

Industrials Observer

March 2026

Full Throttle Into 2026: 10 Key Trends Affecting US Autos

Regulation fights, EVs, tariffs, and more, plus ways to play it all.

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Disclosure

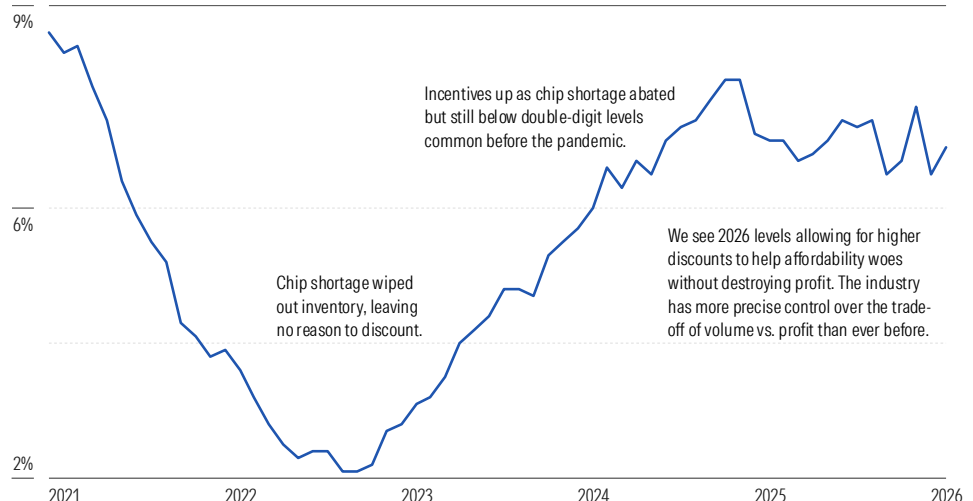
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Executive Summary

The US auto industry is not a calm sector for investors, so this report discusses key trends (summarized in [Exhibit 2](#)) to understand for 2026. Uncertainty can keep stock price multiples lower than in more moaty sectors, but we think it also creates buying opportunities for patient investors willing to put up with volatility. Vehicle affordability is a problem for consumers in 2026, but those who are buying are purchasing rich trim packages, which helps profits despite low overall industry sales levels. We don't expect pricing to collapse, as we expect incentive increases to be more measured: Inventory remains well below prepandemic levels of 3.5 million-4 million units, and discounts are not near double-digit levels as a percentage of average transaction price ([Exhibit 1](#)). Miles driven has risen for five straight years, which means demand for mobility as well as accidents that can create vehicle or repair demand.

Exhibit 1 Discounts Are Well Below Double-Digit Percentage of Sale Price

US light-vehicle incentives as a percentage of average transaction price through February 2026.



Source: Cox Automotive, Morningstar.

Industrials Observer

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Companies Mentioned

Name/Ticker	Economic Moat	Currency	Fair Value Estimate	Current Price	Uncertainty Rating	Morningstar Rating	Market Cap (Bil)
Ford Motor F	None	USD	18	11.21	High	★★★★	45.0
General Motors GM	None	USD	83	72.76	High	★★★	67.8
Gentex GNTX	Narrow	USD	42	21.40	Medium	★★★★★	4.7

Data as of March 30, 2026.

Key Takeaways

- ▶ As shown in [Exhibit 32](#), light trucks took share for the 13th straight year, but for the first time in over a decade, crossovers lost share. The continued move to light trucks helps all automakers as they make more money on them versus passenger cars. However, the Detroit Three may be having second thoughts on leaving most car segments, especially in light of gas prices spiking with the Iran war.
- ▶ With hybrid share rising, fewer resources needed for electric vehicles, and consumers wanting more affordable models, the US could see new sedan or hatchback offerings soon. However, [Exhibit 36](#) shows light trucks can offer more space for not much more money or fuel economy sacrifice, so we don't see more car offerings as a game changer for profits.
- ▶ Inventory remains well below prepandemic levels, which should prevent pricing from collapsing in 2026. Incentive levels also are not too high, so the industry could discount more, should demand slow, and not wreck automakers' profitability.
- ▶ [Exhibit 44](#) shows that leasing's recovery stalled in 2025, but with the worst of the off-lease shortage just ended, we expect leasing's mix of new-vehicle sales to rise for the next few years. More leasing and declining used-vehicle prices as 2026 used supply gradually improves should bring more consumers into the used- and new-vehicle marketplace.
- ▶ Data from the Federal Reserve Bank of New York in [Exhibit 53](#) gives us no significant cause for alarm with respect to a potential credit bubble, nor do we see signs of credit contracting widely. Fourth-quarter 2025's 90-day auto loan delinquency rate of 5.21% is the highest in 15 years, but total delinquencies (30 days or more) have declined sequentially for five straight quarters.
- ▶ [Exhibit 16](#) data shows that most EV owners stay with an EV for their next new-vehicle purchase, but internal combustion engine owners also mostly stay with an ICE when buying their next vehicle. Plug-in hybrid owners are the most likely to switch powertrains when buying their next vehicle, but our math in [Exhibit 22](#) shows that EVs are not yet cost-competitive with mass-market vehicles.
- ▶ The Trump administration's February repeal of the Endangerment Finding completes the president's ambition to remove what he sees as EV mandates from the Biden and Obama administrations. The expiration of the \$7,500 federal consumer tax credit has cost EVs market share, per [Exhibit 17](#). We think that tax policies and regulation won't matter once EV batteries make EVs more attractive than other powertrains, but for now, [Exhibit 19](#) shows that hybrids are winning over EVs with more than 12% of the sales mix.
- ▶ [Exhibit 27](#) shows there is no escaping tariffs, given foreign content even in US-assembled vehicles. Tariffs have not decimated sales, as automakers are absorbing most of the cost rather than consumers. Who bears them in the long run may depend on the fate of the United States-Mexico-Canada Agreement, which is to be renegotiated or terminated this summer.

