

VEHICLE PRICING IN THE NEW AUTOMOTIVE REALITY

How e-commerce, direct sales, and electric cars are radically transforming pricing for new vehicles



Summary

For automakers, the COVID-19 episode will be followed by an ever-accelerated transformation towards e-commerce, direct sales, and electrification. This shift will bring massive changes to both price models and price setting for cars.

In this study, we investigate this transformation, surveying more than 1,100 potential electric vehicle buyers in Europe and talking to leading industry experts who have already begun applying new pricing logics. Based on six fundamental premises about pricing in the future, we have developed a transformation roadmap for pricing in markets that are increasingly omni-channel, direct to customer, and electric.

Preface

With advancements in e-commerce, direct sales, and electric vehicles, the automotive industry is radically changing. New players like Byton are leading this change into an omni-channel and direct sales model with electric vehicles. Accenture Strategy and Byton joined forces to rethink vehicle pricing in this new automotive reality. Based on our global network of leading industry experts and innovative start-ups as well as best practice and conceptual elaborations, we developed six fundamental premises of future pricing. Jointly, we bolstered these premises with a quantitative study surveying more than 1,100 actual Byton prospects using Byton's European sample of potential electric vehicle customers.

In this point of view, we focus on the role of pricing in the new automotive reality. Of course, the impact of e-commerce, direct sales, and electric mobility is much wider, disrupting the business models of many established players in the automotive ecosystem. We will cover this in an upcoming publication.

Since the transformation in sales and pricing has already started, we believe that this point of view will help our partners and clients to lay the foundation for future success.

Munich & Kronberg, August 2020



Johannes Trenka,
Accenture Strategy Managing Director



Gerald Krainer,
Byton Director Go-to-Market Europe

1. The changing automotive sales landscape: Three megatrends are disrupting conventional pricing

Over decades, pricing in the automotive industry has barely changed. Based on what the brand positioning allows, OEMs set a sky-rocket list price which is gradually discounted at the different sales levels, until the customer haggles for the best deal at a retailer of choice. Since e-commerce and powerful online platforms increased price transparency in recent years, transaction prices have experienced a race to the bottom. In addition, greenfield players such as Tesla are pursuing “direct to customer” sales (D2C) and established OEMs like Daimler are increasingly following in order to cut costs of retail. This has led to new price strategies such as a “fixed price approach”. Lastly, with more electric vehicles (EVs) on the market, established vehicle segments and pricing mechanisms are changing.

While automotive sales already slowed down in 2019 (-4% from 2018), a severe hit of at least 20% is expected in 2020 due to COVID-19. At the same time, e-commerce, D2C, and EVs are kicking in simultaneously disrupting automotive pricing.

Figure 1: Three megatrends are disrupting conventional pricing

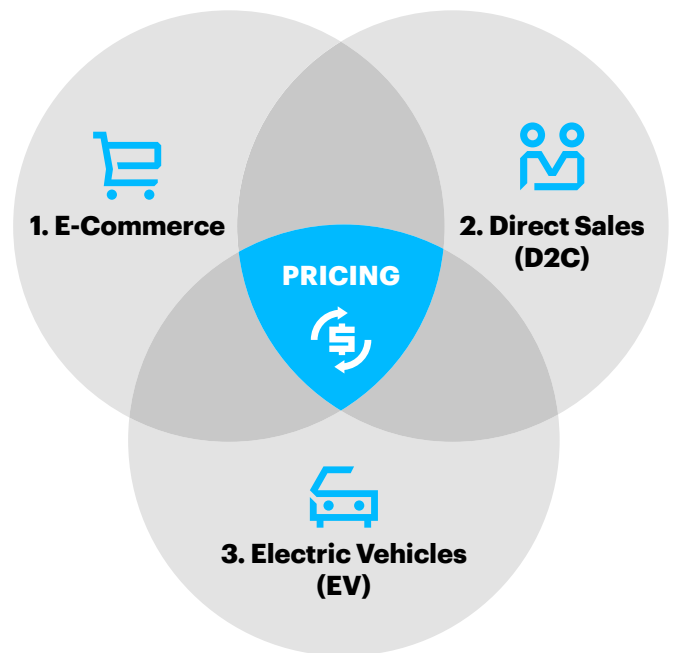





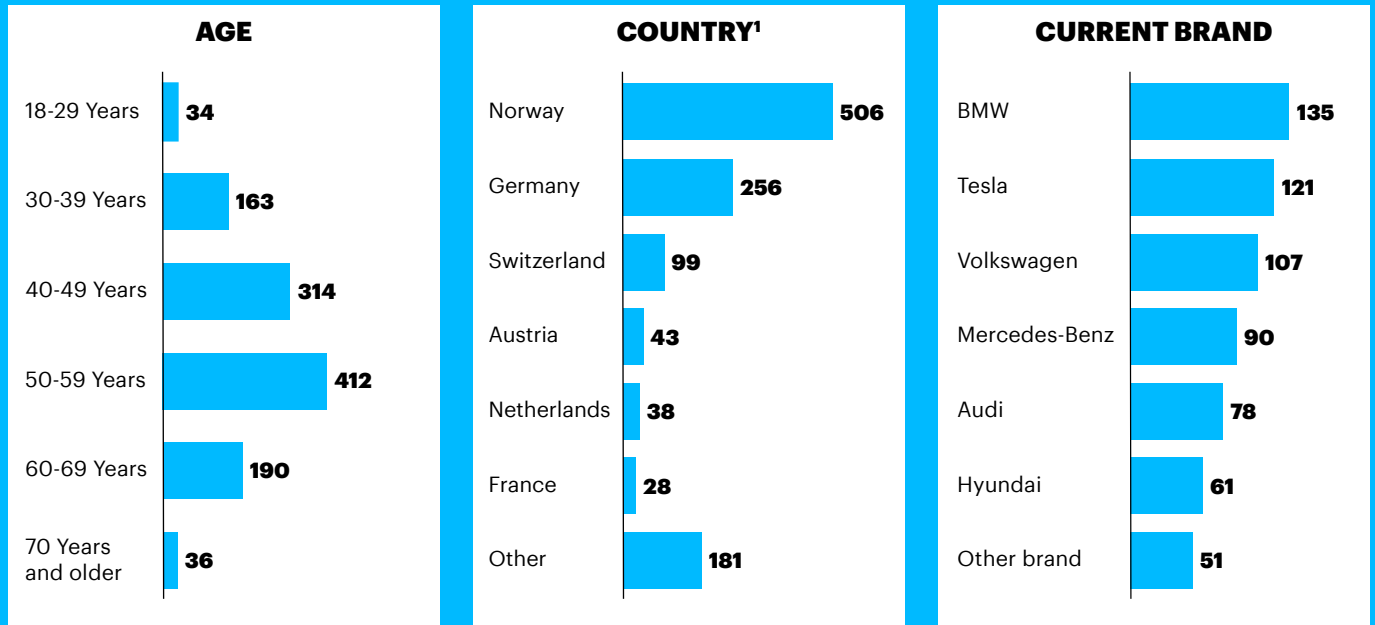
Figure 2: Three megatrends and their implications on vehicle pricing

| MEGATRENDS | IMPLICATIONS ON PRICING |
|---|--|
|  1. E-Commerce Customers want end-to-end online experience along their journey | <ul style="list-style-type: none"> • Full price transparency due to increased comparability of different brands and offers • Increased price competition (incl. intra-brand) due to third-party platforms • Fewer options for price negotiations due to full online journey |
|  2. Direct Sales (D2C) OEMs accelerate shift to direct sales due to strategic and financial considerations | <ul style="list-style-type: none"> • OEM transaction price responsibility since agents usually are not allowed to give discounts • Price harmonization across channels due to central price control • Advanced analytics-based pricing due to availability of data previously held by the dealer |
|  3. Electric Vehicles (EV) Increasing penetration of EVs means new challenges and opportunities | <ul style="list-style-type: none"> • Limited flexibility in price setting due to higher base price and fewer upgrade options vs. internal combustion engines (ICEs) • New vehicle economics due to differences in residual value and potentially slower depreciation vs. comparable ICEs • New segment type as pure EVs define new categories and cannot be priced against competition |

Study Approach

In this study, we surveyed more than **1,100** potential buyers of EVs across Europe about their vehicle usage, channel preferences, and expectations regarding different forms of vehicle ownership or access.

