available anywhere else. For these features a deeper analysis must be conducted and the value to be put in the table is the best possible guess we can have about the feature.

Another method for building value tables consists in dividing vehicles inside segments in mainstream and premium players. This could be done since premium options lists are more extensive and expensive than the mainstream ones, bringing
to a change in values of the table with respect to one based purely on mainstream brands.

Once the method has been chosen, the analysis is conducted using the Jato specifications database, reading all the lists of options of competitors and extrapolating the values from packs and single options. It entails a good knowledge of the logic of the voices of the value tables and how Jato counts the features, in order to avoid double counting of the same content.

The explanation of the task is quite straightforward but the analysis is mainly composed by exceptions and specific cases, both per market and per models, widening time required for the analysis.

## Chapter 14

## WLTP introduction and $\mathrm{CO}_{2}$ taxation changes for 2018

The WLTP (Worldwide harmonized Light vehicles Test Procedure) is a new testing procedure for determining the levels of pollutants and fuel consumptions of vehicles.


WLTP will apply to all new car registrations from September 2018, changing in this way all the homologated fuel consumptions of the vehicles sold in every market.

The changes with respect to the NEDC, the test that the WLTP is going to substitute, are aimed at representing in a more accurate way the real driving situation, since the NEDC is composed by very slow accelerations and low speeds with respect to the real world driving. Many critics have still been moved to the WLTP, since its accelerations are still not representative of the average European car driver, but it undoubtedly represents an improvement in vehicles testing procedures.

Since many markets are $\mathrm{CO}_{2}$ sensitive, in other words, their taxation is based on $\mathrm{CO}_{2}$ emissions, it has been necessary to calculate the impact on our product range competitiveness of this new driving cycle.

First, the priority has been the French market, because their taxation changed starting from January 2018 with the following values to be added to the list price of each vehicle sold:

| $\mathrm{g} / \mathrm{km}$ of $\mathrm{CO}_{2}$ | $€$ Malus 2018 | As it is clear from the image beside, that continues up to |
| :---: | :---: | :---: |
| <120 | 0 | $10.500 €$ malus for $185 \mathrm{~g} / \mathrm{km}$ of $\mathrm{CO}_{2}$, below $120 \mathrm{~g} / \mathrm{km}$ of |
| 120 | 50 |  |
| 121 | 53 | emitted there is no additional taxation, trying to push |
| 122 | 60 | manufacturers to move quickly towards environmentally |
| 123 | 73 |  |
| 124 | 90 | friendly vehicles or seeing their profits vanishing for unsellable |
| 125 | 113 | cars due to the high taxes they have to endure. |
| 126 | 140 |  |
| 127 | 173 | We started analyzing if our competitive position would have |
| 128 | 210 | ed after this malus introduction. The |
| 129 | 253 | ed after this malus introduction. The |
| 130 | 300 | clear, since some of our powertrains lack the modernity of our |
| 131 | 353 | competitors turbocharged counterparts due to investments on |
| 132 | 410 |  |
| 133 | 473 | gy not quite su |
| 134 | 540 | towards electrification of our direction we have now to face this |
| 135 | 613 | inconvenient situation. |



The two steps expected were in January 2018 with the change in taxation and in September 2018 when the WLTP will change the homologated consumptions and emissions, affecting again the malus of taxation over the list price. We expect a shift in trend of sales for France, with the diesel engines starting to grow in mix, despite their forecast ban in Paris by 2030. Petrol powered vehicles will see their volume mix affected by this tax changes, in these years they were becoming more and more popular but due to their higher $\mathrm{CO}_{2}$ emissions or fuel consumption, as you prefer to see it.

Moreover, it has been interesting seeing what the introduction of a new driving cycle in September 2018 would mean for our positioning in all $\mathrm{CO}_{2}$ sensitive markets. On top of this, the analysis considered the introduction of the new family of 3 cylinders turbocharged petrol engines that will put us back on the train of leading OEMs. They will be first introduced with the new 500X and the analysis started from this model and its competitors.
$\mathrm{CO}_{2}$ taxation is a growing trend among the European governments and car companies have to be prepared and think ahead of the introduction of new charges for buyers. The electrification of the circulating fleet has already begun, will all automakers be prepared? Or will they accept unprofitable offers from the leading companies of electric vehicles that in these years have already invested in R\&D on this field?

## Chapter 15

## Conclusion

Having spent six months in the EMEA Fiat pricing department, I have seen and touched the reality of the automotive pricing world, as it is today, with its tools, rules and varying complex environments. But what's next in this field? What are the new challenges for automotive companies in terms of marketing, sales and customer management?

