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# McKinsey China Auto Consumer Insights 2024

## Evolution, not Involution

April 2024

## About the survey

In the fourth quarter of 2023, we surveyed 2,449 auto buyers in 19 major cities across China representing a range of demographic attributes, including first-tier, second-tier, third-tier, and fourth-tier cities, as well as North, Northeast, East, Central and South, Southwest, and Northwest China. The report divided respondents by age, gender, income, purchasing experience, and current vehicle type. Based on the decision-making process during car purchasing, this survey provides deep analysis of consumer attitudes, vehicle preferences, purchasing habits, driving experiences, and after-sales needs.

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Cover image:@Getty Images

# Executive summary

The rapid development in electrification and smartification of the China auto industry is undeniably shaping and transforming the preferences of auto consumers in China. Reciprocally, the evolving preferences and behaviors of Chinese consumers are exerting a profound influence on the China auto industry, compelling it to embrace electrification and smartification with accelerating investments in these two areas. Such mutual influence is not only pivotal for the future of the Chinese auto industry but also poised to profoundly impact the technology development, business models, and competitive landscape of the global auto industry in the next five to ten years.

To gain deeper insights into the evolving preferences of Chinese auto consumers, McKinsey recently conducted the latest round of its annual China Auto Consumer Survey. Based on the responses, we have identified the following six key findings.

1. **Consumers are continuing the trend of trading up**
   The China auto market continues to introduce various competitive new models of smart EVs, gradually increasing the attractiveness to consumers and shifting their attention toward mid-and high-priced models. Meanwhile, escalating price competition's impact on consumer decision making remains limited, with 80 percent of respondents indicating that price competition hasn't accelerated their vehicle purchase decisions.

2. **Perceptions of EV and ICE brands are diverging**
   Multinational OEMs no longer command premium prices, and their brand halos are almost gone, a trend especially evident in the EV industry. Meanwhile, owners of traditional premium MNC brands are switching to premium Chinese EV brands—a trend flowing almost entirely in one direction.

3. **EV penetration is rising fast, with a hidden concern of charging anxiety**
   EV consumers making purchasing decisions are increasingly considering the performance of the vehicles themselves, rather than regulatory incentives such as free license plates. Also, the acceptance of EVs by Chinese consumers has seen its first-ever decline as EV charging infrastructure is deployed slowly in some areas. The situation highlights the extreme importance of optimizing charging infrastructure to support the sustained development of the EV sector.

4. **Direct-to-consumers (DTC) model is winning consumer trusts, thanks to its high transparency across customer journey**
   Premium Chinese EV brands have adopted omnichannel direct-to-consumer (DTC) models, which have achieved remarkable customer satisfaction. Even in after-sales maintenance, where the previous year's survey found a performance gap with traditional OEMs, premium Chinese EV brands are catching up.

5. **Autonomous driving (AD) enjoys great popularity, but chance of monetization is coming under pressure**
   Consumer demand for AD solutions continues to increase. However, the free-software strategy of top technology-oriented OEMs has made consumers less willing to pay for AD technologies. Among those willing to pay, the amount they are willing to pay has declined.

6. **Consumers are aware of low-carbon vehicles but less willing to pay a premium for them**
   Nearly 70 percent of Chinese consumers are aware of low-carbon vehicles and willing to pay extra for them, but both the willingness to pay and the amount they would pay have declined.

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We see the industry evolving, not involuting, under pressure. Guided by Chinese consumers, the EV sector's growth at full speed is now an inevitable trend, and new consumer preferences and behaviors are emerging and developing. However, the fundamental commercial behaviors are constant: meet diverse consumer needs and create reasonable economic value.

# 1 Consumers are continuing the trend of trading up

**Key insights:**

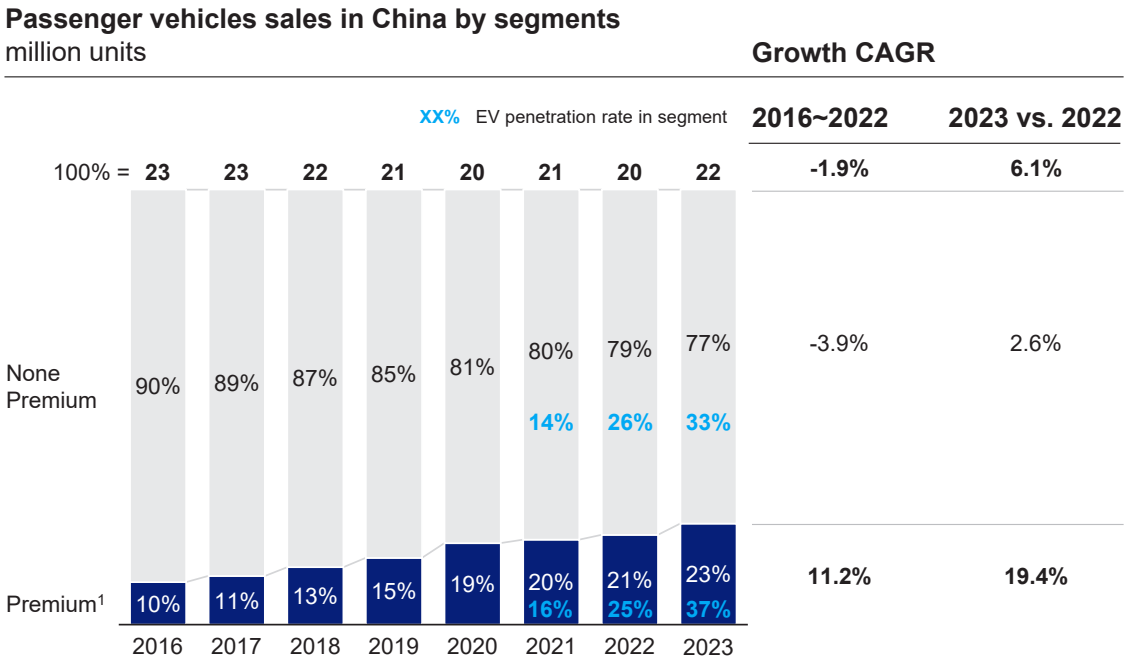
- Trading up continues to be popular among Chinese consumers, and the market share of premium vehicles continues to grow
- Meanwhile, the share of consumers who say they would like to trade down has dropped significantly compared with the results of the survey conducted a year earlier
- The intense price competition that has been occurring in China has had a limited impact on stimulating consumption

## The desire to trade up is boosting sales of premium vehicles

Over the past few years, more and more Chinese consumers have been upgrading their vehicles. As a result, the market share of premium models increased from 10 percent of passenger vehicles in 2016 to 23 percent in 2023 (Exhibit 1).

Exhibit 1

### In China, the premium segment of passenger vehicles continues to post double-digit growth in 2023




1. Premium car definition: premium brands based on consumer perception, including traditional premium brands and emerging premium EV brands.

Source: China New Car Insurance Registration Database

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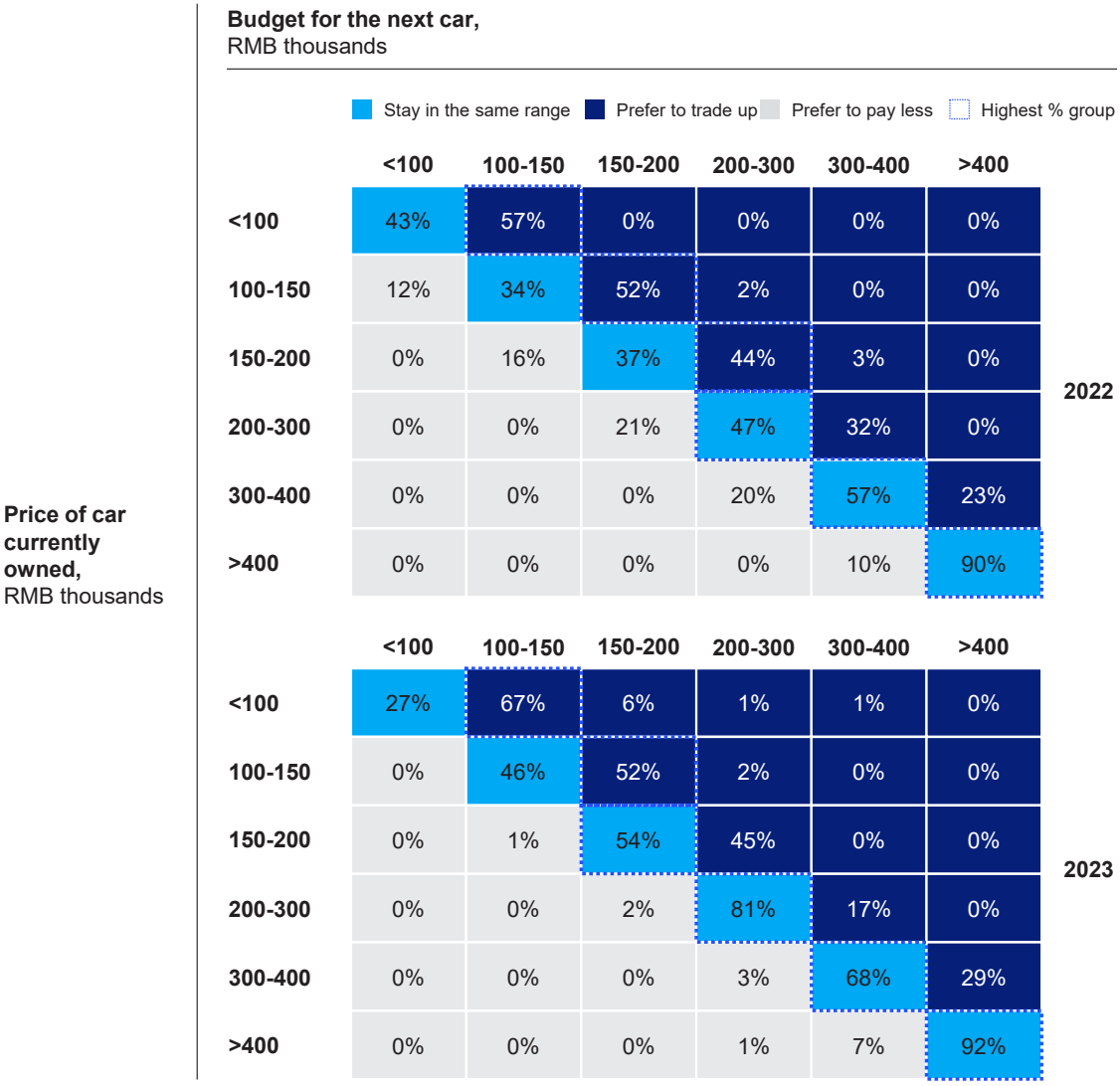
According to the results of our latest survey, Chinese consumers maintain a strong desire to upgrade in their next car purchase, particularly those whose existing car is priced below RMB 200,000 (Exhibit 2).

- Most likely to trade up are those whose existing car is priced below RMB 100,000: more than 70 percent say they intend to trade up when they purchase their next car;
- Over 50 percent of car owners whose existing car is priced at RMB 100,000 to RMB 150,000 say they will trade up;
- Nearly 50 percent of respondents whose existing car is priced at RMB 150,000 to RMB 200,000 say they will do so;
- For the price segment above RMB 200,000, the most common choice among consumers is to stay where they are. In that segment, premium smart-EV models with great value for money are continually being introduced to the market. These attract relevant consumer groups, inspiring their rational thinking instead of constantly pursuing models with a higher price.

Exhibit 2

# Chinese consumers' desire to upgrade their vehicle remains strong

**Budget for the next car vs. price of car currently owned**
% of respondents




Source: McKinsey China Auto Consumer Survey (2023&24)

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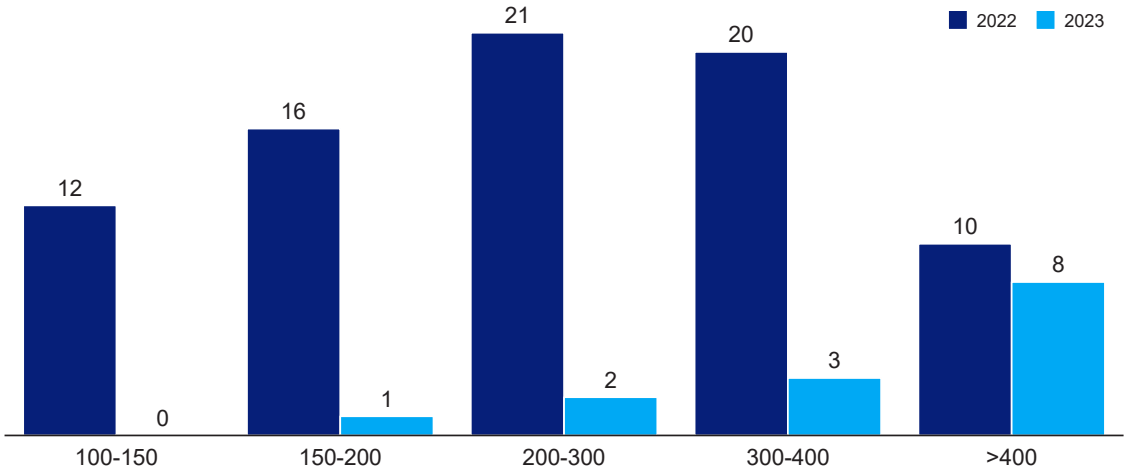
## The share of consumers seeking a downgrade has fallen significantly

In last year's report[1], many consumers in each price segment said they planned to purchase their next car in a lower-price segment. However, in the latest survey, a much smaller share of respondents expressed the same intention (Exhibit 3). Among the car owners whose existing car is priced at RMB 150,000 or less, the share seeking a lower price decreased to zero from 12 percent in 2022. In the segment of RMB 150,000 to RMB 400,000, the share of those intending to pay less dropped from about 20 percent in 2022 to about 2 percent in 2023.

Exhibit 3

### The share of consumers planning to downgrade is significantly lower in 2023 than in 2022

**Consumers expecting to "downgrade" by price of car currently owned**
% of respondents, RMB thousands




Source: McKinsey China Auto Consumer Survey (2023&24)

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Two factors seem likely to have contributed to the significant decrease of the share of those who tend to downgrade:

— Consumers show relatively stronger enthusiasm and confidence for new-car purchases in the post-pandemic era.

— China auto makers continue to introduce highly competitive new models of smart EVs. In 2023, more than 40 new EV models were launched in the price segment above RMB 200,000 alone, and almost all models were equipped with features such as comfort, infotainment functions, autonomous driving (AD), smart cockpit, and ultra-fast charging. As these new models' attractiveness to consumers gradually increases, consumers shift their attention to models in higher-price segments or stay in the same price segment of their existing vehicle instead of seeking a lower-priced vehicle.

[1] Thomas Fang, Mingyu Guan, Bill Peng, and Tony Zhou, "McKinsey China Auto Consumer Insights 2023," July 2023.

## Price competition that has been occurring in China has had a limited impact on stimulating consumption

Competition based on price is gradually intensifying in the China auto market. With mind-blowing high-tech functions (for example, city area navigation-on-autopilot, advanced smart voice assistant, electric suction doors, 800V architecture, ultra-fast charging, and air suspension) at attractive prices, the newly launched models keep refreshing consumers' price perceptions. Did the intensifying price competition stimulate the desire to purchase a new car, or did it simply help create a group of consumers who want to wait on the sidelines?