Figure 3: Sample of quantitative survey



▶ **66% have pre-ordered an EV**



▶ **71% use their vehicle daily**

¹ The sample is biased towards Norway, a pioneer market for EVs in Europe.

Expert Interviews

Further, we interviewed the **C-Suite** from disruptive industry players and ecosystem partners.

Figure 4: Interview partners

| | |
|---|--|
|   <p>Georg Bauer Co-Founder & President Industry Relations, Fair</p> |   <p>Andrea Castronovo CEO, Alphabet Italia Fleet Management SpA</p> |
|   <p>Stefan Eling Director Captive Mobility, Santander Consumer Bank</p> |   <p>Nico Polletti CEO & Founder, Cluno</p> |
|   <p>Philipp Sayler von Amende CEO & Co-Founder, Carwow</p> |   <p>Tien Tzuo CEO & Founder, Zuora</p> |

1.1 Customers want an end-to-end online experience

Accustomed to the customer-centric business models of e-commerce firms such as Amazon or Airbnb, consumers are increasingly demanding convenient end-to-end online journeys in the automotive industry as well.

Established OEMs and dealers have been slow to react and are having a hard time meeting changing customer demands. At the same time, greenfield OEMs (e.g. Tesla, Byton NIO) and third parties like rental firms (e.g. SIXT), platforms (e.g. Carwow), and white label offerings (e.g. Rockar, Roadstar) address consumers' expectations. They offer new, digitally enabled sales approaches that promise hassle-free, enjoyable experiences for customers. Even the financial service provider Santander has announced plans to launch its own online platform for used cars in Germany. As companies shift toward dedicated e-commerce, there are significant implications on pricing:

- **Full price transparency:** Through e-commerce, different brands and models become directly comparable at a fingertip for customers.
- **Increased price competition:** Third-party platforms increase price competition (also among dealers of the same brand, referred to as "intra-brand competition"), since not only list prices, but also the final transaction prices, including dealer discounts, become directly comparable with just a few clicks.

- **Fewer price negotiations:** Since online journeys offer fewer options to negotiate, OEMs and dealers need to focus even more on setting and communicating the "right" prices through their e-commerce channels.

1.2 OEMs accelerate shift to D2C

Players in other industries (e.g. Zara in fashion, Nespresso in FMCG) have demonstrated the importance of control over sales channels as well as transaction prices, and, as a result, they've set up omni-channel customer journeys years ago. In automotive, Tesla and other industry disruptors launched D2C models, and traditional OEMs have begun to move from indirect to direct sales models (see Figure 5).

Increasing pressure to lower costs, which is intensified by COVID-19, has led many OEMs to rapidly accelerate their journey to D2C sales. Unlike greenfield disruptors, established OEMs face huge organizational transformation challenges when shifting to D2C because the change affects a wide range of business areas and functions (e.g. stock management, logistics, invoicing).

Figure 5: D2C initiatives in the automotive industry

| | ESTABLISHED OEMS | | | | | SPIN-OFFS | | | | DISRUPTORS | | |
|-----------------------|--------------------------|---|-------------|--------------|----------|-----------------|-----------------|-------|------------------------|------------|-------|-------|
| | HONDA | DAIMLER | TOYOTA | BMW | VW GROUP | BMWi | GENESIS | LYNK | POLESTAR | TESLA | NIO | BYTON |
| Market | New Zealand Australia | South Africa Sweden Austria Rest of Europe | New Zealand | South Africa | Europe | Europe Japan | Canada Korea | China | Europe USA China | Global | China | China |
| Go-live | 2000/ 2021 | 2017/2019/ 2021/2025+ | 2018 | 2020 | 2020+ | 2013/ 2018 | 2017 | 2017 | 2019/ 2020 | 2012 | 2018 | 2020+ |
| Scope (Models) | All | All | All | All | Selected | All | All | All | All | All | All | All |

Obviously, D2C sales has important implications on pricing:

- **Control of transaction price by OEMs:** OEMs get central price control, requiring a ramp up of pricing capabilities for setting discounts and tacticals (in indirect sales, those are within the realm of the dealer).
- **Price harmonization across channels:** OEMs need to steer and harmonize transaction prices across multiple sales channels (e.g. online car configurator, e-commerce store, retail).
- **Possibility for analytics-based pricing:** OEMs gain access to data (e.g. customer, transaction, and stock data) that was previously held by the dealer, enabling data-driven pricing and end-to-end revenue management.

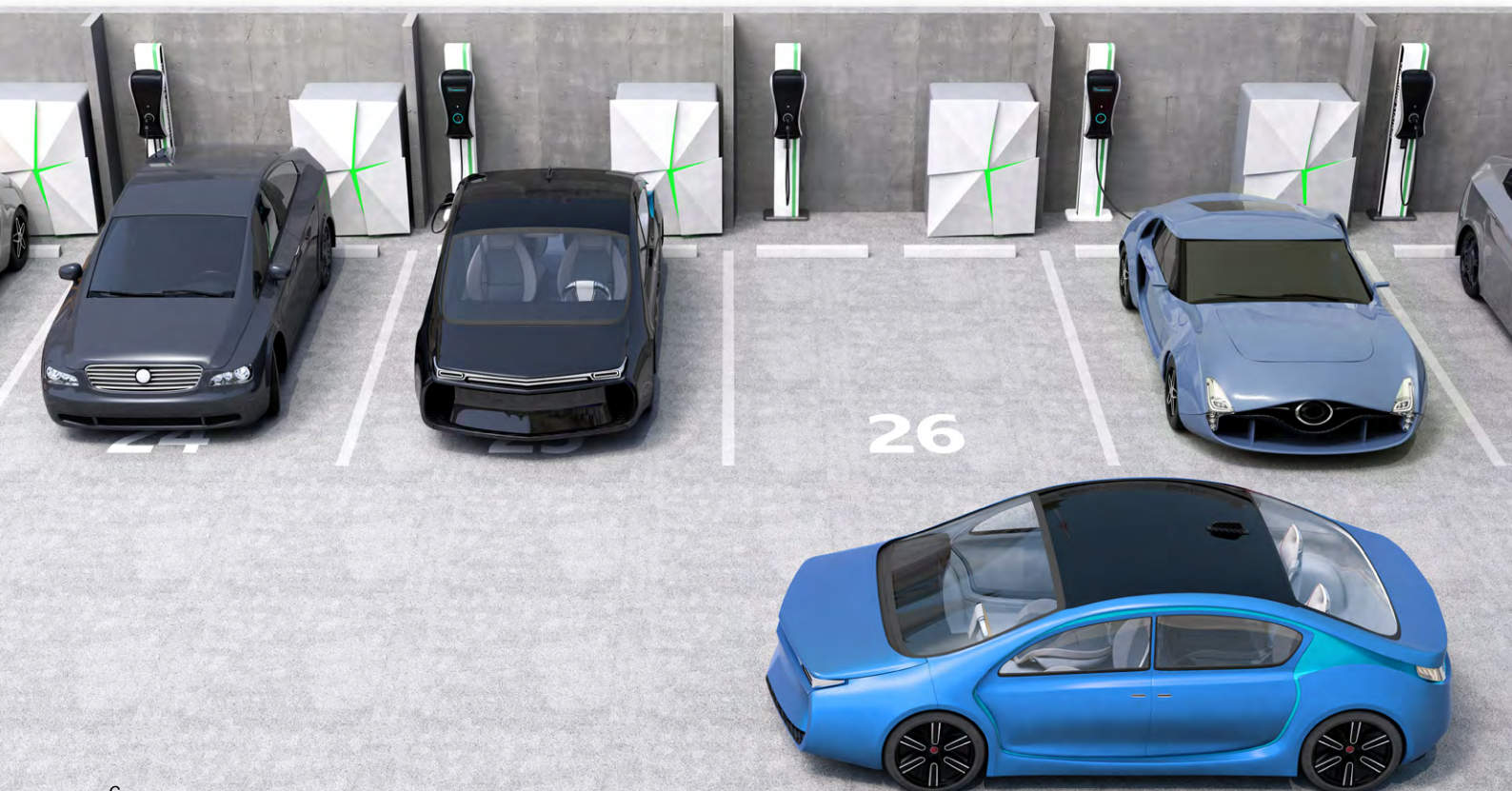
1.3 Electric vehicles bring new challenges and opportunities

EV sales are rising globally with a compound annual growth rate of more than 40% between 2015-2019. While we see an increasing number of new players (e.g. Tesla, NIO, Xpeng, Faraday Future, Byton) focusing exclusively on EVs, almost all major traditional OEMs have introduced pure battery electric vehicle models and are continuously expanding their product ranges (more than 75 models in Europe in 2020).