Exhibit 2 Key Automotive Trends Summary for 2026

Trend	Description	Implication
Trump Reversing Regulation	In 2025, the government lowered Corporate Average Fuel Economy rules through the 2031 model year and set noncompliance penalties to \$0. In 2026, the Environmental Protection Agency rescinded the Endangerment Finding of 2009, which let EPA eliminate penalties for greenhouse gas emission.	Excellent for non-EV-only automakers like the Detroit Three, whose US sales mixes are nearly 100% light truck. The change will mean credits earned from selling EVs will be written off this year, such as about \$1.1 billion for GM, but there is no immediate downside to selling large SUVs and pickups anymore. That could change if Democrats regain power in Washington. Stocks to consider: Detroit Three and other legacy automakers that aren't EV only.
Falling EV Sales Mix	Electric vehicles' 2025 mix of US new light-vehicle sales fell 9 basis points to 7.75%, while hybrids rose 250 basis points to over 12%. EV volume fell 50% in the months after the federal tax credit expired.	Toyota's broad hybrid lineup should continue to do well this year. We don't see EVs regaining share to 7%-8% in 2026 in the absence of the tax credit. Share of 5%-6% is more realistic this year, in our view, which is bad news for Tesla and other EV-only firms like Lucid and Rivian. Ford has amended some of its EV plans, such as now making the successor the F-150 Lightning full-size pickup an extended-range EV instead of a battery electric vehicle. Stocks to consider: Toyota for hybrids, Detroit Three for internal combustion.
Tariffs Still Here	The February Supreme Court ruling voiding tariffs the president levied under the International Emergency Economic Powers Act should help the auto industry a little, but the tariffs levied under national security justifications for imported vehicles were primarily done under the Trade Expansion Act of 1962.	The Supreme Court ruling does not end tariffs on vehicles imported into the US, so the environment has not changed with the announcement. Every automaker has tariff exposure even if it assembles in the US, due to foreign parts content that is tariffed. GM estimates its 2026 gross tariff exposure at \$3 billion-\$4 billion (slightly under \$2 billion net) while Ford estimates net tariff costs of about \$1 billion. Both firms see less net tariff headwind than in 2025 on supply chain management and a partial credit on imported parts for US-assembled vehicles. Ford has the highest US production mix of the Detroit Three. Stocks to consider: Detroit Three
Falling Auto Production	2025 North American light-vehicle production fell 4% from 2024, with cars down 11.3% and light trucks down 2.5%. Car production suffered more than normal because GM ended the Chevrolet Malibu sedan at the end of 2024.	We expect about a 2% decline in 2026 US sales, meaning another low-single-digit decline in 2026 production. We expect US production boosts in 2027 and 2028 with GM adding Equinox and Blazer assembly in the US instead of just Mexico. 2027 also sees GM expanding Orion, Michigan, to add Escalade SUV capacity to help a maxed-out Texas plant, and 2028 sees the Buick Envision coming to Kansas from China. Stocks to consider: No firms win, but GM adding US mix will help tariff costs.
Light-Truck Mix Keeps Rising	Light trucks (crossovers, pickups, SUVs, vans) increased their US new-vehicle sales mix for the 13th straight year to 83%. Crossovers, which are nearly half the entire US mix, lost share for the first time in over a decade.	This may sound like good news for the Detroit Three, which dominate full-size pickups while the Japanese lead in crossovers. However, the crossover decline was only 50 basis points and was likely the result of the Nexperia shortage hurting Honda crossover production, so we don't see this trend lasting. Light trucks should keep gaining share, albeit slowly. US automakers are considering reentering sedan segments, but that is not likely to work out if all of them do so at the same time. Stocks to consider: 2026 crossover recovery helps everyone, but Toyota (RAV4) and Honda (CR-V) models lead that segment.
Inventory Still Below 3 Million	US light-vehicle inventory has not reached or exceeded 3 million units since April 2020. Supply chain problems with Ford after the Novelis aluminum plant fire and the Nexperia chip shortage hurting Honda and other automakers resulted in an inventory decline at the end of 2025.	In the near term, lower supply will likely keep pricing elevated, but with Novelis coming back online and the Nexperia issue behind the industry, we expect 2026 inventory to end the year higher than 2025's 2.6 million, which probably will also push incentives as a percentage of average transaction price up as well. Stocks to consider: Suppliers like Gentex and Adient benefit if production rises on higher demand, but no one wins if inventory rises on slowing sales.
Used-Vehicle Pricing High and Leasing Penetration Stalled	A lack of off-lease vehicle supply is keeping used prices well above prepandemic levels. A chaotic used-vehicle market with low supply also makes it hard for automaker captive finance arms to estimate lease residual values three years in the future, so leasing fell versus 2024's roughly 24.5%.	The worse of the off-lease supply dearth was in late 2025, so we expect gradual higher supply in 2026, which will slowly bring used-vehicle pricing down and likely lead to more new-vehicle leases being written. For used-vehicle supply to normalize from the chip shortage impact, it will be late 2027 or 2028. Stocks to consider: More leasing helps all automakers and dealers. CarMax benefits from more affordable used-vehicle pricing.
New-Vehicle Loan Interest Rates Falling Could Continue in 2026	New- and used-vehicle loan rates fell year over year throughout 2025 but remain respectively about 200 and 250 basis points above mid-2022 levels.	With recent momentum downward and a new Fed chair coming this year picked by a president who strongly pushes for lower rates, we think further rate cuts are coming to help consumers buy a vehicle this year. Stocks to consider: Better affordability means our entire auto coverage wins.
Auto Loan Delinquencies Rising, 90-Day Concerning	Credit is the lifeblood of the US auto industry, and we don't see it being withdrawn. However, 90-day delinquencies are on a troubling trend. Total delinquencies fell about 40 basis points in 2025 from a 14-year high reached in late 2024. 90-day delinquencies finished 2025 38 basis points higher than in 2024 at 5.21%, only 6 basis points below the all-time high since 2003 of 5.27% in the fourth quarter of 2010.	Although these 90-day rates are troubling, the automaker captive finance arms in our coverage primarily lend to prime customers. Large write-offs even in the Great Recession did not hit our coverage. Credit weakness for vehicle buyers is more of a used-vehicle problem, which could pose problems for CarMax, though its subprime exposure is not large. Stocks to consider: Ford Credit is the least exposed captive finance arm among our US auto coverage to subprime, but we don't see this issue as a major risk for any stock in our coverage unless it led to a recession.
Miles Driven Rises for Fifth Straight Year	US miles driven in 2025 was 3.32 trillion, up 0.9% from 2024 and 1.9% higher than 2019. Most years before the pandemic saw annual increases, so that trend appears to be back in full force. The 0.9% increase is below the compound annual growth rate since 1970 of 2.0%.	Barring no recession, we expect more mileage growth. More miles driven can also mean more accidents and more vehicle wear, which increases demand for buying vehicles at dealerships (there are only six publicly traded US franchise dealer stocks) as well for their lucrative service departments that bring gross margins of 45%-55% regardless of warranty status. Stocks to consider: Copart, as more miles mean more accidents, and all six public auto dealers have lucrative service segments. Our entire coverage wins if accidents create new-vehicle demand.