Our survey asked consumers how the price competition has affected their decision about purchasing a new car. The responses suggest that that the impact was limited:

— The largest share of consumers (64.1 percent) say they are neutral, meaning the price competition does not affect their purchase decision (Exhibit 4).

— Another 16.4 percent say the impact is negative——that is, the price competition will inhibit or delay their purchase.

— The remaining 19.4 percent express a positive impact, meaning the price competition has boosted or accelerated their purchase decisions.

Exhibit 4

### Price competition has limited impact on consumers, with more than 80 percent of consumers report no positive role for price competition in their purchase decisions

'Does the price competition make a positive or negative impact to your new car purchase decision?'

**Consumer attitudes towards the price competition**
% of respondents


Source: McKinsey China Auto Consumer Survey (2023&24)

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The proportion of respondents saying the impact is positive is about three percentage points higher than the percentage reporting a negative impact. As a result, price competition appears to have stimulated the overall China car market, but only slightly. In addition, the segments reporting a neutral or negative impact total more than 80 percent of respondents, meaning most people surveyed observe no positive role of price competition in their purchase decisions. The evidence points to a limited overall impact of competing on price.

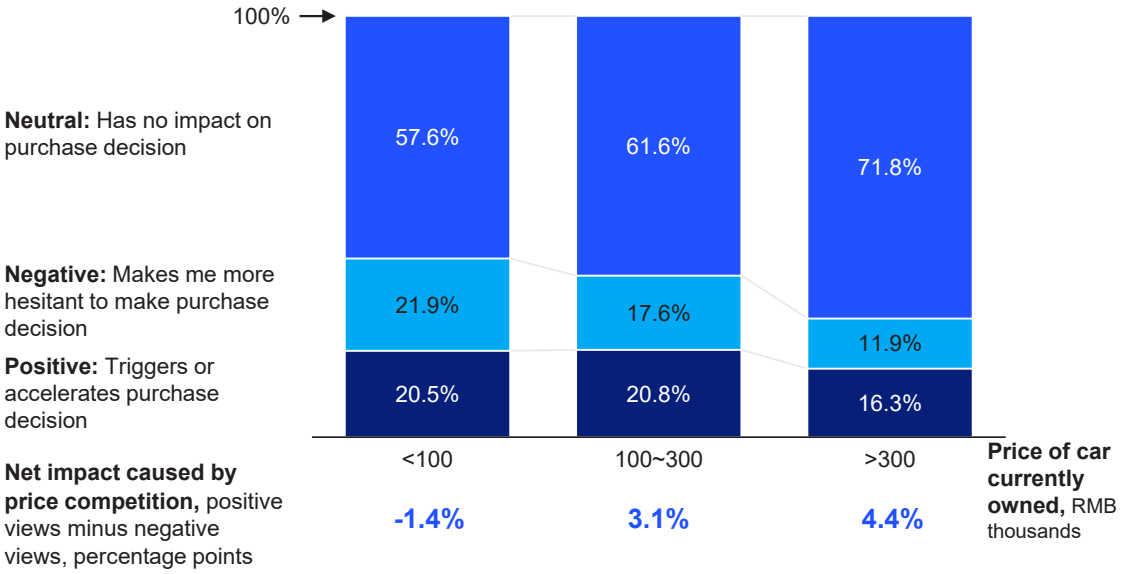
The impact of price competition varies according to the price of respondents' currently owned cars. In the low-price segment, more consumers cite a negative impact than a positive one, and in the middle-price segment, the difference between positive and negative impact is only 3.1 percentage points (Exhibit 5). The net impact (positive minus negative) is greatest for the price segment above RMB 300,000, at 4.4 percentage points. We interpret this to mean that consumers in the low and medium price segments, facing a stretch of price competition, are more likely to expect further aggressive price cuts, so they adopt a wait-and-see attitude. Consumers in the high-price segment have stronger purchasing power and can respond more positively to favorable prices.

Exhibit 5

## Price competition have limited net impact for volume segment consumers, and may even result in losses

'Does the price competition make a positive or negative impact to your new car purchase decision?'

**Consumer attitudes towards the price competition (by price of car currently owned)**
% of respondents




Source: McKinsey China Auto Consumer Survey 2024

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# 2 Perceptions of EV and ICE brands are diverging

**Key insights:**

- Consumers' brand perceptions have significantly diverged: their initial consideration set differs according to the brand or type of car they own
- While premium Chinese EV brands have successfully attracted consumers with their competitive edge in smartification, many owners of traditional premium MNC brands are switching to premium Chinese EV brands
- Consumers' perceptions of Chinese car brands have greatly improved along both traditional and emerging evaluation dimensions, while the brand halo of traditional multinational company (MNC) players is increasingly challenged
- Nearly half of Chinese consumers are reluctant to pay high premiums for MNC brands, and the proportion is increasing

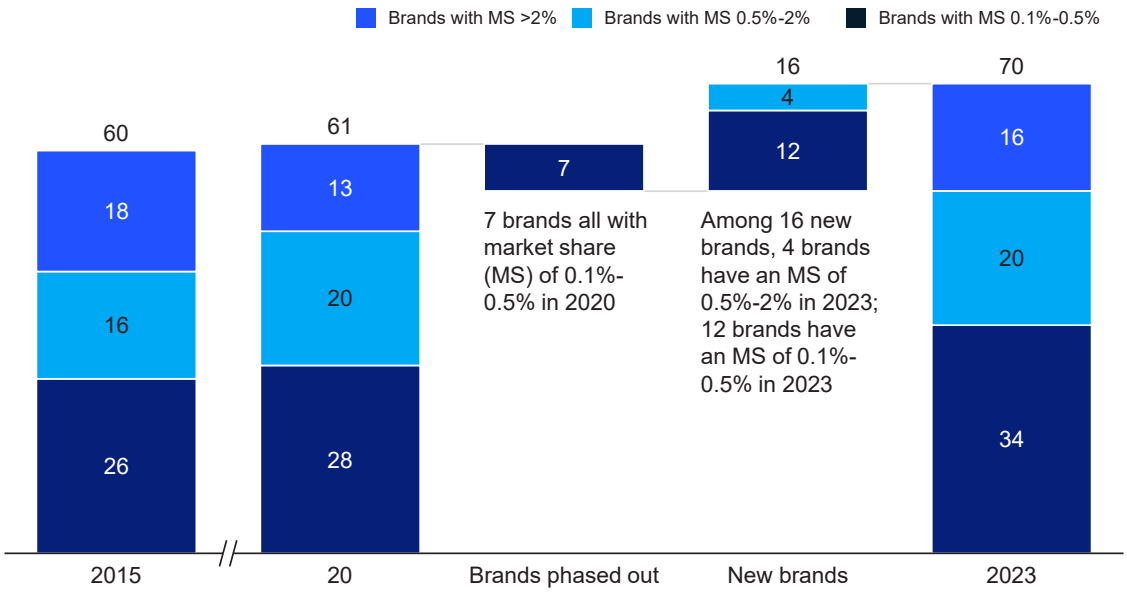
## Consumers' brand perceptions have significantly diverged; their initial consideration set differs according to the brand or type of car they own

Competition in China's passenger vehicle market is getting more and more intense. Several leading new EV brands are gaining considerable traction, while some weak, old brands are phased out. Over the past three years, 16 new brands have entered the auto sector, each with a market share greater than 0.1 percent. In the meantime, seven old brands have gradually vanished from the sight of consumers (Exhibit 6).

Exhibit 6

## Competition in China passenger vehicle market is intensifying as new brands catch up and old brands are phased out

**Major brands in the Chinese auto market[1]**




1. Only include the brands with market share over 0.1%, which overall account for over 99% of China total PV market.
Source: China New Car Insurance Registration Database

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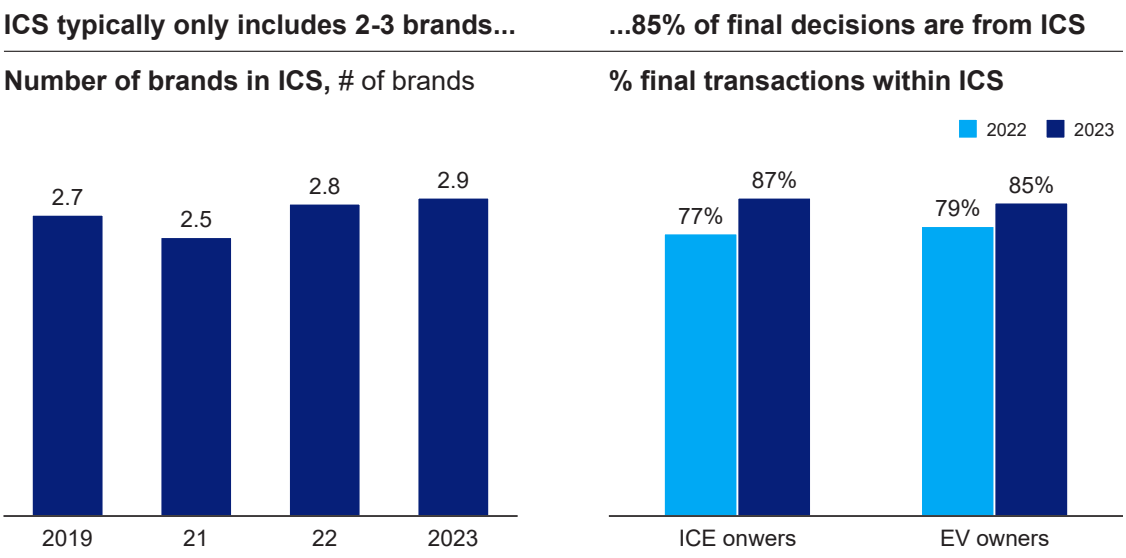
As significant changes take place in the brand landscape, how will consumer perceptions of individual brands evolve? Respondents' answers to several survey questions shed some light on this question.

When consumers consider purchasing a car, they develop an initial consideration set (ICS), collect more information about each brand in that ICS, and then make purchase decisions. According to our previous surveys, a consumer's ICS contains just a few brands—two to three on average—and the brand purchased, regardless of powertrain type, usually comes from their ICS (Exhibit 7). It is noteworthy that while the average number of brands in consumers' ICS is roughly unchanged, the likelihood of the final purchase coming from that set of brands has increased considerably. In other words, consumers' purchase decisions are getting more focused. OEMs can benefit from this trend by working more actively to put their brands into consumers' ICS and capture a greater mindshare when consumers develop an intention to purchase a car.

Exhibit 7

## Although # of optional brands increases, Chinese consumers continue to keep a shallow ICS (initial consideration set)




Source: McKinsey China Auto Consumer Survey across the years

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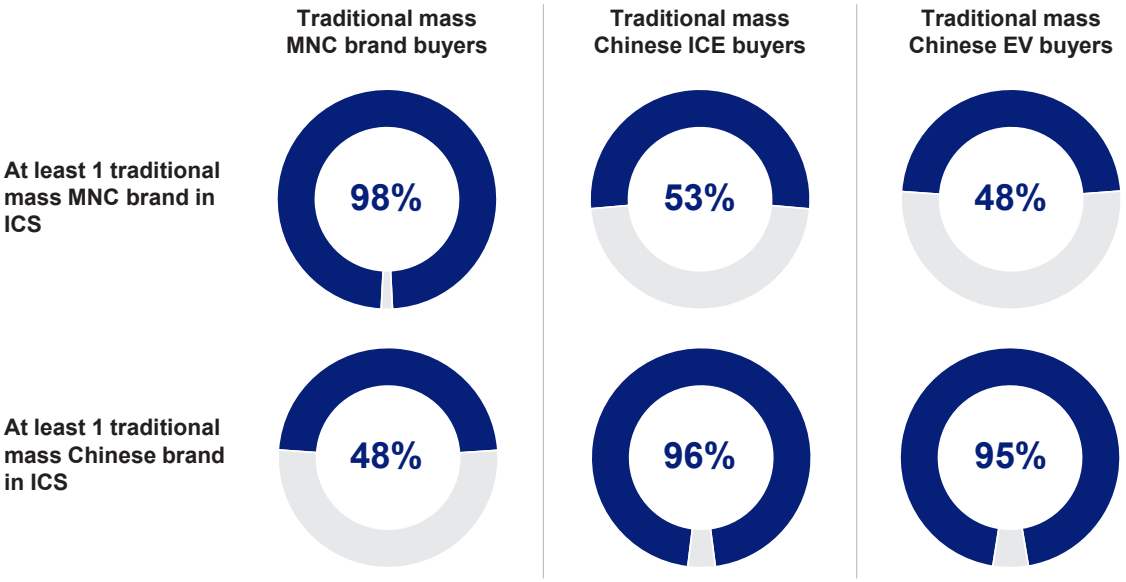
A more in-depth analysis of the data shows that ICS mixes vary for different groups of consumers. For example, consumers who purchased a mass brand vehicle over the past six months differ in their consideration of MNC versus Chinese mass brands (Exhibit 8):

Exhibit 8

## Consumers in the mass brand segment show different consideration in ICS (initial consideration set)

**ICS mix of different groups of customers who purchased a new car in the past 6 months**
% or respondents




Source: McKinsey China Auto Consumer Survey 2024

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— Among respondents who purchased traditional mass MNC brands, traditional mass MNC brands appear in nearly 100 percent of respondents' ICSs, but Chinese mass brands are present in only about 50 percent.

— Among those who purchased traditional mass Chinese brands, the opposite holds: traditional mass MNC brands appear in only about 50 percent of respondents' ICSs, whereas traditional mass Chinese brands appear in nearly 100 percent.

In this example, the differences in ICS mix between the different groups of mass brand vehicle owners tends to be consistent with respondents' highly divergent brand perceptions, including their awareness of Chinese and MNC brands (Exhibit 9):

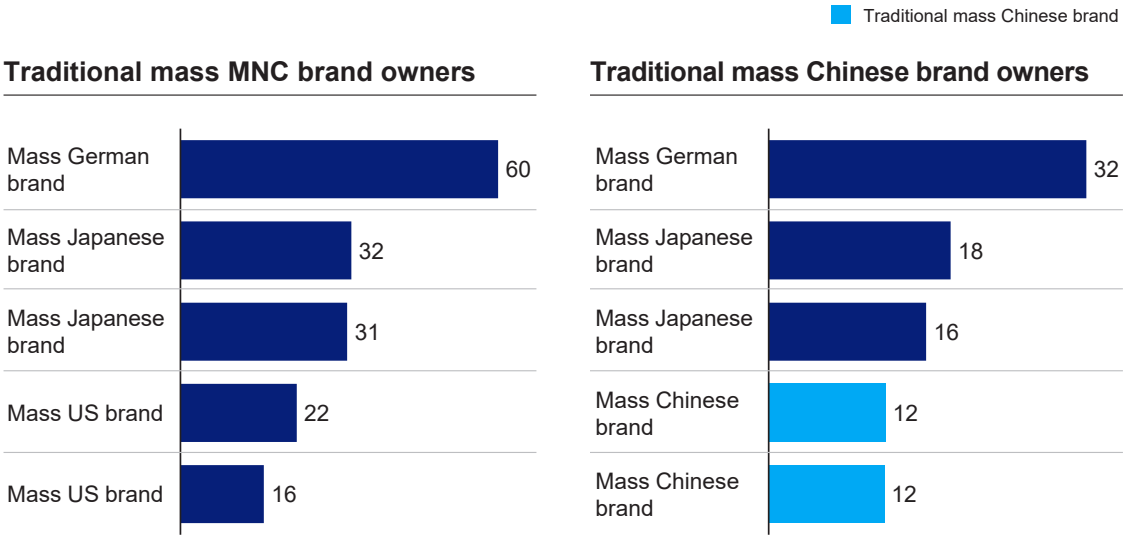
— For the respondents who own traditional mass MNC brands, the top five most recognized mass brands are all MNC brands.