With improving battery range and charging infrastructure, as well as new government subsidies with the onset of the COVID-19 pandemic, the breakthrough of electromobility has arrived.

For vehicle pricing, this means:

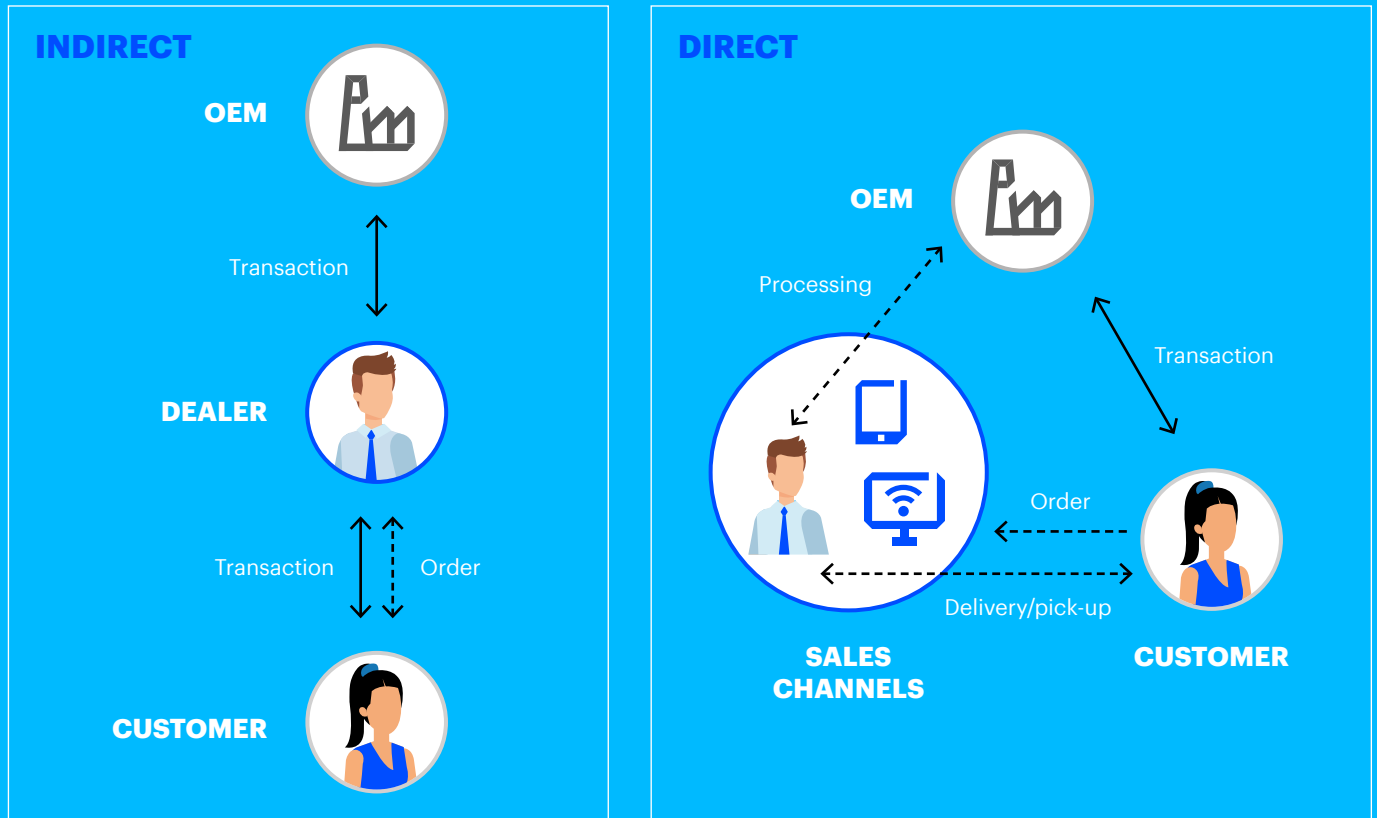
- **Limited flexibility in price setting:** Base prices of EVs are higher today than for comparable vehicles with internal combustion engines, given the still high cost of batteries (which over time will likely decrease). In addition, engine components cannot be differentiated by various optional equipment and features, except for those related to “range”.
- **New vehicle economics:** Compared to ICEs, EVs have up to one third lower wear and tear, they can reach higher lifetime mileage and, as a result, they tend to depreciate slower. Hence, EVs are monetizable over a longer period, e.g. through multiple leasing cycles. While ICEs lose the biggest chunk of their value in the first year, the residual value of EVs is potentially higher, giving companies more opportunities to re-market them.
- **New segment type:** Pure EVs define new segments and cannot be priced against traditional internal combustion engine (ICE) competition. For instance, Volkswagen’s ID3 comes with the exterior size of a “Golf” but offers the interior space of the higher positioned “Passat”.



The direct sales (D2C) model

In a D2C model, OEMs own and orchestrate different distribution channels covering e-commerce and physical retail. They transform formerly independent dealers into agents (agency model). The latter receive a commission per sale. Hence, vehicles are sold by the OEM directly to customers either via agents in physical retail spaces, their own flagship stores, or e-commerce. Regardless of the channel, the transaction happens between the customer and OEM.

Figure 6: Differences between traditional indirect and D2C sales models



Strategic benefits of D2C

Full control over sales channels and direct contact with end-customers (who increasingly want to buy directly from OEMs due to their reputation for expertise and reliability). Consequently, full access to valuable data currently only available to dealers.



Financial benefits of D2C

Up to 4% reduction in cost of retail due to elimination of intra-brand competition, higher e-commerce share, and centralization of back-office processes.



Pricing benefits of D2C

Full control of pricing from list to transaction price. This includes aligned discounts, stabilization of price levels, and end-to-end price governance.

2. Pricing in the new world: Fundamental premises for future car pricing

Against the background of the three megatrends e-commerce, D2C sales, and EVs, we developed six fundamental premises for future automotive pricing:

Figure 7: Premises for future car pricing



1 Pricing will become channel agnostic

OEMs need to have strategies and capabilities in place to set, steer, and monitor prices across channels.

OEMs need to ensure transparent prices that are the same across all channels (e.g. online, agent). Our survey found that 69% of consumers expect online and offline prices to be the same. Among young consumers (18-39 years old), even 78% share this expectation.

78%
of young consumers (18-39 years old) expect prices to be the same online and offline.

This finding is particularly important in the light that online sales of vehicles are getting more popular, and OEMs should focus on this critical channel: More than a third of consumers (and close to half of young consumers) would prefer to purchase their next vehicle online.

To ensure a seamless customer journey across all channels and customer touchpoints, online and offline prices must be the same to avoid cannibalizations across channels.

2 Price negotiations will become a thing of the past

It's not the lowest price, but the most transparent and fair prices that will matter. OEMs should consider "fixed prices" that are stable over a specific time in a defined market.