Source: Morningstar.

- We see auto-dimming mirror maker Gentex as a cheap, high-quality, narrow-moat actionable idea, especially for investors who typically refuse to buy automaker stocks. The company boasts a debt-free, cash-rich, fortress balance sheet along with dominant market share of 79%. Its outlier EBIT margins in the auto supplier space mean the stock is rarely undervalued, but we see now as one of those times, thanks to depressed light-vehicle production. The company will be rolling out several new scalable product innovations, such as large-area dimmable devices (sunroofs and visors), for the next few years while paying a dividend and repurchasing stock. We summarize our Gentex pitch in [Exhibit 65](#).

Exhibit 3 We Like the Transformation Story at Narrow-Moat Gentex and See the Stock as Very Cheap, Which Is Rare

Talking Point	Base Case (\$42 Fair Value Estimate)	Milestones
Costs	Aggressive negotiations with about 30 Gentex suppliers for lower electronics and materials costs have succeeded, enabling gross margin to rebound from depressed 2021 levels in the low 30s. We expect stable gross margins of at least 33% over time.	2025 gross margin up 100 basis points from 2024 to 34.3% and 2026 guidance is for 34%-35%. 2025 buyouts saved \$15 million in wages, and AI will reduce launch costs via less labor. Voxx cost-cutting still has another at least \$20 million to go via IT automation, and Gentex exited a lot of low-profit China business due to tariffs.
New Automotive Products	Driver monitoring systems, in-cabin monitoring systems, and especially large-area dimmable devices mean Gentex could be a different firm, with EPS nearly doubling by 2030 in our model . Biometrics could create profile-based in-cabin experiences for personal vehicle or robotaxi customers while nanosensing technology helps robotaxi fleets keep vehicles in service.	DMS launched last year with Rivian, Volvo, and Polestar (about \$10 million sales) and two more customers by mid-2026 with big volume in 2027-28. Large-area devices targeted start of production in summer 2027 with visors and sunroofs still to come. Next-generation full-display mirrors with angled, wider, and narrower views in late 2028. The current FDM model is only 7% of Gentex total mirrors shipped, so there's plenty of growth runway as Gentex transforms itself.
Option Value Beyond Autos	Dimmable airplane window growth is still possible, and new verticals in healthcare and smart home products bring further option value .	Hands-free surgical lighting in clinical trial. 2025 had the first version of consumer-level smoke and CO2 alarms that eliminate the need for multiple devices. Boeing 777X launching in 2027 adds another aircraft type for electrochromic windows (already on 787 and Airbus A350) and more aircraft could come over time.
Capital Allocation	We expect ongoing share buybacks and perhaps a dividend increase in 2027.	Last July, Gentex announced a new buyback authorization for over 18% of the company. Annual buybacks could be at least \$200 million-\$300 million, and no debt is needed to repurchase shares in that size. A dividend increase is to come when net income is back to 2018's record of about \$438 million.

Source: Company filings, Morningstar Research.