— The owners of traditional mass Chinese brands include two Chinese brands in their choices of the top five most recognized mass brands. Also, they are much less likely to recognize top-ranking MNC brands than the owners of MNC mass brands are.

Exhibit 9

## A similar perception-diverge is happening to mass segment ICE consumers' brand recognition

**Top 5 most recognized ICE brands (mass) by different groups of customers**
% of respondents




Source: McKinsey China Auto Consumer Survey 2024

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Similar differences in ICS mix and divergence of brand perceptions are more evident in the survey results collected from premium brand owners:

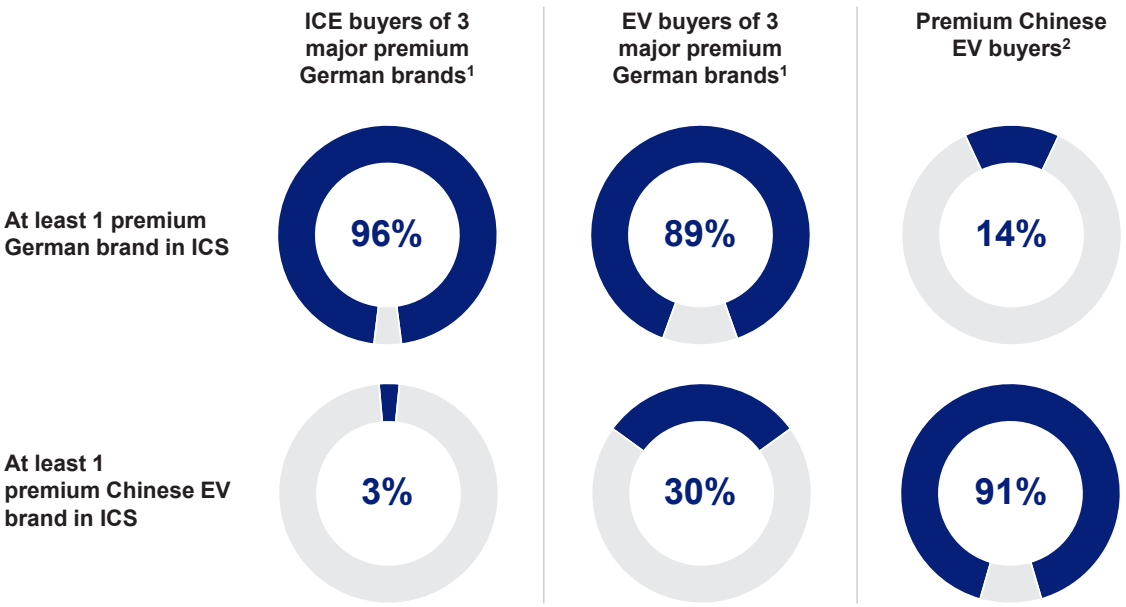
— Among respondents who purchased three major premium German brands, the appearance rate of these three brands in their ICS is nearly 100 percent for ICE vehicle owners and nearly 90 percent for EV owners (Exhibit 10). In contrast, few premium Chinese EV brands were in these consumers' ICS: almost zero for ICE vehicle buyers and less than one-third for EV buyers.

— In contrast, consumers who purchased premium Chinese EV brands rarely include the three premium German brands (appearance rate of 14 percent). And for these owners, the ICS appearance rate of premium Chinese EV brands is 91 percent.

Exhibit 10

## Consumers in the premium vehicle segment also show significantly-different consideration in ICS

**ICS mix of different groups of customers who purchased a new car in the past 6 months**
% or respondents




1. Incl. buyers of 3 major premium German brands.
2. Incl. buyers of 6 premium Chinese EV brands.
Source: McKinsey China Auto Consumer Survey 2024

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The distinct differences in ICS mix between premium segment owners are also consistent with their divergent brand perceptions (Exhibit 11):

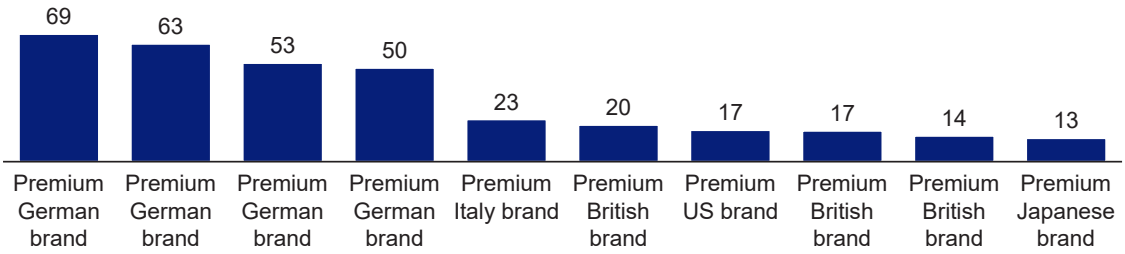
— Respondents, when asked to identify the brands they consider “premium”, regardless of powertrain type, mention only traditional MNC brands known for their ICE vehicles.

— When asked to focus on premium EV brands, respondents most often mention three emerging EV brands (that is, brands that sell only EV models). The top position is occupied by an American EV brand, followed by two Chinese EV brands. The three premium German brands offering both EV and ICE vehicles rank fourth, fifth and seventh.

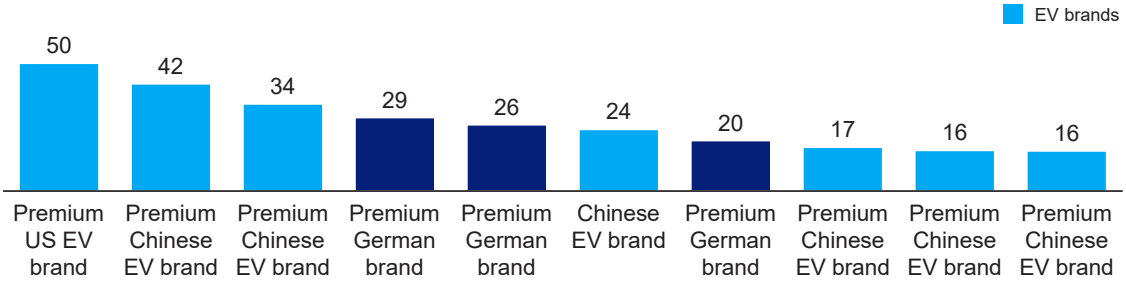
Exhibit 11

## The huge difference in ICS-mix among different vehicle groups is caused by consumers’ diverging perceptions on premium between ICE vs. EV

**Top 10 brands viewed as “premium brand (regardless of powertrain type)” among consumers**
% of respondents




**Top 10 brands viewed as “premium EV brand" among consumers**
% of respondents




Source: McKinsey China Auto Consumer Survey 2024

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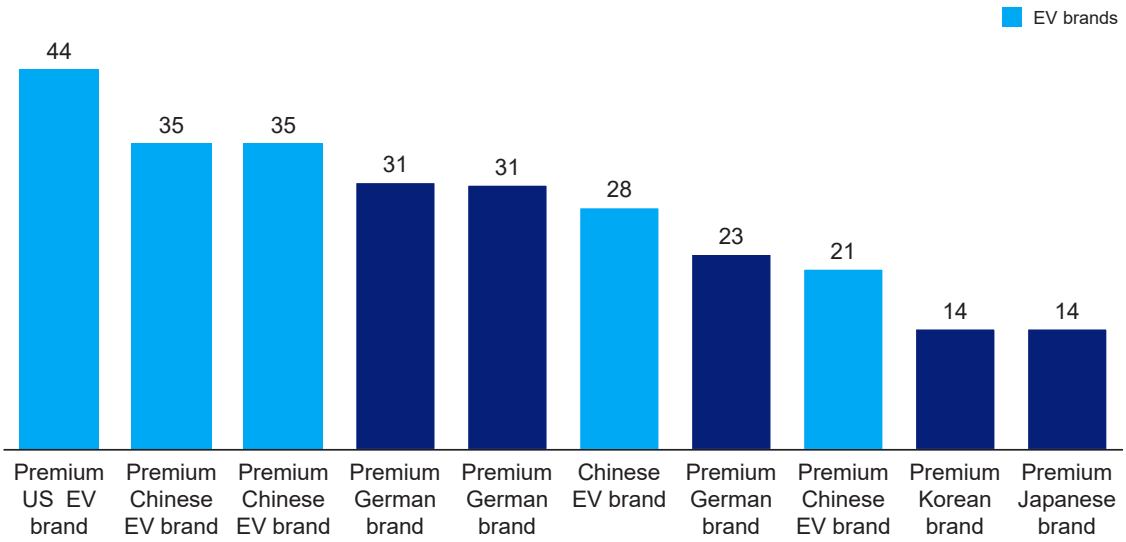
Even the consumers who own a major premium German brand rank these three German brands behind the American EV brand and two Chinese EV brands (Exhibit 12).

Exhibit 12

## Even owners of the 3 major German brand owners consider EV brands more premium in the EV domain

**Top 10 brands viewed as "premium EV brand" among 3 major German brand owners**
% of respondents




Source: McKinsey China Auto Consumer Survey 2024

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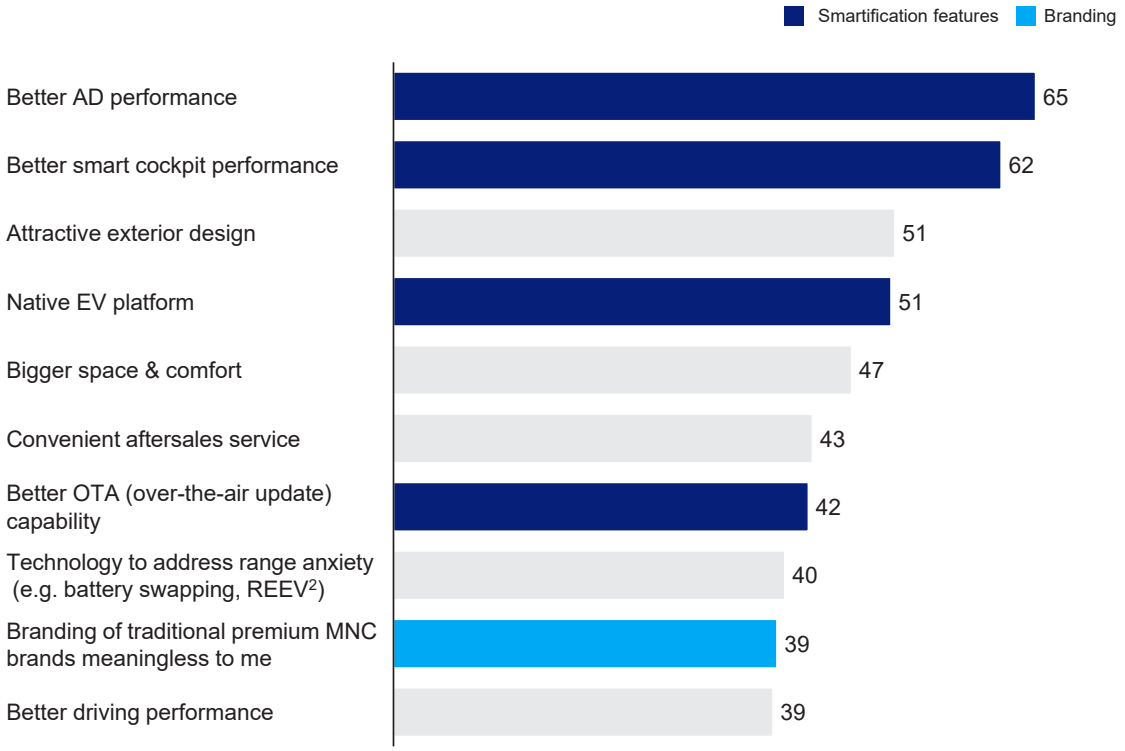
Through further research, we found that selection criteria differ among owners of premium vehicles bearing different brands. Respondents who own premium Chinese EV indicate that they chose premium Chinese EV brands primarily because such brands wield technical advantages in AD, smart cockpit, and original EV platforms (Exhibit 13).

Interestingly, when owners of traditional premium MNC EV were asked similar questions, they often identify a brand-related reason as the key consideration for their decision. Such responses includes a preference for the traditional premium MNC brands and a lack of confidence in premium Chinese EV brands (Exhibit 14).

Exhibit 13

# Smart features are core reasons consumers given to buy EV from premium Chinese EV brands

**Reasons for buying EV from premium Chinese EV brands, vs traditional premium MNC brands**
% of respondents[1]




1. Incl. owners of 6 premium Chinese EV brands.
2. Range extended electric vehicle.

Source: McKinsey China Auto Consumer Survey 2024

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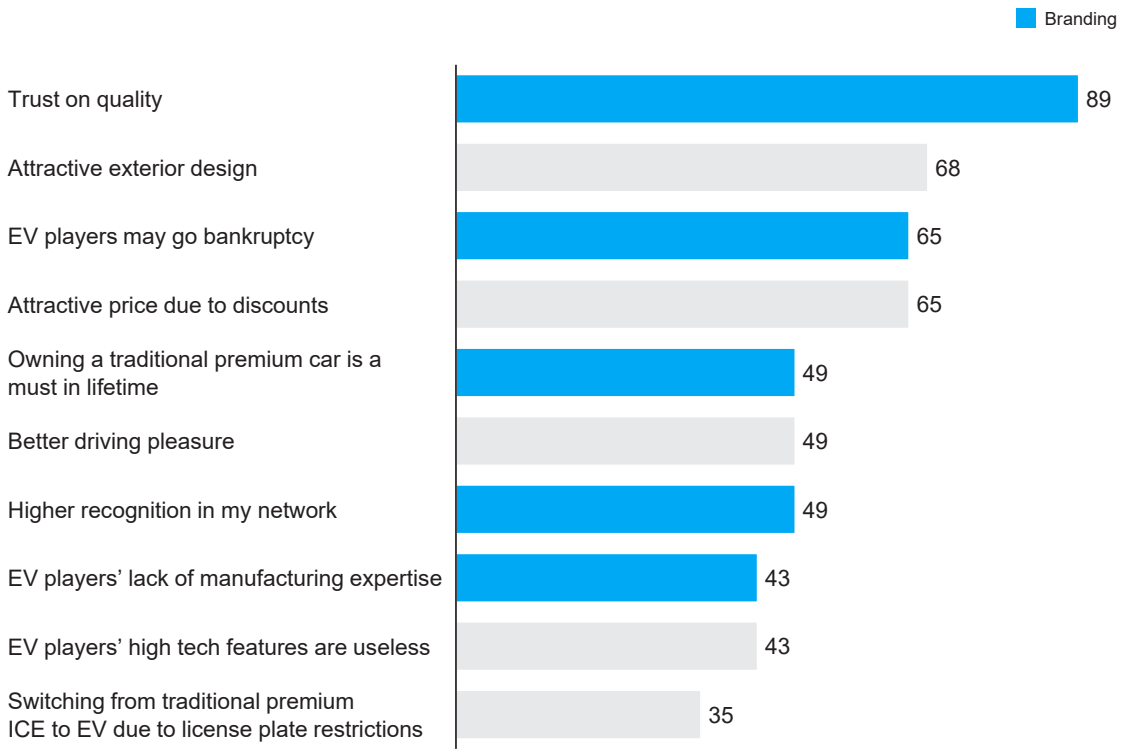
Exhibit 14

## ...while the traditional premium EV buyers are triggered by branding effects

**Reasons for buying EV from traditional premium MNC brands, vs premium Chinese EV brands**

% of respondents[1]




1. Incl. EV owners of 3 major premium German brands.
Source: McKinsey China Auto Consumer Survey 2024

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However, the traditional premium MNC brands cannot simply rely on favorable brand perceptions to stop the one-way churn of customers. Among our survey respondents who currently own a premium brand vehicle, have held the vehicle for more than three years, and plan to purchase a new one, we found that many traditional premium MNC brand owners are switching to premium Chinese EV (Exhibit 15). The trend mostly flows in one direction: 24 percent of respondents who own any of the three premium German brands say their ICS contains at least one premium Chinese EV brand, but only 7 percent of premium Chinese EV owners say their ICS contains any of these three German brands. These responses suggest that, when purchasing their next car, owners of the German brands tend to be more interested in premium Chinese EV brands than premium Chinese EV owners are in the traditional premium MNC brands. Thus, the probability of a traditional premium MNC customer switching to a premium Chinese EV brand is likely to be much higher than the probability of premium Chinese EV owners switching to MNC brands.