Customers don't like to haggle over price, as our quantitative survey confirms. 69% of consumer perceive price negotiations with dealers as cumbersome and prefer buying at a fixed price. Thus, consumer preferences have changed: Price levels or discounts may no longer be the most important criteria for purchase (less than 10% of respondents mentioned it as most important). Similarly, according to the online platform Carwow, only 25% of their customers choose the cheapest offer, while 59% go for their local dealer and 31% for the best rated.



**Philipp Saylor von Amende,
CEO & Co-Founder, Carwow**



As long as customers feel that they are not overpaying due to information asymmetry with the dealer, the price itself serves only as a hygiene factor and entry point for subsequent detailed purchase "evaluation".



Only 8%

of consumers enjoy price research and bargaining.

Instead of trying to get the best price after endless negotiations with multiple dealers, consumers increasingly prefer "peace of mind" and would rather purchase at a fixed price, knowing that they did not miss out on a better deal. OEMs are starting to realize this and are switching to fixed prices within a D2C model. Also, dealers have recognized the need for price transparency: Lexus dealers in the US have developed the "Lexus Plus" concept, where participating dealers ensure their customers fair and transparent prices without the need for negotiation.



3

Leasing will fully outpace car ownership

OEMs need to provide attractive leasing offers across multiple leasing cycles throughout a vehicle's lifetime.

As EVs are increasingly embraced, more consumers are leaning towards leasing. Our study found that 48% of consumers say leasing is their most or second most preferred option for acquiring an electric car. Since it is still difficult to determine the residual value of EVs across brands and models, consumers avoid re-selling risks with a leasing contract. In addition, especially due to the COVID-19 crisis, consumers value the lower capital commitment of leasing (42% of respondents said it is the main advantage of leasing). Furthermore, the technological characteristics of EVs favor leasing: EVs tend to depreciate slower than ICEs, mainly due to fewer parts and less wear and tear. Slower depreciation would allow OEMs to offer lower leasing rates and monetize EVs through multiple leasing cycles over their lifetime.



Stefan Eling,
Director Captive Mobility,
Santander Consumer Bank AG



How to handle residual value risk is a challenging topic for OEMs and their financial service partners. Compared to ICE and given the uncertainty of the future technological evolution, now EV residual values are much more difficult to determine. On top, in a direct sales model OEMs can no longer pass this risk to their dealers. This might trigger new business and price models.



EVs and residual value

Many studies predict higher residual values for EVs compared to ICEs, but substantial data sets are still scarce, and the effects might be segment and market specific. It is important to keep in mind that in a D2C sales model, OEMs are the ones who carry the risk related to residual values, not dealers. These two factors, plus the expected additional demand for leasing after the onset of COVID-19, could lead to higher risk for OEMs and their financial partners. However, easier digitally enabled re-marketing and multiple leasing cycles can mitigate that risk.

4

Subscription models will continue to grow but not attract the mass market

Car subscriptions will continue to grow, and OEMs should use subscriptions to complement their offerings. The advantage that start-ups and third parties tend to have over OEMs is their broader brand and model mix.

With up to 16 million vehicles on the road via subscription, this innovative price model is on its way to becoming the “fourth pillar” for car ownership, and OEMs should start getting a foothold in this area. High interest by “Gen Y” drivers in this flexible model, the desire to test an electric car for some time without a longer commitment, and, last but not least, the impact of COVID-19 on people’s desire to travel alone, suggest that subscription has the potential to be a lucrative channel to reach younger, more urban customers with a high willingness to pay.



Nico Polleti,
Founder & CEO, Cluno



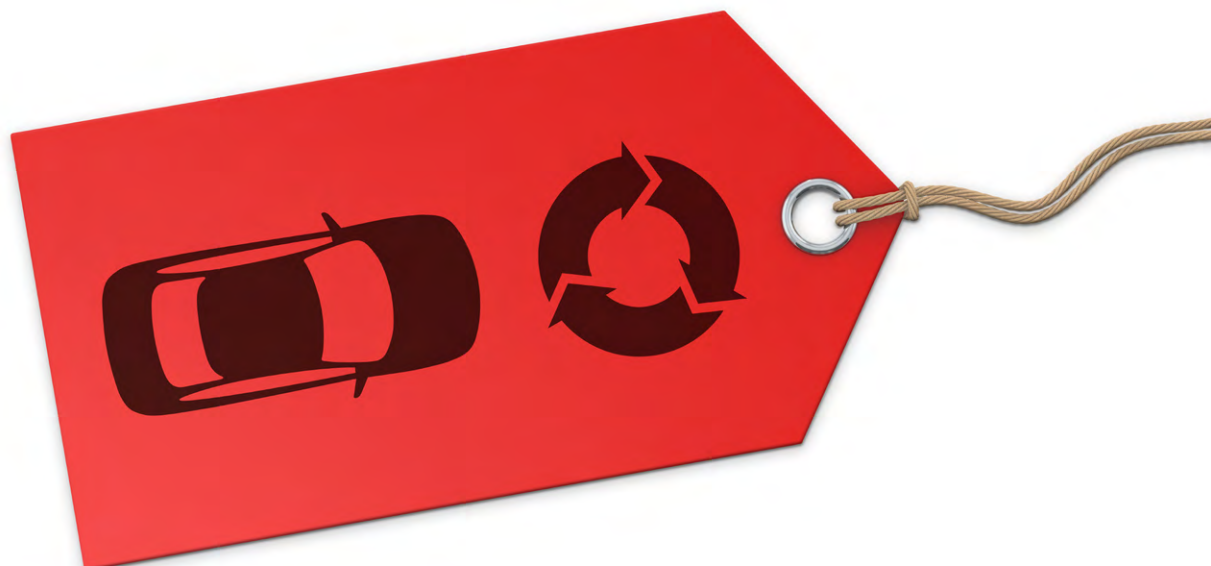
Customers today desire flexibility and peace-of-mind from ‘all-in’ offers. Hence, from a pricing perspective, it is not about being the cheapest but having a transparent and reliable offering.



28%

of consumers name subscription as one of their top two preferred forms of car access.

The “all-inclusive paradigm” of subscription is positioned as a transparent and reliable alternative to riskier and negotiation-intensive cash buying or leasing. While it likely will not be popular in the mass market or replace other forms of access to vehicles, it will become one cornerstone of the future sales model of OEMs.



Subscription models in the automotive industry

The so-called “subscription economy”, pioneered by technology firms such as Spotify, Netflix, or Zuora, shifts the sales model from one-off product purchases to continuous “recurring” services. Ultimately, the automotive industry has embraced this model by offering car subscriptions that give customers access to one or even more vehicles based on a regular fee ranging from 500€ to 4,000€ a month. While a subscription rate is higher than a comparable leasing rate, the offering comes with multiple advantages. First, down payments are not required or are very little. Second, fixed costs like maintenance, repairs, tax, and insurance are already included. Finally, subscriptions are easy to set up, have short contract durations, and they often come with a vehicle swap option.

The first pilots on subscriptions were launched in 2012 by first movers like “SIXT unlimited”. Besides subscription pilots by major OEMs, recently dealers, car rental firms, and innovative start-ups such as Cluno (for new cars) and Fair (for used cars) have entered this market (see Figure 8). Now that more people are interested in individual and virus free mobility since the beginning of the COVID-19 pandemic, we expect more OEMs to offer this innovative price model, which give consumers lower upfront financial commitments and more flexibility.

As our quantitative survey across Europe illustrates, consumers value subscriptions mainly for low capital commitment (rated as main advantages by 27%), their flexibility (24%), and their cost transparency (21%).