We See US Auto Sales Growing, but Not in 2026

We expect 2026 US light-vehicle sales to decrease about 2% from 2025 to 15.8 million-16.0 million. Barring a recession, we see upside potential to our forecast range because it's still around recessionary levels based on our historical per capita sales analysis in Exhibit 4. Even if the United States has a recession this year, we think sales would not suffer as severely as they normally would, because in our view, US auto sales levels have been in recession territory since spring 2020, and the industry has room to meaningfully increase incentives without destroying profitability. It would not take a large change in per capita sales rates to get the industry back to 17 million, so we see that level as still obtainable midterm, especially if incentives go up.

Exhibit 4 Even in a Recession, We Don't See US Auto Sales Falling as Much as They Normally Would
Recessionary US light-vehicle sales scenarios using 2025 populations.

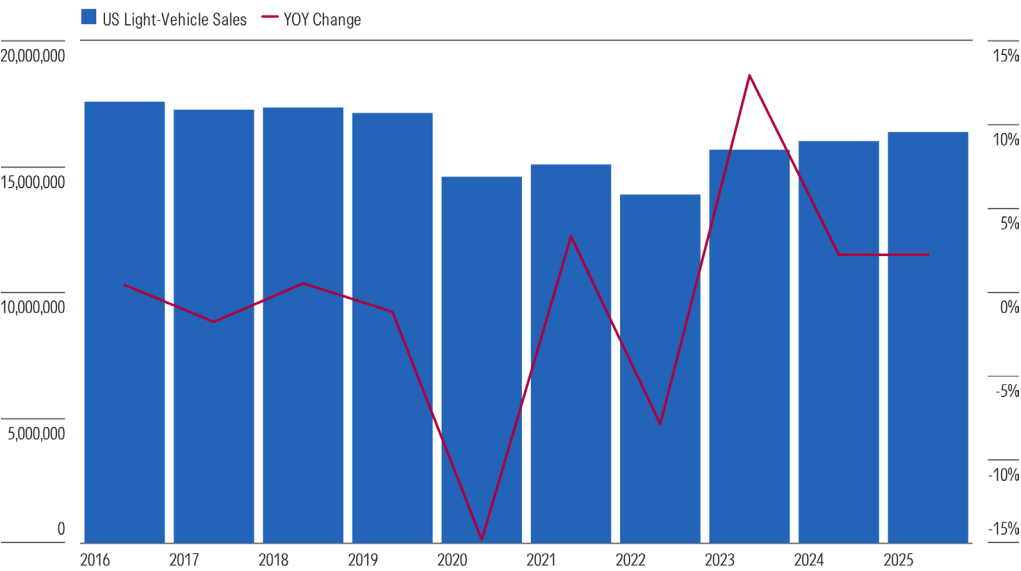
	Total US Population Sales	US Licensed Driver Sales
Sales at 1980 per capita levels	16,905,083	18,609,724
Sales at 1982 per capita levels	15,336,946	16,647,497
Sales at 1991 per capita levels	16,747,327	17,589,506
Sales at 2009 per capita levels (actual 2009 sales totaled 10.43 million)	11,642,112	12,016,760
Sales at deep recession per capita levels of 4% of total population and 6% of drivers	13,721,821	14,488,415
Sales at 2019 per capita levels	17,768,848	18,061,748
Actual 2025 US sales	16,348,337	
Midpoint of our 2026 expected sales	15,900,000	

Source: Automotive News, Center for Automotive Research, Federal Highway Administration, Morningstar calculations and estimates.

We forecast 2026 US light-vehicle sales will be between 15.8 million and 16.0 million units. The impact of tariffs on 2025 sales was not severe because firms didn't pass the costs to consumers, which led to gross margin compression (such as nearly 200 basis points for GM's automotive segment), but pricing dynamics can always change, and we think more pass-throughs are coming this year. Inventory recovery from the September 2021 low continues, but we still don't expect a return to the high 3 million or even over 4 million units that the industry saw before the pandemic. High interest rates are keeping some consumers out of the market, so we still believe that sales can actually rise or not fall severely in a recession. We don't normally say that, but US auto sales have already been at severe recessionary levels at times across 2020 and 2021, and recent levels indicate a mild recession when looking at per capita data. Normally, just before a recession, incentives as a percentage of average transaction price are high, as are sales, but that is not the case in early 2026.

Exhibit 5 gives perspective on how sales have fared in recent years. 2017 sales declined year over year for the first time since 2009. The pandemic hit in 2020 and caused the chip shortage, which decimated inventory, so 2022 sales fell to nearly 13.9 million, the lowest since 2011's 12.78 million. 2023's sales of 15.6 million on robust inventory growth were up 12.9%, the largest year-over-year increase since 2012's 13.4%.

Exhibit 5 Sales Since 2020 Heavily Affected by the Pandemic
US new light-vehicle sales (millions) and year-over-year change for the past 10 years.