Exhibit 15

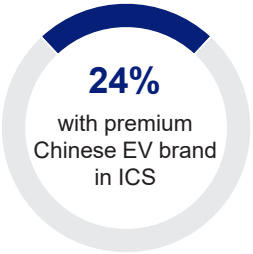
## Traditional premium brand owners are almost in a "one-way flow" to be converted to customers of premium Chinese EV brands

ICS for those who owns a car (for at least three years) and have the plan to buy a new one soon

**ICS mix for next vehicle of different groups of customers**
% or respondents

**% of customers consider brand from the other group in ICS for next car**

**3 major premium German brand owners[1]**




**Premium Chinese EV owners[2]**


1. Incl. owners of 3 major premium German brands.
2. Incl. owners of 6 premium Chinese EV brands.

Source: McKinsey China Auto Consumer Survey 2024

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## Consumer perceptions of Chinese car brands have greatly improved, while the brand halo of traditional MNC OEMs is increasingly challenged

How did consumer perceptions toward different types of brands come to diverge? In our opinion, a critical factor has been the significant progress achieved by Chinese car brands in vehicle quality, energy consumption, smartification, and electrification in recent years. This has contributed not only to the divergent brand perceptions but also to the increasing favorable opinion of Chinese brands. To test this idea, we listed several brand attributes—including traditional dimensions like quality, energy consumption, and safety, as well as emerging dimensions like smartification and electrification—and asked respondents to identify which of these attributes describe each brand. We observed the following patterns of responses:

— On traditional dimensions, such as energy consumption, driving pleasure, safety, and quality, Chinese brands are beginning to rank among the top five (Exhibit 16). For Chinese OEMs, this indicates significant progress over 2020, when no Chinese car brands were in the top five on these attributes.

— On new dimensions such as sense of technology, EV technology, AD, and smart cockpits, top-ranking brands are mostly Chinese players plus one American EV OEM (Exhibit 17). Traditional MNC brands rank low on the tally.

Exhibit 16

## Chinese brands are gaining recognition as leading brands in traditional dimensions, a big improvement vs. survey 3-years ago

| Top 5 brands' origin in a few traditional dimensions in latest survey % of respondents | | | | | | Number of Chinese brands in Top 5 | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2020 | 2023 |
| **Energy efficiency** | Korea | Japan | China | China | Japan | 0 | 2 |
| **Driving pleasure** | United Kingdom | Germany | Germany | China | China | 0 | 2 |
| **Safety** | Sweden | United Kingdom | Germany | China | China | 0 | 2 |
| **Quality** | Germany | Sweden | Germany | China | China | 0 | 2 |

Source: McKinsey China Auto Consumer Survey 2024

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Exhibit 17

## In rankings of more technology-intensive dimensions, Chinese brands are clearly recognized as market leaders over the traditional MNC brands

| Top 5 brands' origin in technology dimensions in latest survey % of respondents | | | | | | Number of Chinese brands in Top 5 | Number of traditional MNC brands in Top 5 |
|---|---|---|---|---|---|---|---|
| **Sense of technology** | China | China | China | United Kingdom | Germany | 3 | 2 |
| **Advanced EV technology** | United States | China | China | China | China | 4 | 0 |
| **Advanced AD technology** | United States | China | China | China | China | 4 | 0 |
| **Smart cockpit** | China | United States | China | China | China | 4 | 0 |

Source: McKinsey China Auto Consumer Survey 2024

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## Nearly half of Chinese consumers are reluctant to pay a premium for MNC brands, and the proportion is increasing

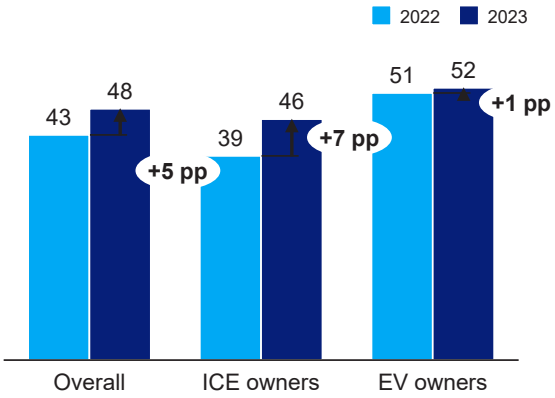
When it comes to the willingness to pay a premium, Chinese consumers have been willing to pay extra money for MNC brands over Chinese ones. However, previous McKinsey China Auto Consumer Surveys found that the premium advantage of MNC brands is dissolving, and the latest survey continues this trend: 48 percent of respondents say they are reluctant to pay premiums for MNC brands, up from 43 percent in the previous survey (Exhibit 18).

Exhibit 18

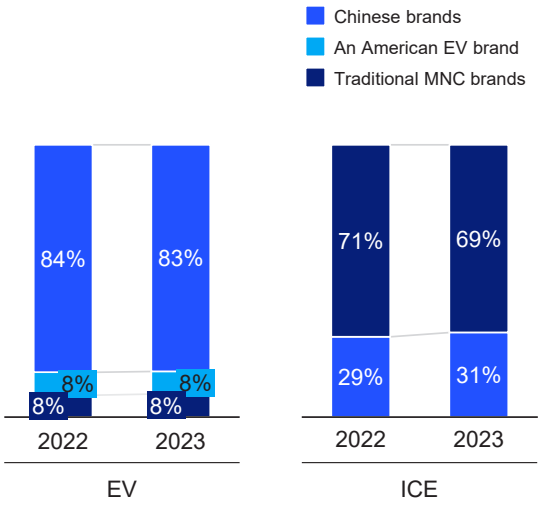
## Chinese consumers are becoming increasingly reluctant to pay a price premium for MNC brands

**Unwillingness to pay price premium for MNC brands over Chinese brands,** % of respondents

**By type of powertrain of existing cars**




**Market share of MNC brand passenger vehicles in China by powertrain**




Source: McKinsey China Auto Consumer Survey (2023&24); China new car registration database

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A similar evolution trend is evident in the feedback from ICE and EV owners. The percentage of EV owners who say they are reluctant to pay a premium has reached 52 percent, up slightly from 51 percent in 2022. The percentage of ICE owners sharing the same attitude has increased significantly from 2022's 39 percent to 46 percent in the latest survey. In the meantime, the signs of this trend can be seen in the evolution of the ICE market share: despite the absolute dominance of the ICE market by MNC brands, their market share has declined to 69 percent, down from the previous year's 71 percent.

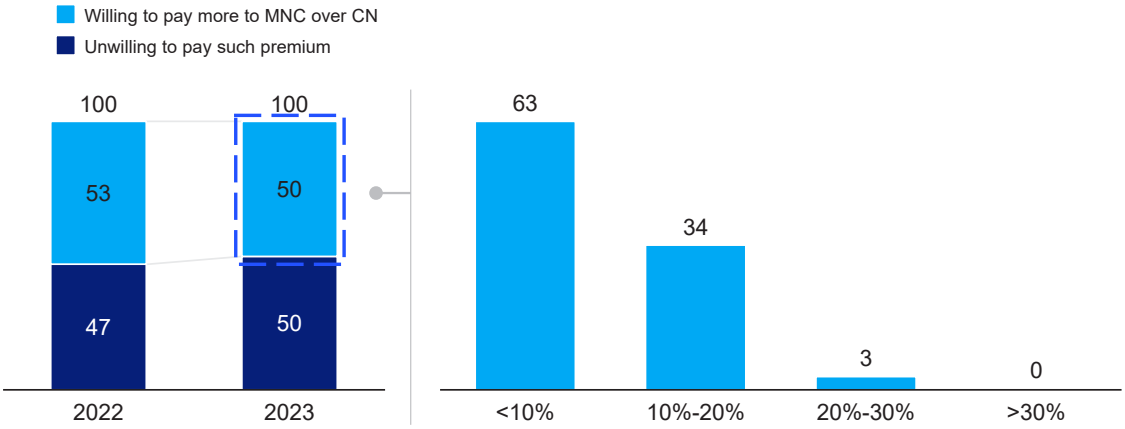
As for premium EV, 50 percent of respondents also say they are reluctant to pay a premium for traditional premium MNC premium brands, and the percentage is higher than in the previous year's report (Exhibit 19). Even for those who are willing to pay, the premium they are happy to pay is limited: only 3 percent of respondents say they can accept a premium of 20 percent over the selling price of premium Chinese EV brands.

Exhibit 19

## A similar trend observed in the premium EV category as well: even among the group that willing to pay MNC higher price, the scale of acceptable premium is very limited

**Willingness to pay more for EV from traditional premium MNC brands over premium Chinese EV brands[1]**
% of respondents

**The % of price premium you feel comfortable to pay for EV from traditional premium MNC brands over premium Chinese EV brands[1]**
% of respondents[2]




1. Incl. 6 premium Chinese EV brands.
2. Respondents who are willing to pay more for traditional premium MNC EV in the latest survey.
Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

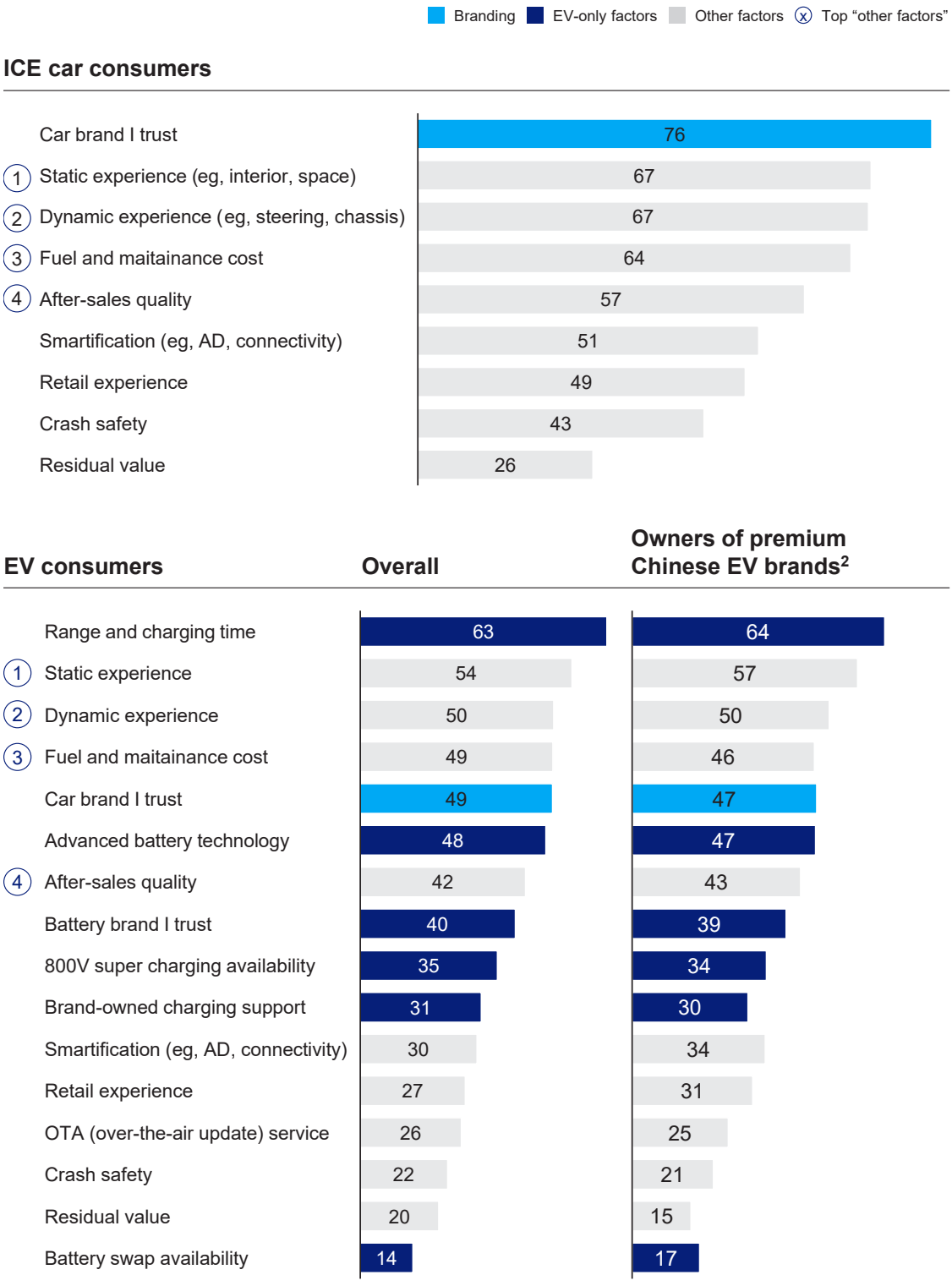
## Brand is now a relatively unimportant consideration for EV consumers, but as EV technology matures, its importance may increase

As Exhibit 18 showed, EV owners have become more reluctant to pay premiums for MNC brands. The same tendency is also reflected in consumers' key buying factors for vehicles with different powertrain types: for ICE consumers, brand prestige is the top consideration, whereas for EV consumers, brand ranks fifth in terms of importance (Exhibit 20).

Exhibit 20

# Not surprisingly, EV buyers are more pragmatic-oriented and have relatively lower rating on the importance of branding

KBFs of ICE car buyers vs. EV car buyers (% of respondents[1])




1. As the EV buyers are offered with more options, % of respondents between ICE vs. EV is not directly comparable.
2. Incl. owners of 6 premium Chinese EV brand.

Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

In McKinsey's previous China auto consumer surveys, there were many similarities in the key buying factors for both EV and ICE owners, and the pattern continues in this survey. For some common attributes, such as static experience, dynamic experience, total cost of ownership (TCO), and after-sales quality, when brand and EV-specific factors (such as range, charging, and battery) are excluded from consideration, the importance of these attributes to ICE and EV owners is evident. This continues to support the view we previously stated: as EV technology matures and when all EV brands gradually offer similar performance in terms of range, charging, and battery, the importance of brand for EV consumers may become close to its importance for ICE consumers.

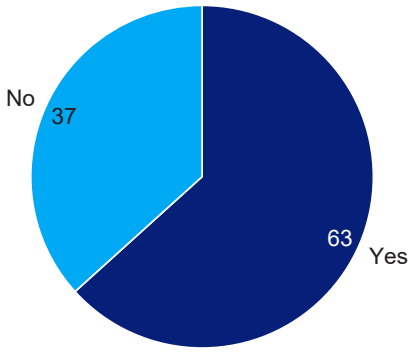
We also found that if traditional MNC brands can close their technical gaps in smartification and electrification, with their strong brands they can rebuild remarkable performance in China. In this survey, the owners of premium Chinese EV brands say that if traditional MNC brands significantly improve their competitiveness on dimensions like smartification and launch new models with performance comparable to that of Chinese smart-EV brands on technical dimensions, a considerable portion (63 percent) of premium Chinese EV owners may consider buying a new model from these MNC incumbents (Exhibit 21).

Exhibit 21

## Almost two-thirds of owners of premium Chinese EV brands would consider traditional premium MNC brands if they conque challenges on smartification and deliver capable EV

% of respondents[1]

'If traditional premium MNC brands have comparable EV models in terms of technology vs premium Chinese EV brands, would you consider buying the vehicles from the traditional premium MNC brand?'




1. Incl. owners of 6 premium Chinese EV brands.
Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company


3

# EV penetration is rising fast, with a hidden concern of charging anxiety

**Key insights:**

— As EV technology matures, a growing number of consumers are considering purchase of an EV, primarily because of vehicle performance

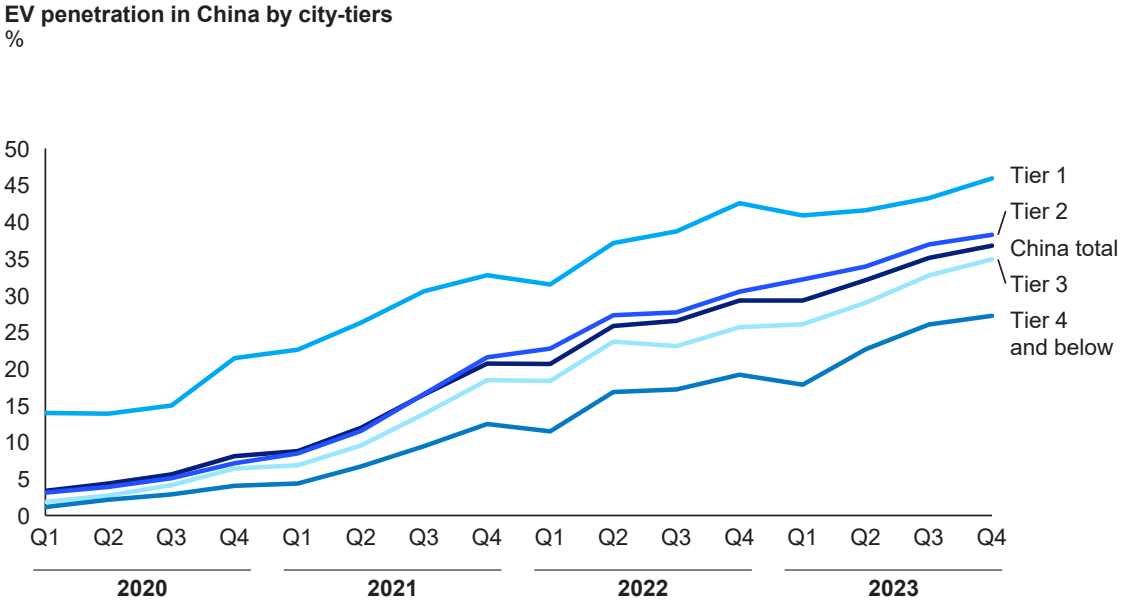
— Chinese consumers' acceptance of EVs has declined for the first time. Although a temporary phenomenon, it still signals the great importance of improving charging infrastructure for the long-term, sustainable development of the EV sector in China

## EV consumers are more likely to base purchase decisions on vehicle performance than to simply consider free license plate factor

China's EV penetration continued to increase rapidly in 2023. The increase happened not only in Tier 1 and Tier 2 cities, but also in Tier 3 and Tier 4 (Exhibit 22).

Exhibit 22

### EV penetration is increasing rapidly in China across all city tiers



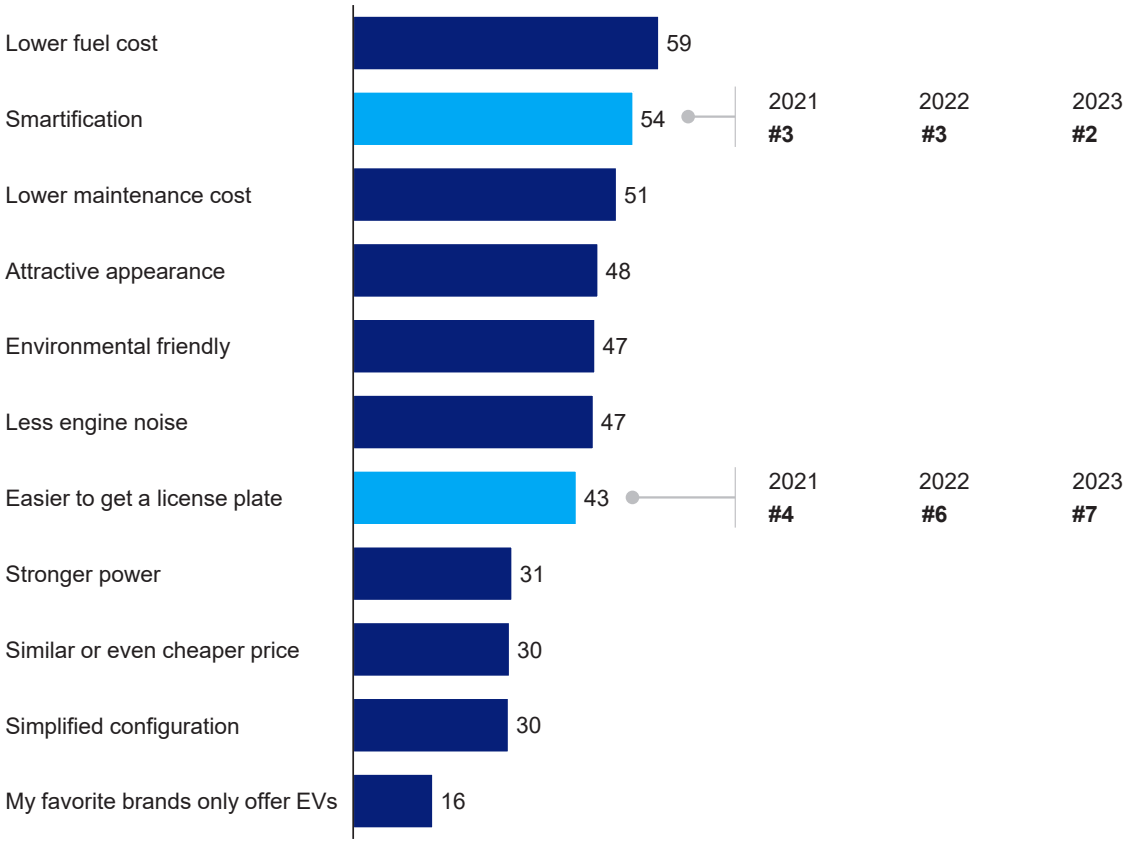

Source: China New Car Insurance Registration Database

McKinsey & Company

An essential reason for the continuous increase of EV penetration is consumers' preference for the vehicles' performance advantages. When identifying the reasons why they would consider buying an EV, respondents most often cited factors such as a low total cost of ownership (TCO) and smartification, which rank much higher than policy factors like ease of getting a free license plate (Exhibit 23). Since the 2021 survey, smartification has risen to become the second-highest-ranked reason, up from third in 2021 and 2022. Over the same period, ease of getting a license plate fell to seventh place in 2023, from fourth in 2021.

Exhibit 23

## The growing EV penetration is triggered by consumers' stronger recognition of EV's actual benefits like smartification




Source: McKinsey China Auto Consumer Survey across the years

McKinsey & Company

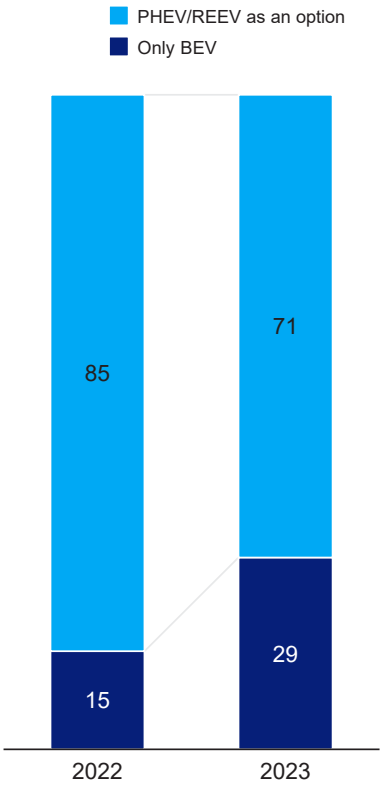
## Consumers favor PHEV and REEV mostly based on consideration of TCO and charging

Plug-in hybrid vehicles (PHEV) and range extended electric vehicles (REEV) scored remarkable sales in China's EV market in the past few years, thanks to consumers' preferences for such models. In our survey, most consumers considering an EV purchase say they include PHEV and REEV in their options, but the proportion doing so decreased from 85 percent in 2022 to 71 percent in 2023 (Exhibit 24).

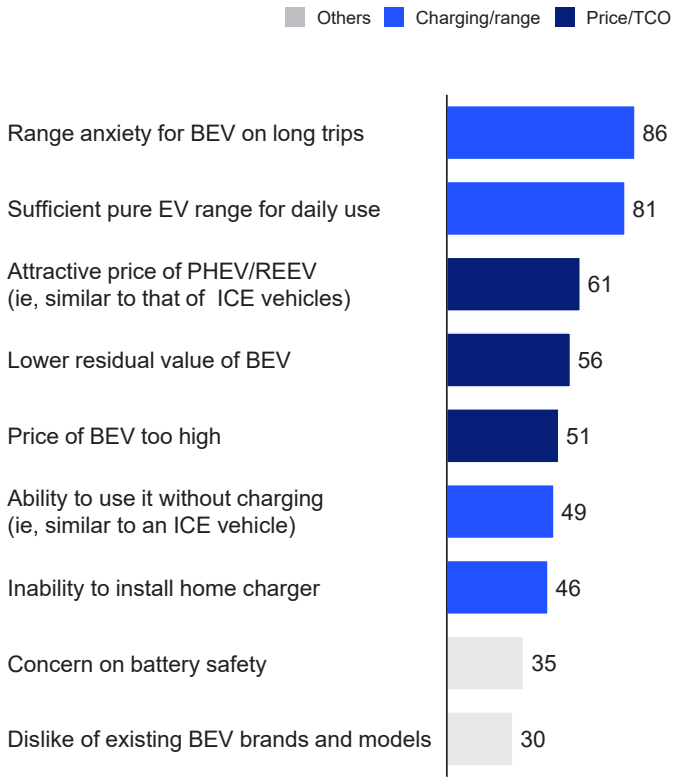
Exhibit 24

### PHEV/REEV is a potential option to most EV customers, due to advantage in range and cost

**Powertrain considered[1]**
% of respondents considering EV




**Reasons for preferring an PHEV/REEV vs BEV**
% of respondents[2]




1. For consumers who consider to buy an EV next time.
2. For consumers either currently own an PHEV/REEV car, or consider to buy an PHEV/REEV car.
Source: McKinsey China Auto Consumer Survey (2023&24)

McKinsey & Company

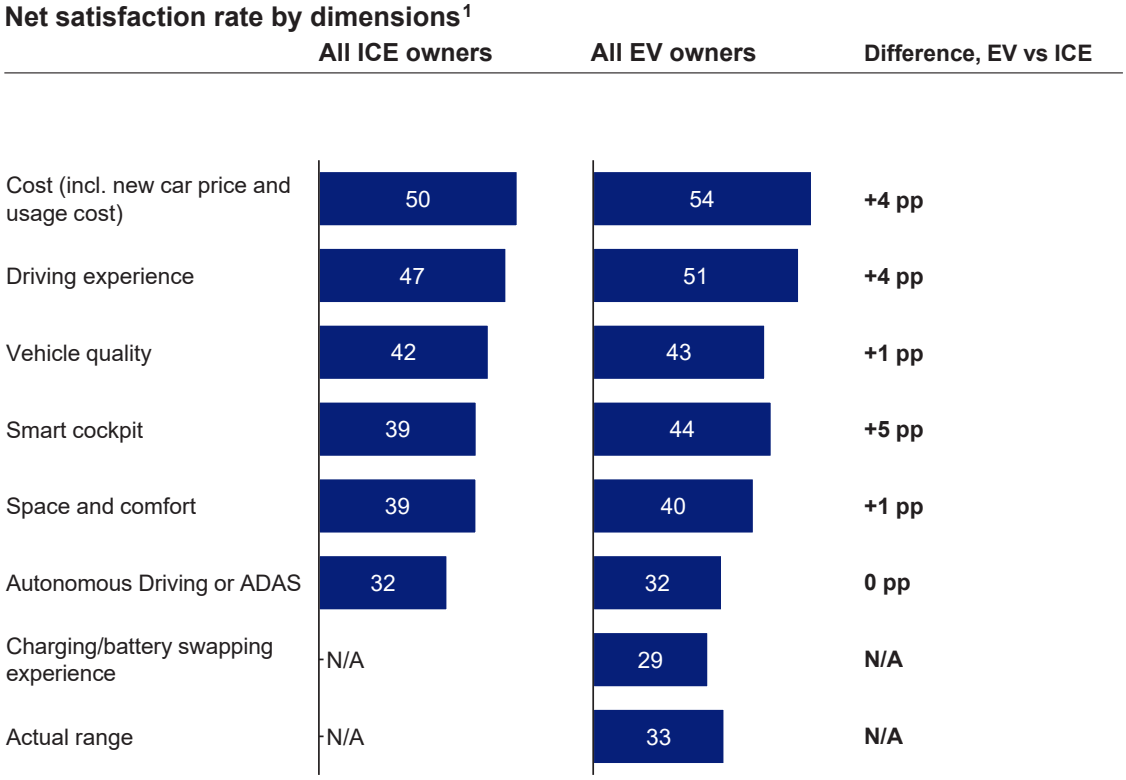
Consumers who report considering PHEVs and REEVs were asked why they consider such models. Most of them cite factors related to charging and range: range anxiety for BEV on long trips (cited by 86 percent) and sufficient pure EV range range for daily use (81 percent). In addition, more than half cite price and cost factors: attractive price of PHEV/REEV being similar to that of ICE vehicles (61 percent), lower residual value of BEV (56 percent), and price of BEV too high (51 percent).