Tien Tzuo,
CEO & Founder, Zuora

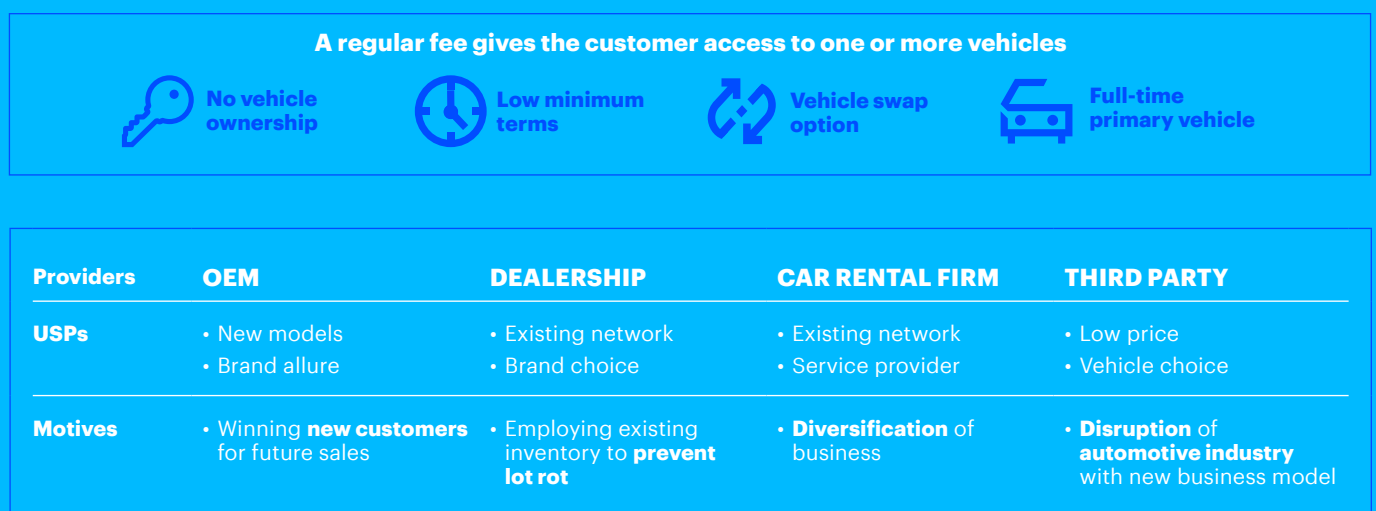


OEMs know that car ownership is dying. What consumers really want is access. Subscriptions make the hassles of owning a vehicle go away. To turn vehicles into new revenue sources, OEMs have to move beyond traditional CRM and ERP systems and adopt flexible monetization solutions. The winners are the ones that can quickly launch new services, build great digital experiences, and turn their customers into subscribers.



Young consumers are more open to subscriptions, showing up to three times higher preference for this model. For providers, the key benefits of car subscriptions include new customer segments with often high willingness to pay, as well as high customer lifetime value due to recurring revenues. Many OEMs also use subscription services to create interest in new EV models, offer the battery in a subscription model, or to pilot new sales models like mobile or direct sales. However, subscriptions require OEMs to move beyond traditional CRM and ERP systems and adopt flexible, agile monetization solutions.

Figure 8: Subscription offerings in the automotive industry



5

E-commerce and direct sales will increase both data availability and quality

OEMs must use the new possibilities of big data, especially for pricing and discounting.

In the indirect sales models, dealers almost exclusively own customer access, transactions, and resulting data. In D2C, this fundamentally changes because OEMs have full visibility and control over sales for the first time. They have data about pricing (average transaction prices), customers (orders, web traffic, loyalty), and vehicles (stock). Combining multiple data from different internal and external sources, such as online vehicle configurations, supply chain data, and competition data, gives pricing specialists the opportunity to leverage these insights with advanced analytics.



Andrea Castronovo,
CEO, Alphabet Italia Fleet
Management SpA



*I believe in big data pricing:
Leveraging data and analytics will be
much more efficient and effective to
derive optimal discounts and prices.*



10 million
data points are processed by
Carwow each day.

Due to e-commerce, not only quantity but also quality of data will increase tremendously. For instance, with unique customer IDs, even iterative and complex omni-channel customer journeys can be tracked. Unlike before, OEMs can trace customers' decision-making processes (e.g. prior model configurations or trade-offs before the ultimate purchase decision) and better understand demand for certain models and configurations.



6

OEMs will establish end-to-end revenue management based on predictive analytics

OEMs need revenue management systems to suggest optimal prices according to strategy and contextual variables.

While transaction price setting today is almost exclusively in the hands of dealers, in D2C OEMs must centrally and professionally steer pricing for all models across all channels. Using advanced analytics embedded in a central revenue management system, OEMs will be able to optimize prices on an ongoing basis, depending on brand, segment, or even model. Prices are adapted according to different generic strategic goals such as (1) maximizing volume or market share, (2) revenue, or (3) profits (see Figure 9).

Such data-driven systems, based on price elasticities, will ultimately support OEMs in managing the highly complex and quickly changing trade-off between required vehicle volume and margin goals. The higher the demand fluctuation and the smaller the respective market, the more complex are the requirements for the revenue management system. Adding further internal or external factors influencing prices, such as stock availability, model lifecycles, CO₂ emission targets, competitive actions, or overall macro-economic environment, can support skimming willingness to pay and increase demand and price forecast accuracy. AI-based models are even able to forecast the optimal price for a vehicle at a given time and location.



Georg Bauer,
Co-founder & President
Industry Relations, Fair

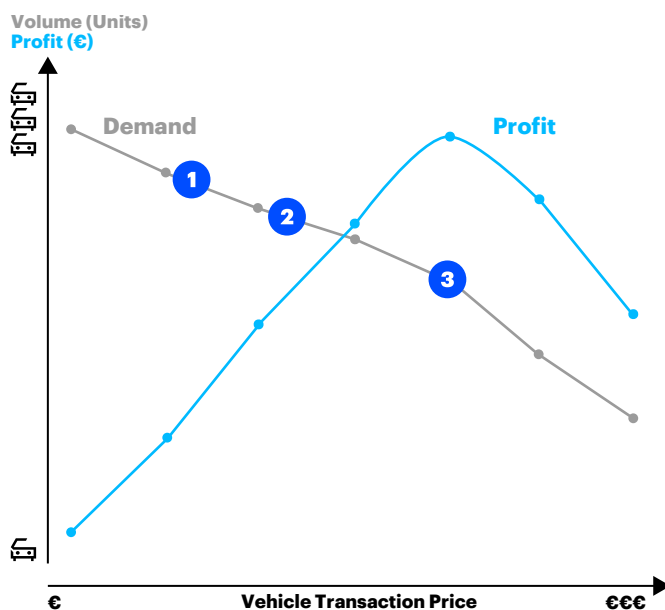


Transparent pricing is at the heart of Fair. We have developed Artificial Intelligence driven algorithms that ensure supply and demand are optimally matched so that our customers always get the best possible monthly payment for their car subscription. We want our customers to have the right car for the right price, and total peace of mind.



Figure 9: End-to-end revenue management based on vehicle transaction price setting

Price optimization according to strategic pricing objectives (Conceptual)



| GOAL | TRANSACTION PRICE |
|-------------------------------|----------------------------------|
| 1 Maximize Market Share/Sales | € Elasticity between 0 and -1 |
| 2 Maximize Revenue | €€ Elasticity = -1 |
| 3 Maximize Profit | €€€ Elasticity < -1 |

3. A transformation roadmap for pricing in a direct sales omni-channel world

OEMs that transition toward a D2C model can do so to different degrees depending on how much they want to disrupt their current indirect sales model. The three forms “Crawl”, “Walk”, and “Run” come with different implications and potential for pricing. In this section, we introduce a transformation roadmap for pricing in an omni-channel direct sales world examining the roles of price strategy, data and analytics as well as IT and technology.

3.1 Shaping price strategy: Build seamless omni-channel experience across purchase types

The role of the list price

Historically, list prices have been set and communicated by the OEM before they are gradually discounted. Companies have good reason for using list prices, both from an internal and external perspective (see Figure 10).