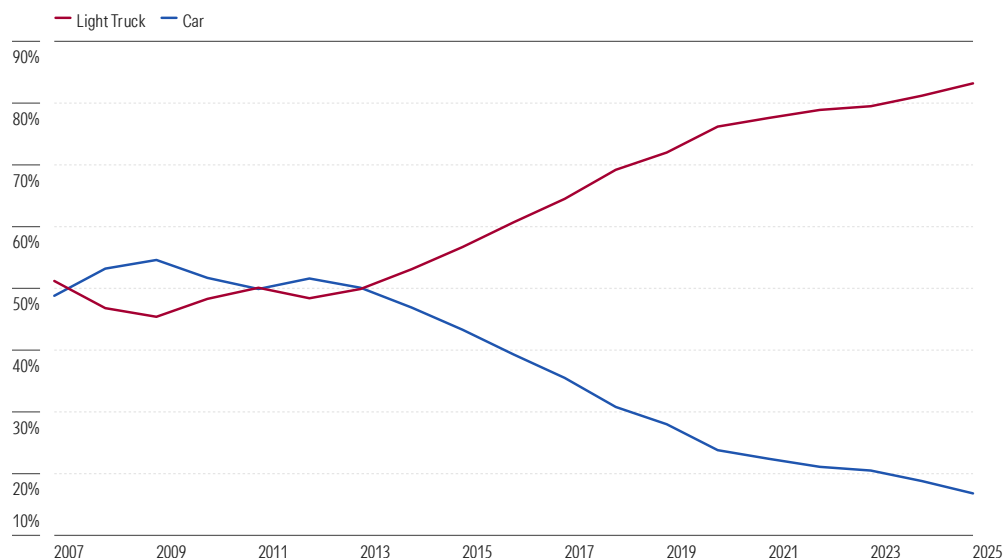


Source: Automotive News, Morningstar calculations.

Light trucks (crossovers, pickups, SUVs, and vans) have taken share from cars every year since 2013 (see Exhibit 6), mostly thanks to continued crossover penetration, though 2025 share capture came from pickups and SUVs. Crossovers now are nearly half of annual new US light-vehicle sales. Americans want large vehicles, and we continue to believe that the pandemic and its related negative effects did not hurt affluent Americans as much as working-class consumers. This has enabled purchases of expensive trim packages in light-truck models (GM's GMC Denali trim had record volume in 2025, for example) and new-vehicle demand to not suffer as much as used vehicles have from the rise in interest rates.

Exhibit 6 Light Trucks' 2025 Mix Gains Came From Pickups and SUVs Rather Than Crossovers

US new light-vehicle sales mix of cars and light trucks since 2007.



Source: Automotive News, Morningstar.

Our Five-Year US New Light-Vehicle Sales Forecast

Exhibits 7 and 8 show our sales forecast, which does not call for US sales to return to 17 million units a year until 2029 or 2030. We have slowed our expected growth cadence in light of comments from our dealer coverage and new-vehicle pricing declining slowly. Uncertainty around President Donald Trump's impact on the economy also plays a role. We don't see how price increases from tariffs help auto volume, especially when prices are keeping some consumers out of the market. It's possible that a year between 2026 and 2028 could be incredible, too, if macro pressures and tariff threats evaporate, because there were many consumers in 2021-22 who bought either a new vehicle that was not quite what they wanted due to supply scarcity or a used vehicle when they wanted a new one. However, a demand surge also depends on many macroeconomic factors, such as consumer confidence and unemployment, as well as the loan/value ratio at that time on vehicles purchased in the past few years. With the worst of the pandemic and the chip shortage in the rearview mirror, credit remaining available, and high used-vehicle prices meaning strong trade-in values for at least 2026, we are optimistic about US auto demand in the next few years, even if the US has a recession.

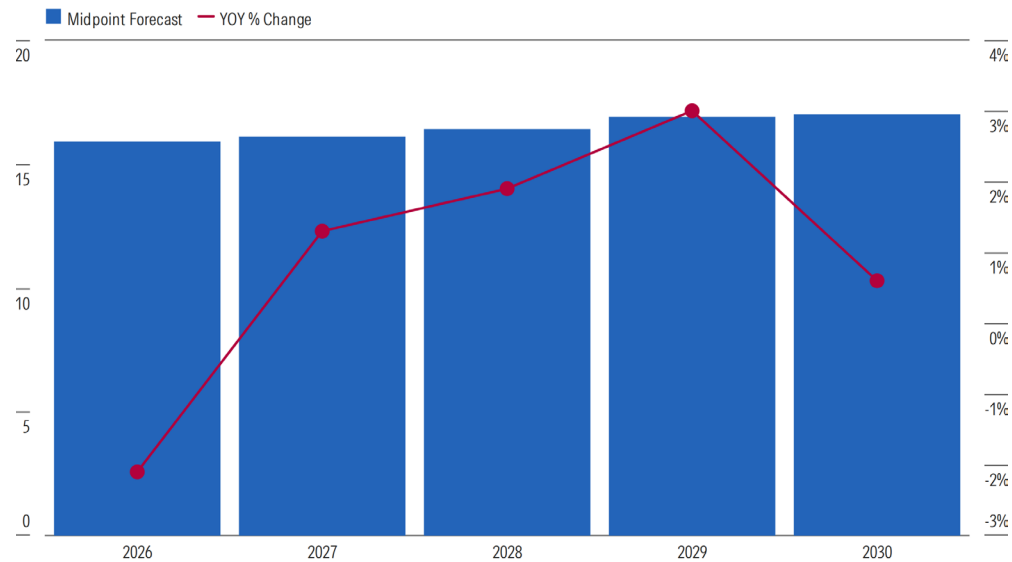
Exhibit 7 We See a Return to 17 Million Units a Ways Off

Morningstar's US new light-vehicle sales forecast (figures in millions).