## Chinese consumers' acceptance of EVs has declined for the first time. Although a temporary phenomenon, it still signals the great importance of improving charging infrastructure for the long-term, sustainable development of the EV sector in China

Chinese consumers with EV are more satisfied with their cars than ICE vehicle owners. The survey asked respondents to rate their satisfaction with various dimensions of driving their ICE car or EV. On almost all comparable dimensions, EV owners rate their experience higher than ICE owners do (Exhibit 25). Clearly, EV brands have laid a solid foundation for the further increase of EV penetration.

Exhibit 25

### EV owners report greater satisfaction than ICE owners across dimensions




1. Net satisfaction rate = % of respondents giving ≥9 points minus % of respondents giving ≤2 points; on a scale of 1-10 with 10 being most satisfied and 1 least satisfied.

Source: McKinsey China Auto Consumer Survey 2024

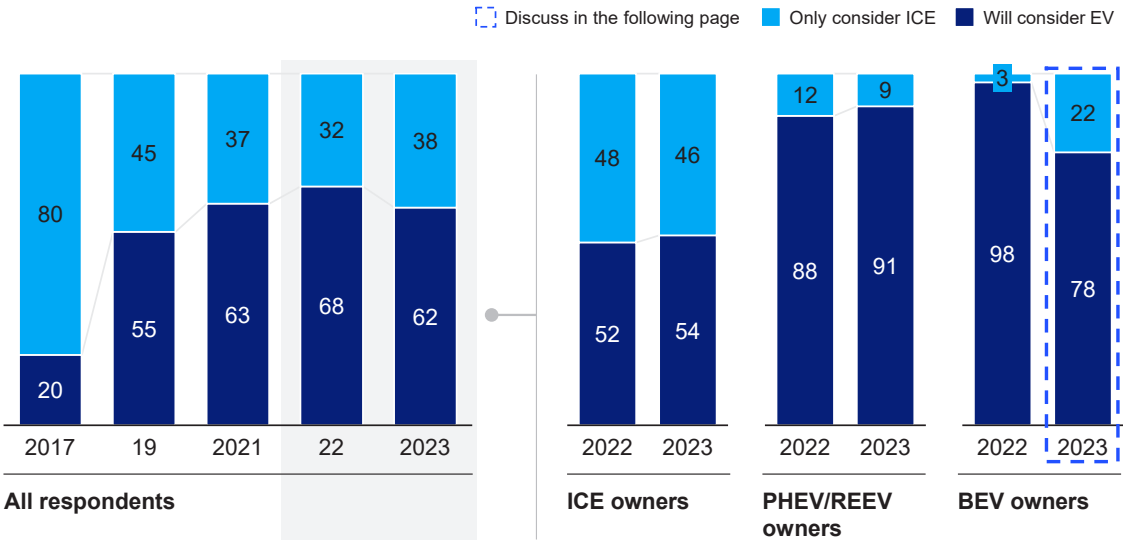
McKinsey & Company

Nevertheless, EV acceptance among Chinese consumers has declined for the first time since the launch of the China Auto Consumer Survey. The percentage of respondents who say they would consider purchasing an EV as their next car is 62 percent, versus 68 percent in 2022 (Exhibit 26). The overall EV acceptance declined despite continued growth in EV acceptance among ICE and PHEV/REEV owners. Fully 22 percent of BEV owners say they will not consider buying another EV in their next purchase, far greater than the 3 percent who said so in the previous survey.

Exhibit 26

## For the first time, responses signal a drop in EV acceptance, mainly in the segment owning BEV

**Type of vehicle considered for the next car**
% of respondents




Source: McKinsey China Auto Consumer Survey across the years

McKinsey & Company

We drilled down to city-level data to look for the source of this apparent buyer's regret. Our in-depth analysis suggested a connection to the quality of charging infrastructure (Exhibit 27):

- The regret level of BEV owners—that is, the percentage saying their next car will be an ICE vehicle, with no EV under consideration—is 54 percent in Tier 3 and 4 cities, much higher than the 10 percent rate in Tier 1 and 2 cities.
- To find the causes of regret, we looked at the dimensions of satisfaction with vehicle experience by city. Users' charging experience stands out for the much greater dissatisfaction of owners in Tier 3 and 4 cities relative to those in Tier 1 and 2 cities. Based on this difference, we identify charging experience as the primary source of dissatisfaction associated with regret levels of BEV owners.
- The variance in charging experience is consistent with trends in the construction of charging infrastructure. In relatively less developed areas, construction of new public chargers is trailing new EV sales volume: in 2023, 9.1 new EV were sold for every new public charger, versus 7.6 new EVs per new charger in 2020–22. In the cities of the more developed provinces, the similar ratio got improved.

Exhibit 27

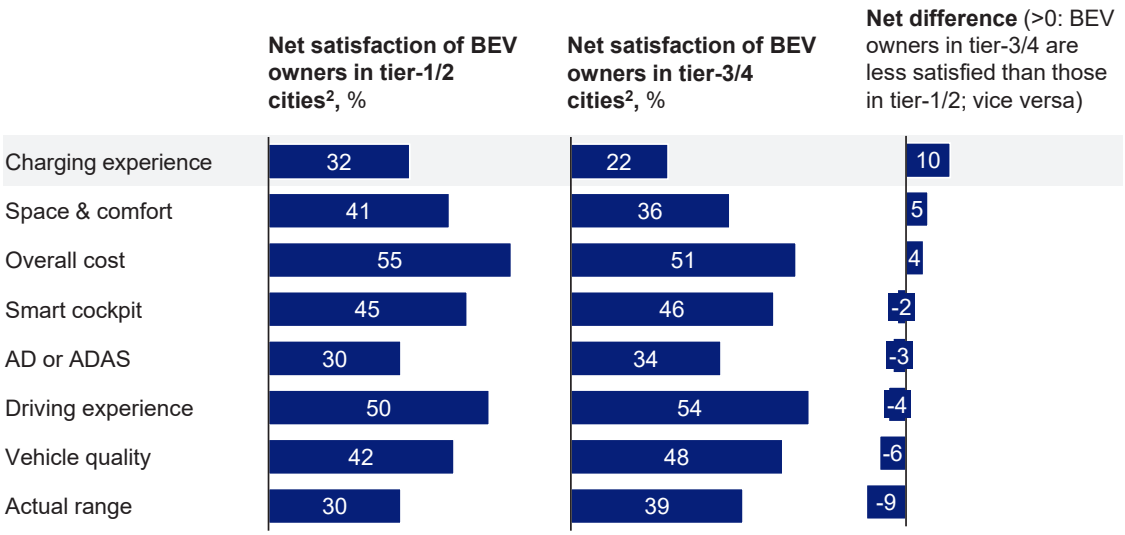
# Dissatisfaction of BEV owners is greatest in Tier 3 and 4 cities, where charging experience is hampered by limited infrastructure

## Regret level of BEV owners in tier 3/4 cities are much higher than in tier -1/2 cities[1]

**54%**
Regret level of BEV owners in tier-3/4 cities

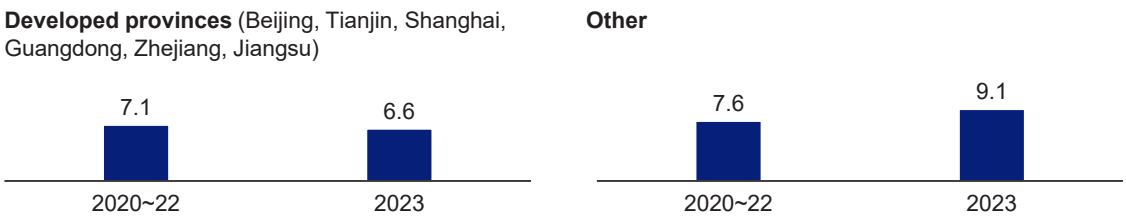
**10%**
Regret level of BEV owners in tier-1/2 cities

## The biggest gap between tier-1/2 and tier-3/4 cities is in charging experience




## The building of charging infrastructure in (relatively) less developed regions is losing momentum in 2023

**Number of new EV per new public charger**




1. Regret means the next car to purchase will only be an ICE vehicle, and not an EV in any forms.
2. Net satisfaction rate = % of respondents giving ≥9 points minus % of respondents giving ≤2 points; on a scale of 1-10 with 10 being most satisfied and 1 least satisfied.

Source: McKinsey China Auto Consumer Insights 2024; EVCIPA

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Electrification is an irreversible trend in China. Although a temporary phenomenon, BEV owners' declining EV consideration is still an important signal to the EV industry. To guarantee the long term, sustainable development of EV in China, more efforts are required to put to further improve and expand the EV charging network.

# 4 Direct-to-consumers (DTC) model is winning consumer trusts, thanks to its high transparency across customer journey

**Key insights:**

— Consumers desire transparency across their purchase journey and are greatly interested in various emerging car retail models and services

— The direct-to-customer (DTC) model improves transparency, as well as the consumer experience in purchase and using vehicles

## Consumers favor emerging car retail models

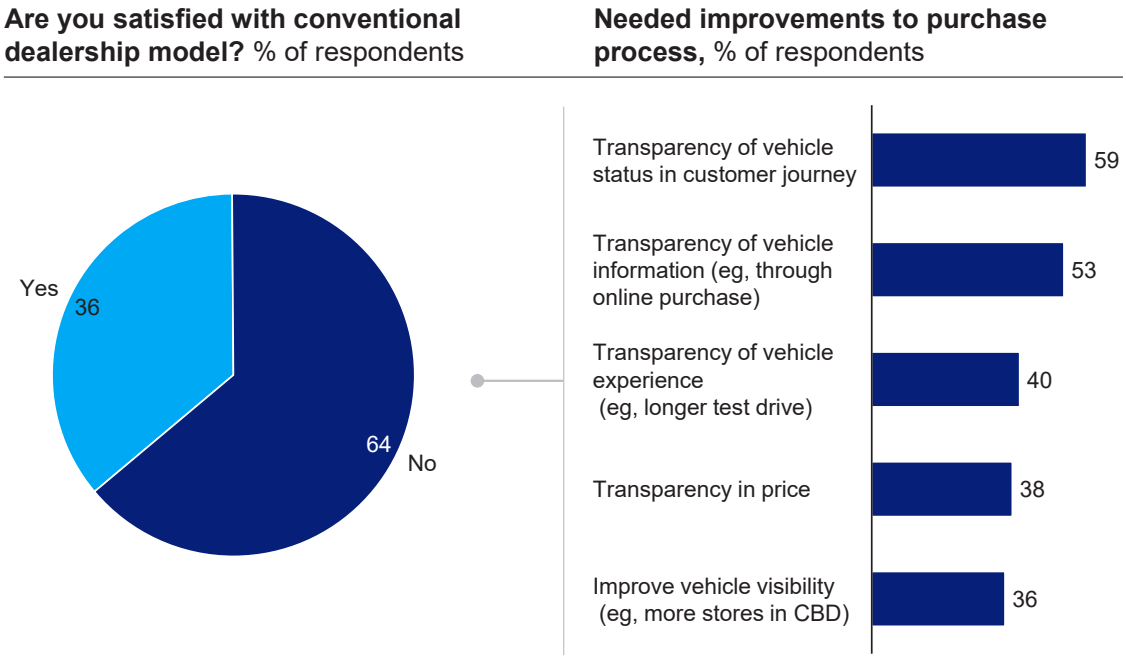
Emerging car retail models, such as online purchase and car stores in shopping malls, are booming. At the same time, respondents to our survey note areas of dissatisfaction with conventional dealership model. Nearly two-thirds (64 percent) of respondents describe themselves as dissatisfied with the level of transparency in the traditional dealership model (Exhibit 28).

Consumers seek transparency improvement in multiple areas, of which the following are the most desired:

- End-to-end transparency in purchase, including all steps from order placement to delivery
- Transparency in vehicle information (for example, online information browsing, test-drive reservations, and deposit payment)
- Transparency in vehicle experience (for example, longer test drive that lasts two weeks)
- Transparency in end price, eliminating different prices at different stores or even different prices from different sales reps
- Vehicle visibility (for example, building more stores in central business district (CBD) to make it more convenient for consumers to see the vehicle and have a test drive)

Exhibit 28

### Approximately two-thirds of consumers express dissatisfaction against conventional dealership model and want greater transparency




Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

## Customers are more satisfied with the DTC model than with the conventional dealership model

In the previous surveys, customer satisfaction was consistently better for the DTC model adopted by most premium Chinese EV brands than for the conventional dealership model used by ICE brands. In this survey, the pattern continues. Across pre-sales, sales, and post-sales stages, customers express greater satisfaction with the DTC model:

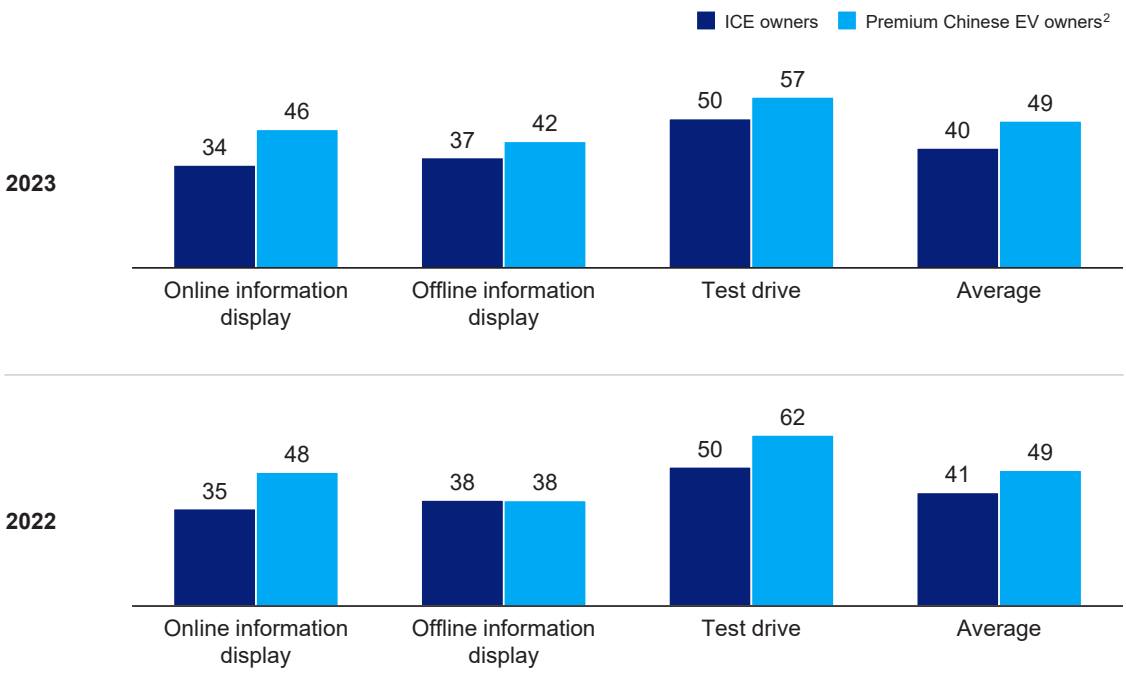
— Pre-sales stage: Premium Chinese EV OEMs have achieved high customer satisfaction through DTC models that build clear advantages in key steps such as online information display and test drives. Moreover, although premium Chinese EV OEMs performed about the same as traditional brands in offline information display in 2022, they improved to gain an edge over conventional OEMs in 2023 (Exhibit 29).