Automotive experts seem to all agree about one thing: the future of retailing is customer-centric.

This statement means that the whole process of car designing will be customer centered and the actual product centered system will become obsolete. But what is in real terms the difference between the two approaches, the present and the future?

The present retailing systems is an argument well known with no further need of explanation, since it is the same since when cars were sold as a finished product and not as a chassis where you could choose the body to put on.

In the future, the transactions will not be the focus on which pricers will conduct their analysis and build their strategies, but the shifting of mobility preferences towards car-sharing and a growing habit of quickly interact and access information across media and devices will have to be reflected in the marketing strategies and customer experiences of the car industries.

How to make a customer centered automobile industry? Let's take inspiration from the growing trend of car-sharing. Forgetting for a moment the propulsion system of the vehicles themselves, since sadly fewer and fewer people are driven in the act of buying by the type of engine, we can imagine a future where car manufacturers will provide their products through a renting system, as the present car sharing
companies. There will be an app, because of course there will be one, through which it will be possible to pay for use and book vehicles of the brand of the customer choice.

The new frontier of mobility resides in renting and not buying. Because buying a vehicle nowadays means periodic maintenance, taxes, fuel, taxes, extraordinary maintenance, taxes, cleaning and so on... All worries that a modern customer doesn't want to face and having a care-free experience is the focal point of a luxury experience. Younger generations need vehicles for mobility. They need to go from point $A$ to point $B$, not caring about the needs of the vehicle; for that concern there will be a team of brand employees that will manage it.

So what can an automaker offer to a tomorrow's customer? First, integration. The system of car sharing of the automaker must interface perfectly with all the devices of the customer, so that he or she can easily get their service. Yes, a service, because automakers will sell mobility and not vehicles. Quite shocking for a hardcore enthusiast of cars like me, who likes caring for his vehicles, but we haven't still talked about autonomous driving and here we won't.

How could the customer of the future choose between services offered by car companies? As for all products and services there will be different levels, at different prices. Technically the differences will be in customer experience, more attention to detail with more refined and posher vehicles for high fees and practical, bare mobility providers for low prices. Maintenance will all be provided by automakers in a sort of care-free mobility.

This transformation will require an unprecedented effort from the car companies, seeking also collaboration with insurance agencies and aftersales market.

Pricing departments will have to build tools to monitor competitors' actions as they are doing today, but with a changing approach. The price will have to reflect the level of service delivered in addition to the product delivered. A luxury brand will not be considered as such if it wouldn't have all of its network at a high level, from the product to the availability of it, to the level of maintenance and usability. The brand
image will play an even greater role in defining prices, since a subscription to a mobility provider will bring to the customer a more engaging experience and relationship than the sole owning of a vehicle. The entire product range of the brand to which the customer is subscribed to could be at his or her disposal to answer mobility needs. New challenges will have to be faced and customers will sign renting contracts or pay-per-use, either ways, the pricing team will have to act strategically in each market as the HQ suggests.

The first steps to move away from the present retailing system have been done as a test, trying to sell vehicles online, without having the customer to set foot into the dealer. This new channel for selling cars is currently under development and expected to grow rapidly in the very near future, reflecting customers recent trends in shopping. The obstacles under discussion are on the legislative side, with signatures and documents required in the act of buying a vehicle, that change market by market. Dealers that are experimenting this new channel are trying to offer the same customer experience at the moment of delivery that a normal customer could feel coming into the dealer. Don't forget that vehicles could be delivered at home by a valet that will be in charge of delivering and presenting all the features to the new owner.

This is just the first step towards a new form of retailing system, but it implies big changes, also from a pricing point of view. It's enough thinking about plane tickets or hotel booking prices that changes by hour and sometimes by minute, in order to better target their different customers. Could it be the future of online cars transactions? How would pricing react to such a fast changing environment? Sure financing services are not ready to offer different solutions every minute, but for cash buyers of small cars this could be a possibility.

Two new trends, both with the intent of creating a more accessible mobility for the new generations of customers, both feasible in a near future only with great efforts from automakers. These two mobility solutions will answer to the different needs of customers: renting of a mobility service or the classical ownership, depending on markets, availability of process and customer taste.

All experts seem to agree that these transformations will have to happen, no one knows when, but this is the direction for automakers of the future and all the departments of the companies must be ready for big changes in organization and mindset, focusing the attention even more on customers and their needs for easily accessible mobility services.

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