	2026	2027	2028	2029	2030
United States	15.8-16.0	16.0-16.2	16.3-16.5	16.8-17.0	16.9-17.1
% Change	-2.1%	1.3%	1.9%	3.0%	0.6%

Source: Morningstar. Change is calculated from the midpoint of each year's range.

Exhibit 8 We Don't Expect Major Growth but Do See Sales Eventually Back at 17 Million
Midpoints of our US new light-vehicle sales (in millions) forecast and year-over-year changes.



Source: Morningstar.

2026 Trends Carry a Wide Range of Impacts Near Term and Long Term

We summarized the trends discussed in this report and highlighted implications for the auto industry in Exhibit 2. Some of these events have implications far beyond 2026, such as the decline in electric vehicles' share of annual new light-vehicle sales. In the short term, the Trump administration's removing the consumer EV tax credit and preventing California from setting its own emission rules relieves firms not named Tesla from selling vehicles they can't yet make money on. However, longer term it remains to be seen whether US automakers can keep improving their EV portfolios to be competitive on cost and software features versus what we see as inevitable Chinese competition coming to the US market. If not, the existence of the American auto industry is at stake.

Some trends will likely reverse, but it's a question of when. For example, even though the Trump administration set financial penalties for not meeting fuel economy rules to \$0 and removed greenhouse gas emission rules, we doubt a future Democratic president would leave these rules in place, though reinstating them could take time. Tariffs we see as at least a medium-term threat, because we don't see them ending in 2026. But we also don't see all future US presidents leaving them in place, at least for vehicles other than from China.

10 US Auto Trends to Watch in 2026

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Trend 1: Trump Slams the Brakes on Biden Auto Regulations

For details on former President Joe Biden's impact on the auto industry, including \$7.5 billion for EV charging infrastructure under the \$1.5 trillion Infrastructure Investment and Jobs Act signed into law in November 2021, see pages 90-92 of our [February 2022 report](#). On Jan. 20, 2025, via an executive order titled "Unleashing American Energy," Trump ordered the temporary pause of all agencies disbursing funds under the Inflation Reduction Act and the \$7.5 billion under the infrastructure act while the agencies review disbursements for consistency with the law.

California Is the Key Battleground in Auto Regulation

The state of California, through the California Air Resources Board, in August 2022 approved its Advanced Clean Cars II rule, which says that by 2035, 100% of all new cars and light trucks sold in California must be zero-emission vehicles, including plug-in hybrids, battery electric vehicles, and fuel cell electric vehicles (otherwise known as ZEVs, PHEVs, BEVs, and FCEVs). The ZEV rule was in response to California Gov. Gavin Newsom's September 2020 Executive Order N-79-20 requiring all new cars and passenger trucks sold in the state to be ZEVs by 2035. This is significant because according to CARB's website, 15 other states follow California's current ZEV rules and 11 others plus the District of Columbia have adopted the Advanced Clean Cars II rule starting in the 2026 or 2027 model year (depends by state).

Under the federal Clean Air Act of 1970, California must apply for a waiver from the Environmental Protection Agency to set its own emission regulations. The EPA under Biden granted California a waiver on Dec. 18, 2024, for Advanced Clean Cars II, but we expected the Trump administration to revoke this waiver and California to fight the revocation. This has all come to pass. The normal way to revoke the waiver would be for the EPA to issue a review notice, take comments, and ultimately issue a determination, all of which could take 18 months or more. The Republican-controlled Congress took a faster approach by using the Congressional Review Act of 1996. That legislation allows Congress to repeal regulations with a majority vote. The complication is that the California Clean Air Act waiver is not a regulation, and in 2023, the Government Accountability Office said the Congressional Review Act cannot be used to overturn the waiver. The GAO said the waiver is more like an adjudicatory order than a rule or regulation.

Congress went ahead and voted to revoke the California waiver, which Trump signed off on via a resolution on June 12, 2025. California and 10 other states jointly filed a lawsuit on the same day in

California federal court, saying the Congressional Review Act was not a legitimate means of waiver revocation because it's not a final rule as defined in the Administrative Procedure Act. The federal government is seeking to dismiss California's case with a hearing held on Jan. 29 this year with no ruling given. Also on June 12 last year, Newsom issued executive order N-27-25, which ordered the development of Advanced Clean Cars III rules, though those are yet to be finalized or proposed in any specifics. The fight between California and the federal government puts automakers in a tough spot, as EV product plans would take years to become reality should California regain regulatory power.

Exhibit 9 Advanced Clean Cars Requirements Have Escalated Quickly
Evolution of California's light-vehicle emission regulations.

Advanced Clean Cars I	Advanced Clean Cars II	Advanced Clean Cars III (Proposed)
- Passed in 2012, ACC I sought to reduce smog and greenhouse gases from light- and medium-duty vehicles - Established zero-emission vehicle mandates and adopted low-emission vehicle standards - Affected model years 2015-25	- Passed in 2022, this subsequent level mandates 100% of new light-duty vehicle sales to be zero-emission by 2035 (35% for 2026 model year) - Adoption by 12 total states including Oregon, Washington, New York, and Vermont - Affects future model years 2026-35	- Trump administration revoked California's waiver in June 2025 - California and 10 other states are fighting the revocation in court - Gov. Newsom issued executive order N-27-25 to create ACC III - Details are yet to be published

Source: California Air Resources Board, Morningstar Research.