Figure 10: Internal and external functions of list price







INTERNAL FUNCTIONS OF LIST PRICE

- Key communication and controlling function (e.g. revenue forecasting and steering)
- Reference price integrated in IT and process landscape (e.g. as base for residual value)
- Major component in business cases (e.g. new product projects)

EXTERNAL FUNCTIONS OF LIST PRICE

- Anchor for competition and customer
- Leeway for adjustments and reaction to demand fluctuations
- Discounts perceived as “win” for customer

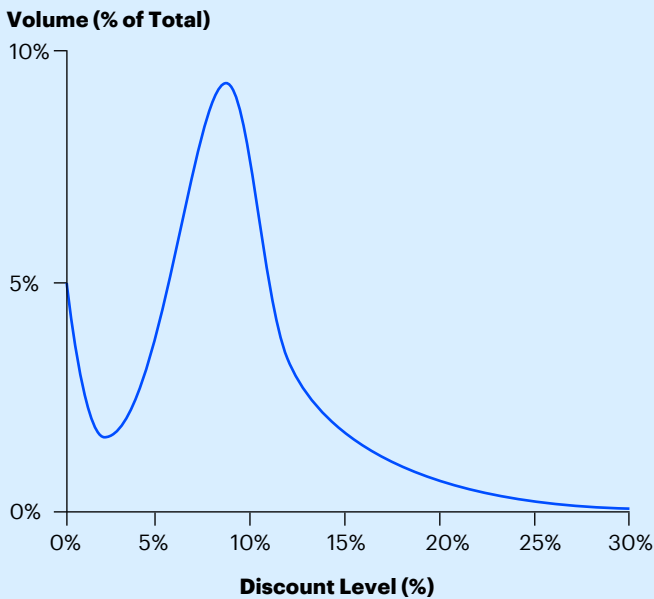
Figure 11: Three levels of maturity of D2C transformation

| |  “CRAWL” |  “WALK” |  “RUN” |
|-------------------------------------|---|---|--|
| Degree of D2C transformation |  |  |  |
| Price Strategy | Soft Agency <ul style="list-style-type: none"> • OEM sets and communicates list prices • Agent holds budget to determine tacticals freely; responsible for final transaction price • Limited cross-channel price control and price alignment due to agent flexibility | Hybrid Agency <ul style="list-style-type: none"> • OEM sets and communicates list prices and defines tactics • Agent selects tactics to apply to customers • Agent with flexibility to give discounts out of own commission | Full Agency <ul style="list-style-type: none"> • OEM sets and communicates transaction prices and ensures same prices across channels • Agent not allowed to give discounts, full pricing power by OEM • OEM with full price control across channels |
| Data & Analytics | <ul style="list-style-type: none"> • Traditional pricing based on market, customer, and product data • Price differentiation done by dealer, based on experience | <ul style="list-style-type: none"> • Rule-based pricing (e.g. discounts based on stock age) • Predictive pricing (e.g. by identifying price elasticity driver) | <ul style="list-style-type: none"> • Intelligent pricing, fully automated price setting • Discounts based on forecasts from other functions • Optimized price-volume steering |
| IT & Technology | <ul style="list-style-type: none"> • Rule-based pricing tool (software or advanced Excel) • Multiple legacy systems | <ul style="list-style-type: none"> • Advanced pricing platform, e.g. MS Dynamics CRM 365 Platform (rule-based discounts) | <ul style="list-style-type: none"> • State-of-the-art automated pricing solution • Advanced revenue management |

Optimal transaction price setting in D2C

D2C puts the responsibility for transaction price setting in the hands of OEMs, with all benefits and complexities. OEMs must reflect changes in channel economics as well as market intricacies in a new price setting approach with only minimal data on actual and historical transaction prices. At the same time, OEMs can now actively manage a greater share of the market margin and move closer to the customer, which results in greater knowledge about customer preferences and valuable data on transaction prices.

Figure 12: Demand distribution across discount levels (conceptual illustration)



Data on current market transactions holds valuable information for OEMs to set their own prices. It can be used to approximate the shape of demand curves, determine acceptable discount ranges and set overall discount budgets. We analyzed transaction price data across markets and car brands, with the following findings:

- Overall, transaction prices are approximately normally distributed with an average discount of 8-12%
- Distribution illustrates that about 5% of cars are sold at list price and some are heavily discounted (“long tail”)
- Discount distributions vary by market and by OEM segment (volume, premium, or luxury)

Transaction price setting for OEMs requires them to decide on volume and margin targets. Therefore, OEMs will first need to make a strategic decision on whether they want to boost volume, maximize revenues, or focus on profit. For this, OEMs need to estimate existing transaction price distributions in the market. Based on the total absolute amount of discounts granted, an overall “discount budget” should be derived and optimally re-allocated to segments and models to achieve defined objectives.

A transaction price analysis for three exemplary markets (see Figure 13) suggests overall discount budgets of 8-14% of revenue. The differences across markets and vehicle segments highlight that it is critical for OEMs to properly reflect the market and competitive context for which they are setting overall discount budgets to achieve stable volumes. The example of the luxury segment in Figure 13 shows that in a market with high discount spreads, volume losses can imply proportionally less decline in revenues.

The three megatrends introduced in chapter 1 (e-commerce, direct sales, electric vehicles) will significantly impact the shape of the discount distribution. For example, increased transparency and competition due to e-commerce will lead to higher average discount levels, while discount spread is reduced (see Figure 14).

A detailed analysis of the differences between EVs and ICEs is provided in Figure 15, where we compare discount levels and spreads of ICEs and EVs for Germany and UK.

Figure 13: Transaction price analysis for three exemplary markets

| | Volume OEM Italy | Premium OEM France | Luxury Model Cross-Country |
|--|------------------|--------------------|----------------------------|
| Avg. discount level (in % of list price) | 12-14% | 8-10% | 10-12% |
| Avg. spread (standard deviation) | 4-5% | 3-4% | 5-7% |

Figure 14: Impact of megatrends on discount distribution (conceptual illustration)



| | | | |
|-------------------------------|---|---|---|
| Average Discount Level | Higher, due to transparency and competition | Lower, due to intra-brand savings (1-2%-pts.) | <p>Short term Lower, due to higher residual value, lower TCO, government subsidies, and higher demand than supply (long waiting periods)</p> <p>Long term Increasing, but still lower than ICE, due to increase in supply and fewer subsidies</p> |
| Discount Spread | Lower, due to higher transparency and customer awareness for "real" transaction price | Approaching 0, due to fixed price and full price control of OEM | <p>Short term Higher, due to fewer options (12% lower differentiation potential)</p> <p>Long term Decreasing, but still higher than ICE, due to increase in options and differentiation potential</p> |

Figure 15: Comparison of discount levels and spreads for EVs and ICEs in Germany and UK in Q3 2019

| Germany | SUV | | Hatchback | |
|--|-------|------|-----------|-------|
| | ICE | EV | ICE | EV |
| Discount level (in % of list price, incl. subsidies) | 14.2% | 9.4% | 15.8% | 15.6% |
| Discount spread (relative standard deviation) | 0.4 | 0.6 | 0.5 | 0.7 |
| UK | | | | |
| Discount level (in % of list price, incl. subsidies) | 8.6% | 7.4% | 9.5% | 19.7% |
| Discount spread (relative standard deviation) | 0.6 | 0.6 | 0.5 | 0.5 |



OBSERVATIONS

Generally lower discount levels for EVs (exception in UK for hatchbacks due to high absolute governmental support – included in discount figures – and large share of low-priced vehicles).

In Germany, higher relative discount spreads for EVs compared to ICEs, in UK comparable relative discount spreads between EVs and ICE.



CONCLUSION

Tendency towards lower discount levels and higher spreads for EVs as customers need to be captured with a product that is less differentiable.

Source: Carwow (EVs without Tesla)

In a soft and hybrid agency, OEMs continue to set and communicate list prices, and they leave final transaction price setting to agents (within some limitations). However, in a full agency, OEMs virtually eliminate external list prices and only communicate transaction prices to customers. This leaves two options for the “old” list prices: Either they are set equal to the communicated transaction prices, or they remain at the old level to still be used for internal processes. In either case, they are increasingly invisible for customers.