Exhibit 29

### In the pre-sales stage, premium Chinese EV brands achieve greater consumer satisfaction with a direct-to-customer (DTC) model

Pre-sales

**Net satisfaction rate across the consumer journey[1], % of respondent**




1. Net satisfaction rate = % of respondents giving ≥9 points minus % of respondents giving ≤2 points; on a scale of 1-10 with 10 being most satisfied and 1 least satisfied.
2. Incl. owners of 6 premium Chinese EV brands.

Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

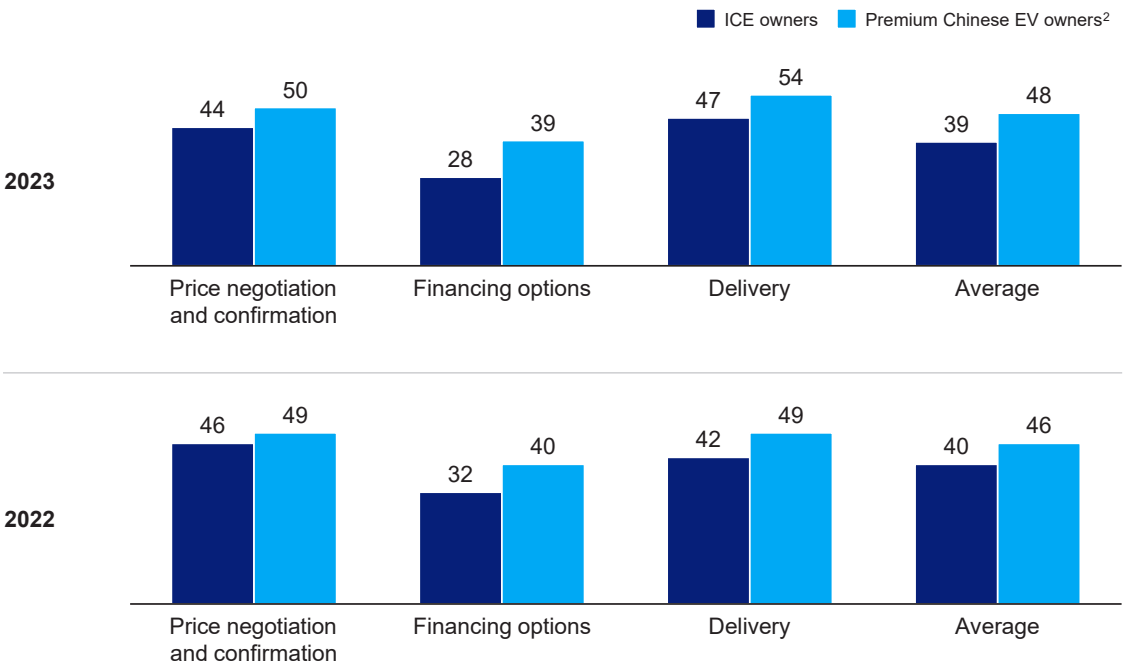
— Sales stage: The DTC channels of premium Chinese EV OEMs again delivered greater satisfaction during the sales stage (Exhibit 30). Leveraging official apps and one-stop delivery centers, these OEMs could communicate complete and transparent information about prices, financing options, and delivery process to consumers. This capability has substantially improved overall customer experience and delivered widespread consumer satisfaction.

Exhibit 30

## In the sales stage, premium Chinese EV brands excel at consumer satisfaction with one-stop delivery centers, transparent pricing, and financing options

**Sales**

**Net satisfaction rate across the consumer journey[1],** % of respondent




1. Net satisfaction rate = % of respondents giving ≥9 points minus % of respondents giving ≤2 points; on a scale of 1-10 with 10 being most satisfied and 1 least satisfied.
2. Incl. owners of 6 premium Chinese EV brands.

Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

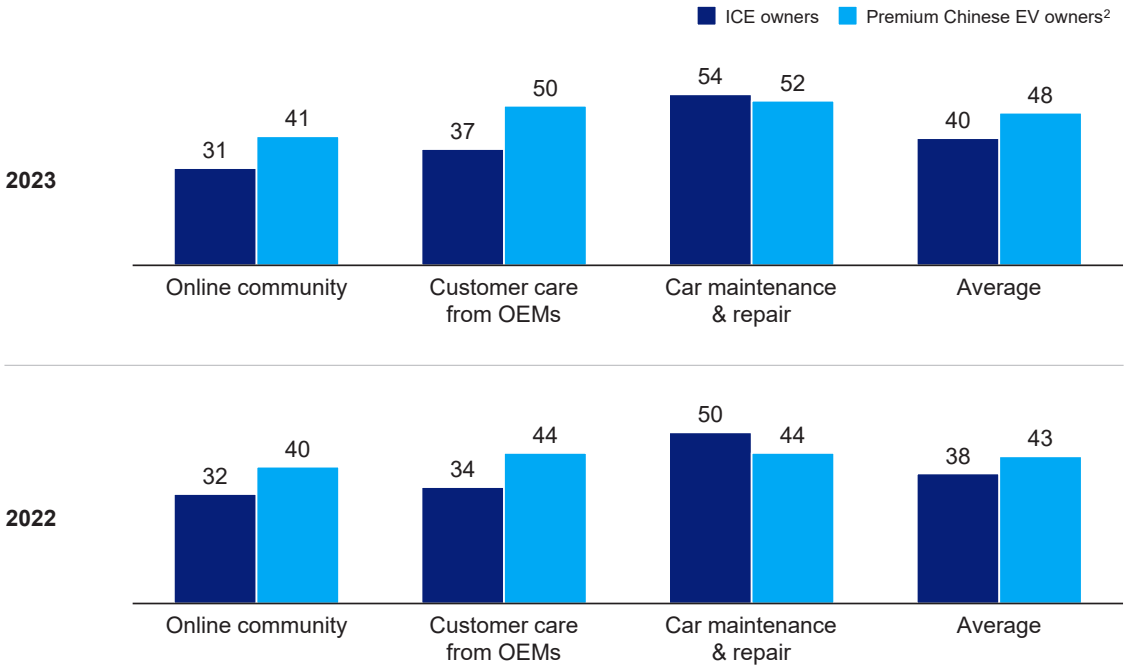
— Post-sales stage: Following a sale, premium Chinese EV OEMs excel at maintaining customer satisfaction (Exhibit 31). These OEMs cultivate consumer satisfaction through online communities, continuous customer care, various owner events, and online marketplaces. These efforts fully demonstrate the importance of an end-to-end customer engagement system: OEMs not only need to focus on building better customer experience for pre-sales and sales stages, but also need to treat post-sales engagement as an important stage for maintaining and improving customer satisfaction and loyalty. Notably, although premium Chinese EV OEMs lag behind traditional OEMs in after-sales maintenance, the satisfaction gap between the two types of OEMs has shrunk.

Exhibit 31

## In the post-sales stage, premium Chinese EV brands continued to excel; even in maintenance, their gap with traditional brands is marginal

**Post-sales**

**Net satisfaction rate across the consumer journey[1],** % of respondent




1. Net satisfaction rate = % of respondents giving ≥9 points minus % of respondents giving ≤2 points; on a scale of 1-10 with 10 being most satisfied and 1 least satisfied.
2. Incl. owners of 6 premium Chinese EV brands.

Source: McKinsey China Auto Consumer Survey 2024

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The survey results suggest that the DTC model has substantially boosted consumers' overall purchase and driving experience by improving transparency across the purchase journey. OEMs and dealerships should try to match the example of premium Chinese EV brands through: speeding up efforts to build a comprehensive marketing system, focusing on improved transparency across the purchase journey to ensure consistent online and offline experience and building a full-life-cycle customer engagement system.

# 5 Autonomous driving (AD) enjoys great popularity, but chance of monetization is coming under pressure

**Key insights:**

- Consumers are becoming increasingly interested in AD solutions
- In the meantime, consumers influenced by the pricing strategies of leading OEMs are less willing to pay for AD solutions and have lowered the amount they will pay
- Consumer willingness to pay for AD solutions in Tier 1 cities might become a barometer for measuring overall changes of consumer preferences concerning AD

## Consumer interest in various AD functions has risen, but willingness to pay has fallen

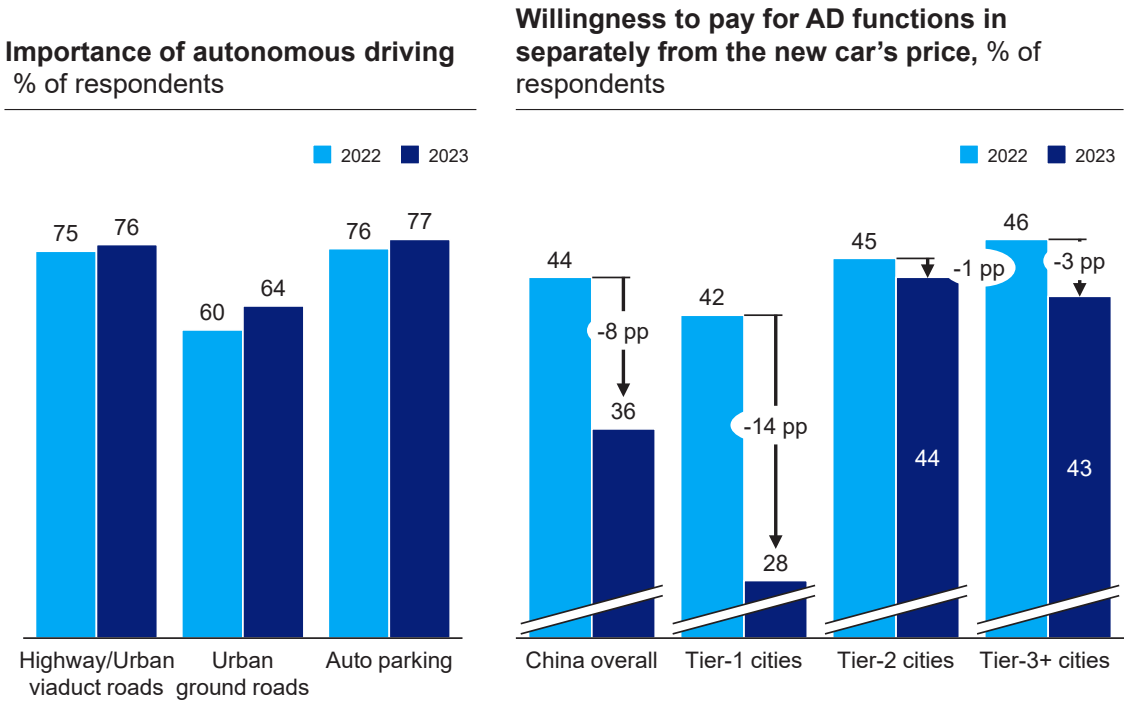
The Chinese smart-EV market has seen rapid progress in advanced AD functions in the past year or two: for leading EV players, highway navigation on autopilot (NOA) has long been a standard specification, and even city NOA is being deployed at a fast pace. In the meantime, the OEMs involved in this progress are committed to leveraging a wide range of promotion channels (for example, livestreaming, short videos, and influencer test drives) to shape consumer perceptions of AD technologies.

Previous McKinsey China Auto Consumer Surveys predicted that leading OEMs' pricing strategy featuring one-off payment would eventually influence consumer perceptions of paid AD functions. The results of this survey support that prediction. Influenced by the aggressive pricing strategy of leading OEMs, more Chinese consumers are aware of the importance of autonomous driving, but their willingness to pay for such functions has declined.

Compared with their views in 2022, Chinese consumers are now more interested in AD functions in different scenarios, including highway/city NOA and auto parking. In the meantime, the amount respondents say they are willing to pay separately for AD functions has declined by 8 percent (Exhibit 32). The pattern of responses to the payment question suggests the following conclusions:

Exhibit 32

### Consumers' interest in AD (autonomous driving) has increased, but willingness to pay for it has declined, especially in Tier 1 cities




Source: McKinsey China Auto Consumer Survey 2023 and 2024

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— Some OEMs with a technical edge have offered AD solutions as a standard specification or a one-off optional package, and in this way, they have subtly exerted a huge influence on consumers' willingness to pay.

— Tier 1 cities are usually the earliest region for adoption of advanced AD technology. Consumers there are influenced most significantly to the free-software pricing strategy, hence a big drop in their willingness to pay.

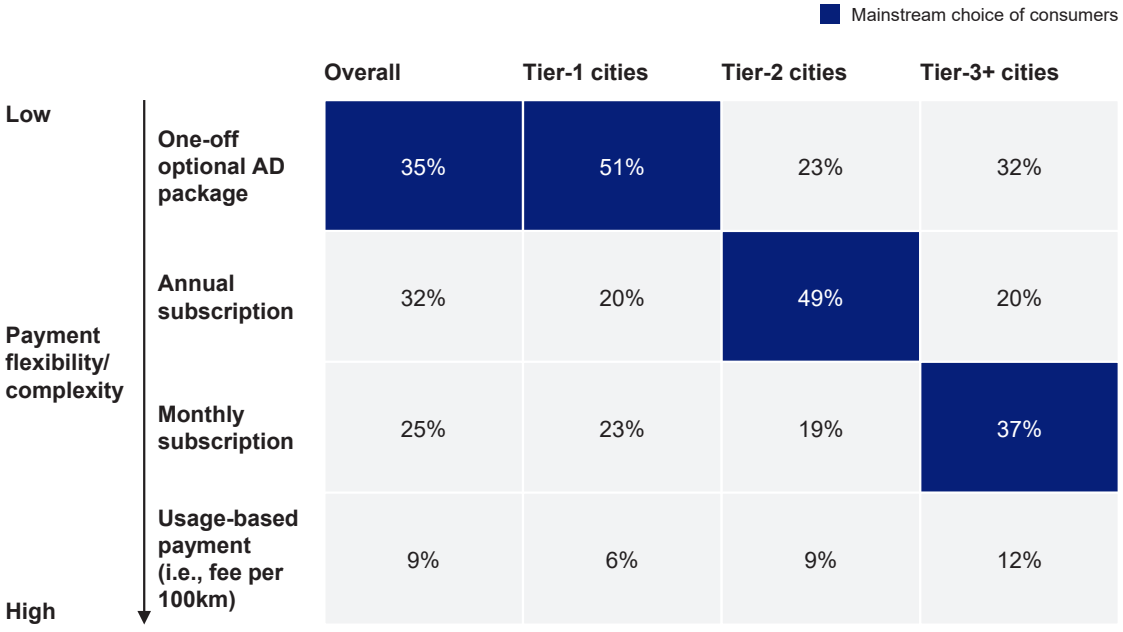
## The more developed a city is, the more inclined its consumers are to adopt simple and direct payment methods for AD functions

Advanced AD functions (eg, city NOA) are first adopted in Tier 1 cities, so the consumers there have greater awareness of these functions and more experience with using them. Educated subtly in the market, consumers in these cities are more willing to pay for AD functions as a one-off optional package, since it is the most direct and simple option (Exhibit 33).