There are also greenhouse gas emission rules. Automakers such as BMW, Ford, Honda, Stellantis, Volkswagen (including Audi), and Volvo since 2019 have agreed to follow California's GHG rules regardless of federal rules. In exchange for not challenging California's right to regulate GHG, these automakers got to extend the 2025 model year GHG rules for the 2026 model year. Per a July 2019 press release from Newsom's office, GHG reduction was moved to 3.7% over five years instead of 4.7% over four years.

ACC II Creates Two Obstacles for Automakers

There are two problems for the auto industry with Advanced Clean Cars II. First, we don't see how it's practical for automakers to manufacture vehicles that can't be sold in certain states but sold in others, and we don't see that production scenario ever happening. Thus, if the Democrats won the presidency and California got its waiver back, we'd consider California's rules as a de facto national standard. The 12 states that follow CARB's Advanced Clean Cars II rule (mostly West Coast and Northeast states but also Colorado and New Mexico) constituted 31.9% of 2024 new light-vehicle registrations, according to the National Automobile Dealers Association. California had the most at 11.3%, so what it says matters to the auto industry.

The second problem is that actual ZEV sales are nowhere near the required percentages shown in Exhibit 11. The 2025 US BEV share of new light-vehicle sales was about 7.8%. In California, 2025 BEV

registration mix per the California New Car Dealers Association was 20.9% (down 110 basis points from 2024), which is still far from 35% for the 2026 model year required under Advanced Clean Cars II. We don't believe trying to force Americans to buy BEVs will work. Eventually, regulators will need to amend requirements, as the European Union did last year, even if California gets its waiver back, barring no massive increase in BEV demand.

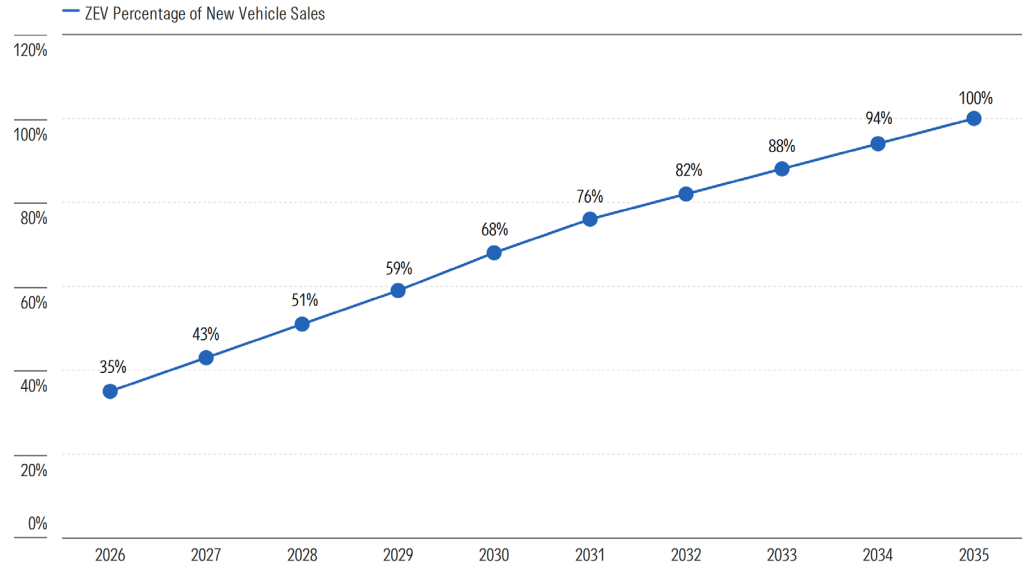
Exhibit 10 Advanced Clean Cars II Causes Unreasonable Challenges for the Auto Industry

Problem	 Issue	 Our Take
Automakers Can't Make Two Versions of the Same Vehicle	Advanced Clean Cars II is a California regulation mandating that 100% of annual new vehicles sold be zero-emission (PHEV, BEV, FCEV) by 2035	The Trump administration has won this round, but California could later win in court and reinstate ACC II, or a future Democratic president could overturn Trump's waiver removal.
	12 states have adopted or will adopt ACC II and constitute about 32% of annual new light-vehicle registrations. This essentially makes California's rules the de facto national standard because it's impractical to make the same vehicle with two emission sets.	If California eventually can reinstate its rules, the auto industry will have to make more zero-emission vehicles. Therefore, it's important for US automakers to keep investing in ZEVs.
BEV Sales Aren't High Enough	ACC II requires 35% annual new-vehicle sales to be ZEVs for the 2026 model year. This escalates every model year until hitting 100% in 2035.	California rules were unreasonable relative to actual consumer demand of EVs and likely would've needed to be amended before 2035.
	2025 BEVs in California were 20.9% of new-vehicle sales, well below the 35% required this year. Nationally, BEVs were 7.8% of new auto sales and will likely decline significantly in 2026 due to the tax credit expiration.	Over time, we expect battery costs to keep declining and more EV infrastructure additions, which should create higher EV demand long-term regardless of state and federal requirements.

Source: CARB, National Automobile Dealers Association, Omdia, Morningstar Research.

Even though the federal government has nixed ACC II for now, for reference, we show the phase-in by model year for ZEVs' required percentage of new-auto sales in Exhibit 11. CARB's 2035 requirement phases in over time, starting with the 2026 model year. The agency says that for 2026-40, the pollution reduction will save almost \$13 billion in healthcare costs, nearly 1,300 lives, and cut climate warming pollution from vehicles by 395 million metric tons, which is the equivalent of combustion from 915 million barrels of oil. It also says that transportation causes 80% of air pollutants in the state. There is no restriction on vehicles already in service today or on selling used ICE vehicles.