The role of the transaction price

In a soft and hybrid agency, the agent is responsible for transaction price setting. We recommend the full agency model, where the OEM has full price control and the agent is not allowed to give any discounts. Our experience shows that whenever agents are left with discount flexibility, they will max out all possible discounts, reducing price stability as well as intra-brand savings.

Pricing in an omni-channel world

In addition, different price communication of OEM (list prices in online store) and agent (transaction prices in showroom) in a soft and hybrid agency result in discrepancies between online and offline prices. This ultimately brings pricing conflicts and heavily competing channels. In most cases, the e-commerce channel is in a strategic disadvantage due to (at least initially) higher communicated price levels compared to offline.

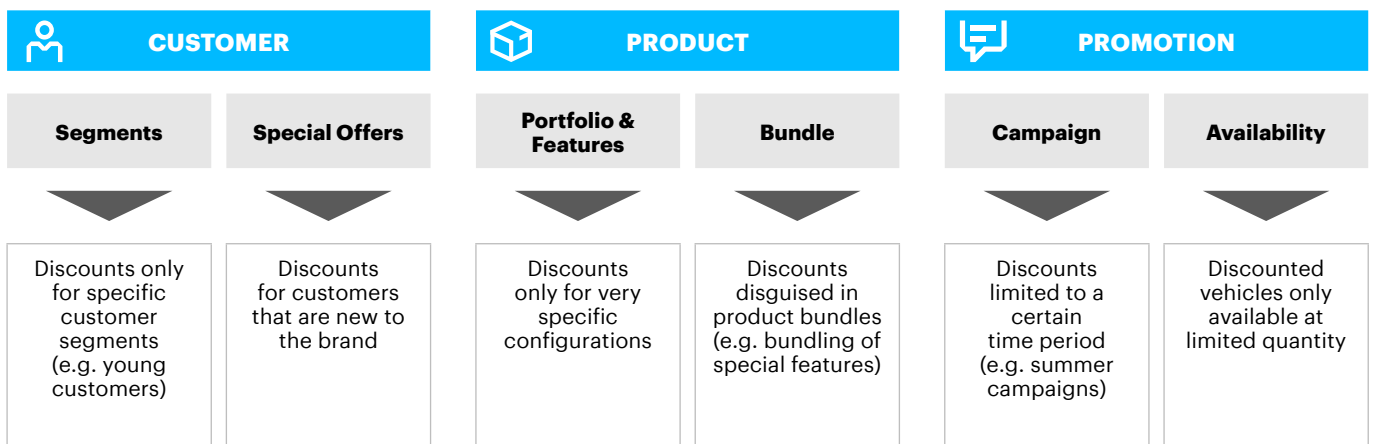
Only a full agency allows OEMs to fully control and steer transaction prices across all online and offline channels. It is recommended (and in some markets legally required) to pursue a same-price strategy across all channels to give customers transparency and the assurance that they are getting the same deal online and offline. Nonetheless, price differentiation is possible via “price fencing”. While following a coherent omni-channel price strategy, differentiation is achieved without cannibalization, based on dimensions such as customer (e.g. discounts for new customers), product (e.g. discounts for specific models and special equipment), and promotions (e.g. timely restricted offers and incentives; see Figure 16).

Balancing pricing and channel-partner remuneration across different types of offerings

Prices not only need to be harmonized across sales channels but also among different types of offerings. With cash purchases and financing, customers acquire ownership of the vehicle. With leasing and subscription, they get access to a vehicle for a specified time. Obviously, for the latter, customers pay the depreciated value over the usage duration. Still, OEMs need to make sure their pricing is perceived as indifferent to the offering form across channels, unless some offerings are being pushed for strategic reasons.

Not only prices, but also the remuneration of channel partners needs to be harmonized across offering forms. Remuneration must cover the agent’s sales cost (e.g. consultation, test-drive).

Figure 16: Overview of potential price differentiation and fencing strategies across channels









It also needs to be designed in a way that keeps agents from systematically pushing certain offerings in favor of others, in a way that is against the interest of the OEM (e.g. pushing short-term over long-term contracts).

For purchases in cash or with financing, total agent remuneration (commission and bonus) is typically 4-7% of the vehicle list price, depending on market and OEM segment. For leasing and subscription models, the bonus part of the remuneration (typically 1-2%) should be lower since the vehicle is not actually sold. In addition, leasing and subscription contracts tie the customer to the agent for service and maintenance, justifying lower total remuneration. In the specific case of a subscription in which the customer pays a rate for an “all-in” offering, the amount allotted for aftersales services needs to be forwarded to the agent as part of the remuneration or be billable to the OEM.

3.2 Crunching the data: Leverage direct sales to set and optimize prices across purchase types

D2C sales requires OEMs to take over end-to-end pricing responsibility for the first time, including transaction price setting. OEMs need to ramp-up their pricing capabilities and learn how to use newly accessible data for pricing. To implement an advanced price setting and price optimization capability, companies should take a staged approach. As they progress, companies’ price setting and revenue management will become more advanced and intelligent (see Figure 17). However, that also means that companies will have higher requirements for data and processing, as well as analytics.

Figure 17: Staged approach to intelligent pricing

| |  “CRAWL” Manual Pricing |  “WALK” Rule-Based Pricing |  “RUN” Intelligent Pricing |
|---------------------------------------|--|---|--|
| Degree of pricing intelligence |  |  |  |
| Goal | Simple rule-based discounts and transaction prices | Optimized rule-based pricing | Highly automated, AI-based pricing |
| Analytics Approach | <ul style="list-style-type: none"> • Basic price diagnostics and exploratory analyses and simulations in MS-Excel • Mostly manual transaction price setting | <ul style="list-style-type: none"> • Rules set by price manager based on descriptive analyses • Basic price elasticities in place incl. revenue simulations | <ul style="list-style-type: none"> • AI-based optimized transaction price points • Parametrized price rules • Trained models to optimally steer revenue based on price elasticities |
| Data | <ul style="list-style-type: none"> • Historic transaction data (mostly own retail, financial services) • Internal sales data (e.g. number and type of vehicles, equipment) • Market research data (e.g. mystery shopping) | <ul style="list-style-type: none"> • Historic and harvested transaction data • Multiple data included (e.g. vehicle type, stock age, web configurator, CO₂ regulation, competition via price scraping) | <ul style="list-style-type: none"> • Fully automated data harvesting • Data quantity and quality extended (e.g. external data, web browsing, CDM & CRM data) |
| IT Intergration | <ul style="list-style-type: none"> • Set-up of pricing data base (transactions incl. invoiced prices) in local repository • Static pricing tool as stand-alone, little integration into IT | <ul style="list-style-type: none"> • Set-up of data lake and (rest-) interfaces to data bases and pricing tool • Increasingly automated price setting within guidelines | <ul style="list-style-type: none"> • Automated data pipelines and data loads into pricing engine • Highly automated price setting with near-time capabilities |

While some OEMs are collecting experience with rule-based pricing engines for optimizing discounts and campaigns, the future are big data-driven and highly automated pricing engines based on multiple internal and external data points. For instance, the strict CO₂ requirements across an OEM's fleet makes data-driven end-to-end pricing attractive, as near-time total fleet sales can be optimized based on multiple criteria (e.g. higher discounts for models with less emissions). The case study below illustrates an AI-based pricing approach yielding substantially better results than simple price rules.

CASE STUDY: Automated AI-based pricing for global OEM

To automate vehicle transaction price setting, Accenture developed an AI-based neural network model that predicts prices based on a wide range of input factors, such as make, model, mileage and location. The algorithm was trained with more than 1 million data points including 3,000 models from more than 50 brands. The AI model was fit directly to the data and quickly outperformed rule-based approaches in terms of price accuracy.

3.3 Getting it right: Set prices productive in greenfield and brownfield landscapes

The transition won't be easy, given the current heterogeneous and decentralized landscape of multiple Dealer Management Systems. OEMs need to move to centralized pricing tools ("single source of truth") to run analytics, calculate adequate discounts for campaigns, and set optimal transactions prices. This means managing enormous complexities that result from the high product dependencies of many model derivatives, special equipment, and customization (especially in "built-to-order" markets such as Germany).