Exhibit 33

### Consumers in higher-tier cities are more willing to adopt simple and direct payment methods for AD

**Preferred AD payment method**[1], % of respondents




1. Including AD features in highway/urban viaduct roads, urban ground roads and auto parking.
Source: McKinsey China Auto Consumer Survey 2024

McKinsey & Company

In the meantime, given their limited experience with advanced autonomous driving, consumers in Tier 2 and Tier 3 cities favor more cautious payment methods to avoid risks. However, with the gradual penetration of advanced AD technology in lower-tier cities, Tier 1 consumers' payment preferences may become a barometer reading the overall changes of consumer preferences.

However, one pattern applies across tiers showing that consumers overall indicate unwillingness to accept a usage-based payment, such as a fee per 100 kilometers.

## The monetary amount that consumers are willing to pay for AD functions also is declining

As the willingness to pay declines, the amount consumers willing to pay also is generally declining (Exhibit 34). An exception is the significant increase in the amount of fee consumers say they will pay for a one-off optional AD package for urban ground roads. We believe this is primarily because leading OEMs are beginning to release city NOA with continuous promotion, thus raising consumer enthusiasm.

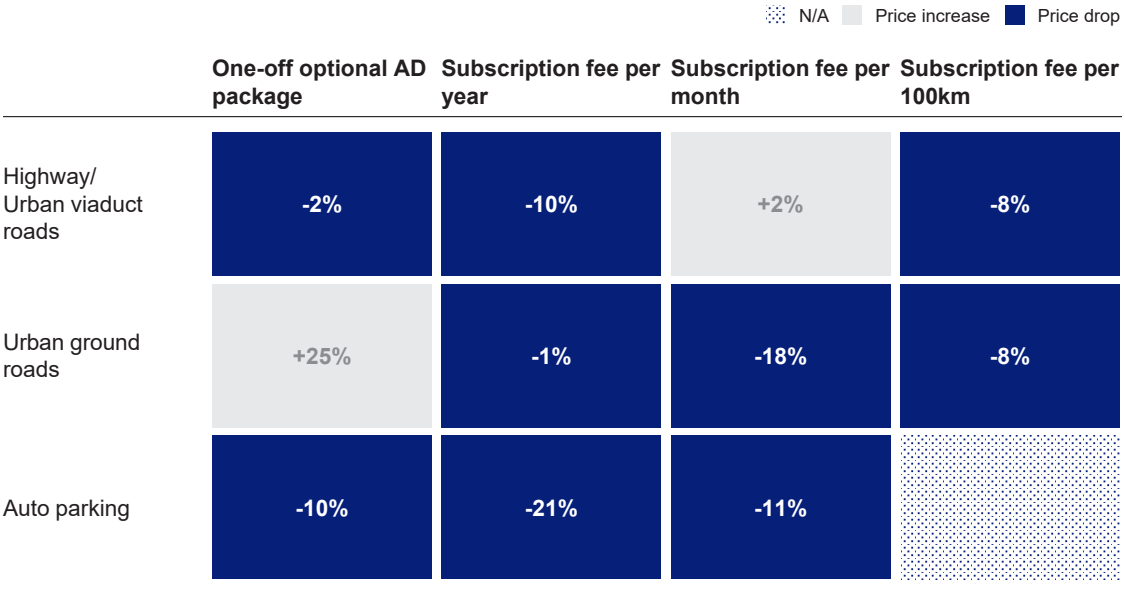
Companies have struggled to make advanced AD functions a separate revenue stream. Still, there has been deep and widespread penetration of autonomous driving in urban areas; for example, leading Chinese EV OEMs dominating the price segment above RMB 200,000 have all launched mature highway NOA and are rapidly implementing city NOA. Considering this and the ceaseless promotion by leading OEMs (as well as car owners), we expect Chinese consumers to develop a clear demand for advanced AD technology. For smart EVs at medium and high price points (for example, greater than RMB 200,000), advanced AD technology, including city NOA, will gradually become a must-have for consumers, resulting in great pressure on OEMs that have not progressed in AD technology.

Exhibit 34

### The amount consumers are willing to pay for autonomous driving has declined

'How much you are willing to pay for the given AD solution with given payment format?'

**Changes in average amount[1],** 2023 vs 22




1. Only for consumers willing to pay for AD functions in separate to the new car price.
Source: McKinsey China Auto Consumer Survey (2023&24)

McKinsey & Company

# 6 Consumers are aware of low-carbon vehicles but less willing to pay a premium for them

**Key insights:**

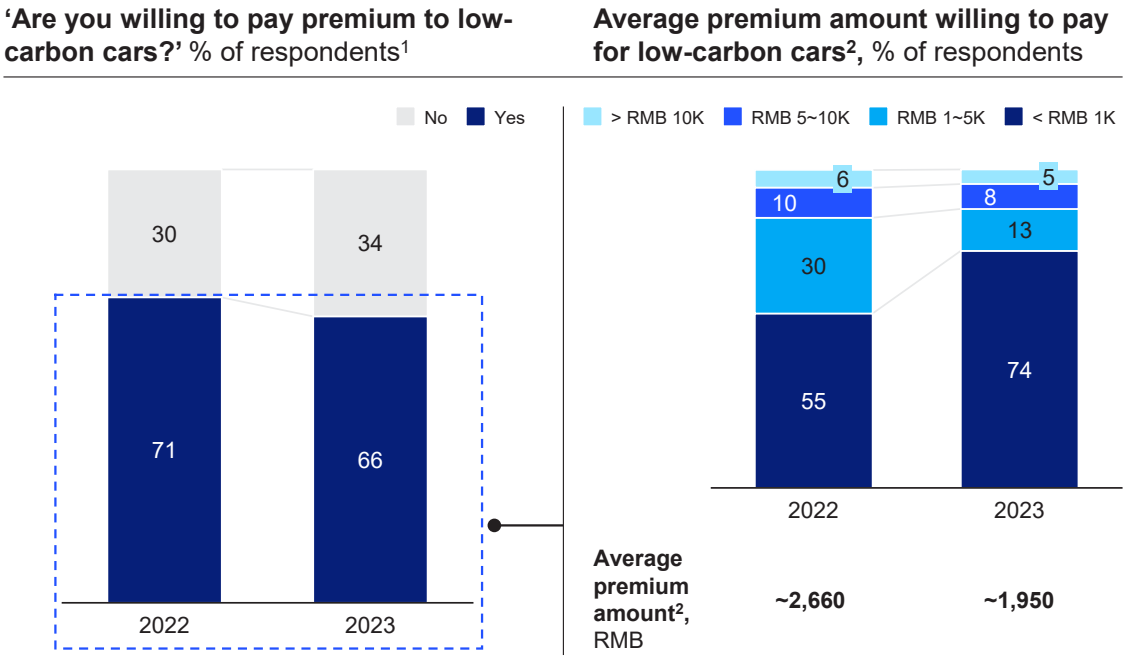
- A considerable proportion of Chinese consumers are aware of low-carbon vehicles and are willing to pay for them
- However, the share of consumers willing to pay a premium for low-carbon vehicles and the amount of the premium they are willing to pay have declined

## Many consumers are willing to pay a premium for low-carbon vehicles, but the share willing to pay and the acceptable size of the premium have declined

Consumer willingness to pay for low-carbon vehicles is critical for the penetration of low-carbon vehicles. According to our survey, nearly 70 percent of respondents say they are willing to pay premium for low-carbon vehicles (Exhibit 35). However, that share of respondents is slightly lower than in 2022. In the meantime, the average amount that consumers are willing to pay also has declined.

Exhibit 35

### The share of consumers willing to pay a premium for low-carbon cars and the average amount they will pay have both declined




1. For consumers either currently own a BEV car, or consider to buy a BEV car.
2. Weighted average of the premium amount from respondents who willing to pay premium to low-carbon cars.

Source: McKinsey China Auto Consumer Survey (2023&24)

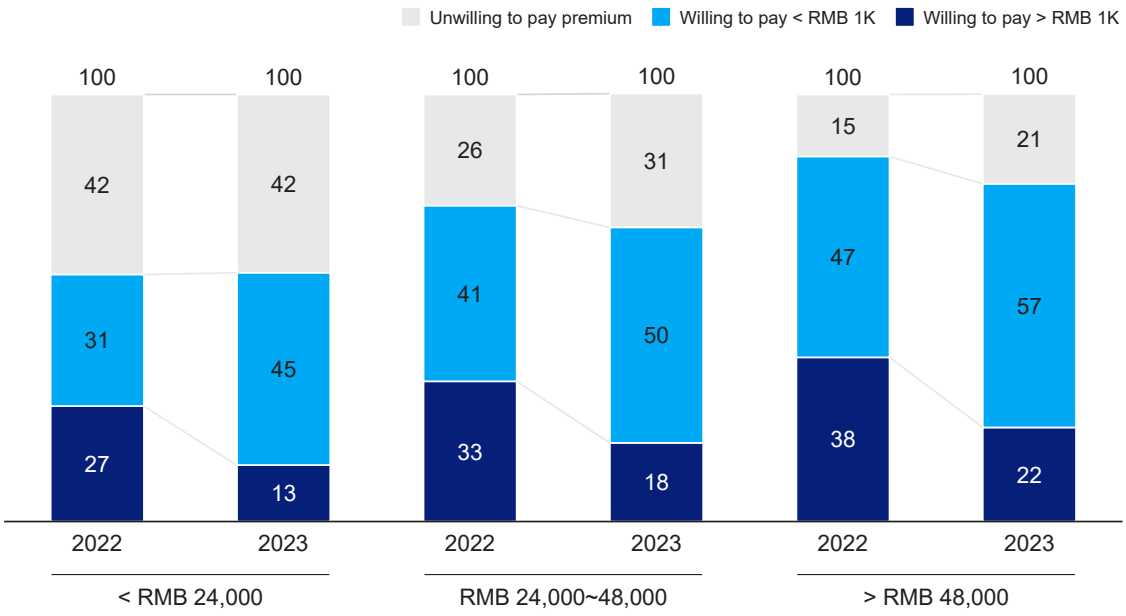
McKinsey & Company

Breaking down the responses by monthly household income, consumers across all income segments average lower amounts they are willing to pay for low-carbon vehicles. However, the high-income group maintains its willingness to pay the most (Exhibit 36).

Exhibit 36

## High-income individuals are willing to pay the largest premium for low-carbon vehicles

**Average premium amount consumers are willing to pay for low-carbon cars, by family monthly income[1],** % of respondents




1. For consumers either currently own a BEV car, or consider to buy a BEV car.
Source: McKinsey China Auto Consumer Survey (2023&24)

McKinsey & Company

In general, given the decline in consumer willingness to pay for AD technologies with even tangible benefits, it is not surprising that consumers are also less likely to be willing to pay—and are paying less—for low-carbon vehicles. In the long run, consumer willingness to pay for low-carbon vehicles depends on the public perception of decarbonization and a deepening sense of urgency.

# Conclusion: Involution or evolution?

The responses to the latest China Auto Consumer Survey, combined with analysis of industry trends, show an industry that has made tremendous strides but also is engaged in intense price competition. We might characterize the former as a healthy evolution and the latter as a risk of involution. The future of the China auto industry will be shaped by which force dominates the years ahead.

In China, "involution" has become a buzzword used to describe competition in various forms, especially intense competition. There is no doubt that China's EV sector is experiencing intense competition in areas that include technology, configuration, and price. Thus, it seems that almost all new EV models are now experiencing involution.

But is involution the most accurate way to characterize the China EV sector? Five to six years ago, almost all best-selling passenger BEV models in the China EV market were A00 segment cars with poor specifications in exterior styling, range, charging speed, space, and infotainment system. Today, Chinese EV have made considerable progress: they now offer futuristic designs, their long ranges can gradually catch up with ICE vehicles, ultrafast charging has also become a reality, and their wheelbase can exceed three meters. Furthermore, they also boast a flat rear floor, spacious interior, smooth infotainment system, and advanced smart voice assistants. Convenient city NOA and autonomous valet parking (AVP) also are gradually becoming a reality.

In our opinion, such remarkable growth of the China smart EV industry within just a few years should not be described as involution but as evolution.

**Though evolution is a painful process, it is the only correct path**

The Chinese smart-EV industry has scored remarkable progress in both technology and user experience. However, price competition and the resulting low (even negative) margins are plaguing almost all participants and have sparked a debate on whether this strategy is worthwhile.

At a time when the entire industry is in turmoil, intense price competition may be a necessary alarm for the automotive industry, where the intensity of competition has long been low. Evolution has been proved, and will continue to be proved, to be a painful process, but it still is the correct path forward.

**Embrace evolution, embrace consumers**

Analysis of the China Auto Consumer Survey over consecutive years has palpably demonstrated the evolution of consumers' role in the automotive industry. Chinese car owners have evolved from passive users to active proposers of automotive products. The automotive industry is a sector serving individual consumers by nature. Faced with the evolution of consumers' role, OEMs need greater evolution in response.

Many Chinese OEMs, both emerging EV players and traditional players, are actively embracing the change. However, some traditional MNC players are still hesitant. Looking back, since it takes six years on average for a traditional MNC player to develop a brand-new model, the current underperformance is probably the result of  decision back in 2017—perhaps, which resulted in slow product upgrades, unmet consumer needs, and a focus on sales volume rather than customer experience, and the like. Looking ahead, the determining moment for participation in the 2030 competitive landscape is now.

How can companies embrace evolution and consumers? Responses that have delivered results include shifts in the following areas:

— **Product innovation.** Shift from offering consumers existing products to developing products based on consumer needs.

— **Brand management.** Shift from thinking some brands naturally deserve a high premium to stressing the importance of brands offering unique value to consumers.

— **Customer touchpoints.** Shift from thinking about factories, stores, and consumers in isolation to promoting efficient information circulation and management across the customer journey.

— **Organizational structure.** Shift from departmental walls and functional silos to a highly efficient structure with greater agility, openness, and diversity, as well as an empowered frontline staff.

Some OEMs have already made trailblazing efforts in these areas. As competition deepens in the China EV industry, we expect to see a growing number of OEMs embark on a journey of evolution to enhance their capabilities.

Wherever the path of evolution leads, the fundamental commercial behaviors remain unchanged: meeting diverse needs of consumers to gain reasonable economic value from such effort. No matter how stiff the competition, companies can benefit from focusing behaviors on the original mission of value creation.

Guided by Chinese consumers, the EV sector's growth at full speed is now an inevitable trend, and new consumer preferences and behaviors are in the making and evolving. We hope OEMs will set a resolution to be top players, stay focus in the EV sector, and evolve with the Chinese consumers to jointly author a new chapter of the industry's epic development.

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The authors wish to thank Daniel Birke, Ting Wu,  Alexander Will, Judy Xu, Vivi Chen and Cherie Zhang for their contributions to this report.

McKinsey China Auto Consumer Insights 2024
April 2024

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