Therefore, OEMs need to transform currently decentral IT and capabilities into an operating landscape that can perform large scale analytics and data-powered pricing, collating the various data silos as illustrated in the "Run" scenario (see Figure 18).

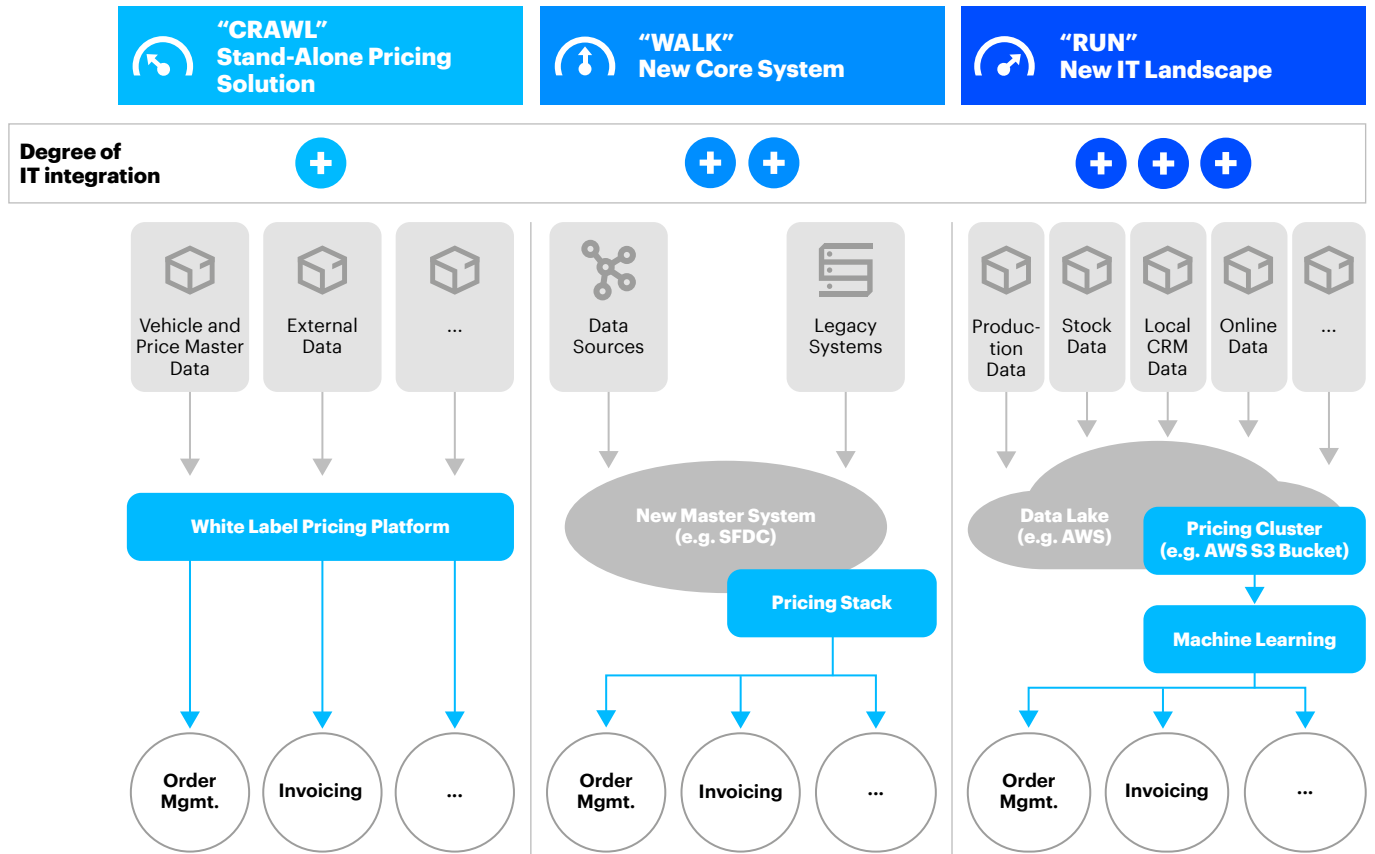
As a start, the "Crawl" scenario describes how the existing IT landscape is extended by a new, integrated "plug and play" pricing solution. This can either be an "off-the-shelf" solution or a custom-built pricing tool. For the tool to be implemented, interfaces to data sources and legacy systems (e.g. order management system) need to be built. Advantages are quick implementation and moderate effort and costs.

During transformation towards D2C sales in a "Walk" scenario, legacy IT is centralized and upgraded to a new core system (e.g. SFDC, SAP S/4 HANA, MS-Dynamics). This core system might already include a pricing and analytics stack (e.g. SFDC with SteelBrick and Einstein). This comes with the advantage of cost effectiveness and an already integrated landscape.

Finally, the "Run" scenario is the "big bang" and most radical approach: The entire IT architecture is fully transferred and operated on a cloud-based environment (e.g. AWS, MS Azure). All data is collated in a central data lake where machine learning algorithms are fed with data and outputs are transferred to existing systems (e.g. order management, invoicing). The AWS ecosystem, for instance, offers with "3S" simple storage services for data hosting. Its ready-to-use "Athena" and "Glue" features work with the data, which is then brought to life for big data pricing with embeddable algorithms.

In order to start this transformation journey, we recommend to team up in cross-functional squads to collect requirements for an advanced pricing solution covering strategy, analytics, and IT as illustrated in Figure 19.

Figure 18: Approaches for implementing a pricing solution



Basic requirements for pricing tool

When considering buying or developing a pricing solution, requirements need to be clearly specified across multiple areas, including price strategy, price setting, and price governance. Additional stand-alone tools or spreadsheets should be avoided so that the pricing tool is the “single source of truth” across and within markets.

Figure 19: Requirements for pricing tool (non-exhaustive)

| | |
|--|---|
| Price Strategy | <ul style="list-style-type: none"> • Prioritization of business needs and goals (e.g. optimization of volume, margins) • Definition of business logic and rules (e.g. price distance to competitors) |
| Price Setting, Automation, Optimization | <ul style="list-style-type: none"> • Automated transaction price and discount optimization • Near-time price updates |
| Pricing Analytics, Forecasting | <ul style="list-style-type: none"> • Real time transparency on aggregated market performance • Real time transparency on planned vs. actual tactical budgets and transaction prices • Simulation of price-volume effects |
| Price Governance | <ul style="list-style-type: none"> • Review, approval, and workflow functionalities (escalation stages) • Definition of users across HQ and markets |
| Competitor Price Watch | <ul style="list-style-type: none"> • Integration of price crawling of competitor prices and campaigns • External market data down to local levels (“market intelligence”) |

Conclusion

Three major changes are hitting the automotive industry: e-commerce, direct sales, and electric vehicles.

While each has powerful implications for pricing, their combination is profoundly disruptive and, as a consequence, pricing practices need to be revamped even faster than before. With all major OEMs currently piloting some form of D2C model, the need to centralize pricing and fundamentally change price strategy, data, and IT infrastructure are enormous.

During a determined transformation towards D2C, OEMs can fully take advantage of a revamped price management leveraging higher data availability and quantity. Advanced analytics and state-of-the-art software solutions that use this data across purchase types and channels will bring pricing to the next level – cumbersome price negotiations, gratuitous special discounts from sales people, or staggered pricing approaches at different sales levels should belong to the past.

However, even in today's prevailing indirect sales model OEMs can start acting by innovating price strategies and price models such as subscription as conventional approaches are increasingly challenged by high price transparency through e-commerce and different economics of EVs.



Further Readings

1. The Future of Automotive Sales

<https://www.accenture.com/us-en/insights/automotive/future-automotive-sales>

2. Pricing Intelligently for Competitiveness and Growth

<https://www.accenture.com/us-en/insights/strategy/pricing-growth>

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