Exhibit 11 California's Attempt to Ban ICE New-Vehicle Sales by the 2035 Model Year Is in Jeopardy
Required automaker ZEV new light-vehicle sales in California by model year under the Advanced Clean Cars II rule.



Source: California Air Resources Board Aug. 25, 2022, press release, Morningstar. CARB's rule applies to automakers rather than dealerships. CARB defines ZEV for this rule as BEV, PHEV, or FCEV. PHEVs must have an all-electric driving range in real-world driving conditions of at least 50 miles. PHEVs cannot make up more than 20% of an automaker's mix to meet the ZEV requirement. BEVs and FCEVs must have a minimum range of 150 miles, be enabled for fast charging (for example, a Tesla Supercharger), and come equipped with a charging cord.

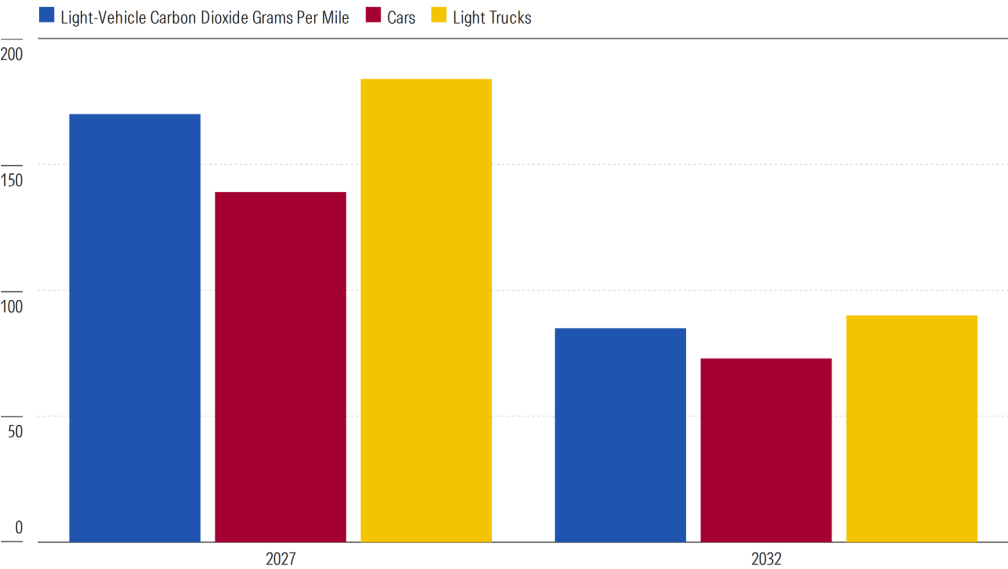
The federal government opened the door to more BEV adoption on Aug. 16, 2022, when Biden signed the Inflation Reduction Act into law. The bill continued the \$7,500 consumer federal tax credit for buying a BEV or PHEV but created many new stipulations to get it. It also created a tax credit for buying a used BEV or PHEV and a tax credit for BEV battery manufacturers; the latter are known as Section 45X credits, which refers to the relevant part of the Internal Revenue Code. However, on July 4, 2025, Trump signed into law the Budget Reconciliation Act of 2025, more commonly known as the One Big Beautiful Bill Act. An aspect of this sweeping legislation was to end the consumer EV federal tax credit starting Oct. 1, 2025. The Section 45X credit, which phases out between 2030 and 2032, remains in place but was amended to have more US-centric sourcing; for example, at least 65% of the direct material cost of an integrated component must come from primary components made in the US. The 45X credit is for up to \$45/kilowatt-hour, split into \$35/kWh for the cell and \$10/kWh for the module/pack. A battery must be at least 7 kWh, and the vehicle's gross weight must be under 14,000 pounds.

Trump Administration Also Slashing Biden GHG and Fuel Economy Rules

The federal government in 2023 became more aggressive on setting ZEV targets. The EPA's April 2023 proposal targeted GHG emission levels for 2027-32 model years that would equate to 67% of 2032 model year light-vehicle sales being electric vehicles and 60% by 2030. Although below CARB's 2032 mandate of 82%, the EPA news met resistance from the National Automobile Dealers Association for being unrealistic and not aligned with consumer demand, as well as from congressional Republicans, who found it unaffordable for consumers and robbing them of freedom of choice. The United Auto Workers union also was not pleased, because it believed the plan's rapid adoption cadence put jobs at risk.

The Biden administration—as an election-year concession to automakers and unions—relaxed the April 2023 proposal so there was not a steep increase in EV adoption until after 2030. The EPA announced its final rule on March 20, 2024. The agency said that automakers may choose to have BEVs be about 30%-56% of their light-duty volume for the 2030-32 model years, which is more relaxed than the original proposal of 67% for the 2032 model year. The agency also set industrywide light-vehicle carbon dioxide grams per mile emitted for the 2032 model year at 85 grams per mile (73 for cars and 90 for light trucks), down 50% from 170 grams in model year 2027.

Exhibit 12 Biden Emission Rules Were Getting More Strict Through 2032 Model Year
Carbon dioxide grams per mile limits for 2027 to 2032 model year set by the Biden administration.



Source: EPA, Morningstar.

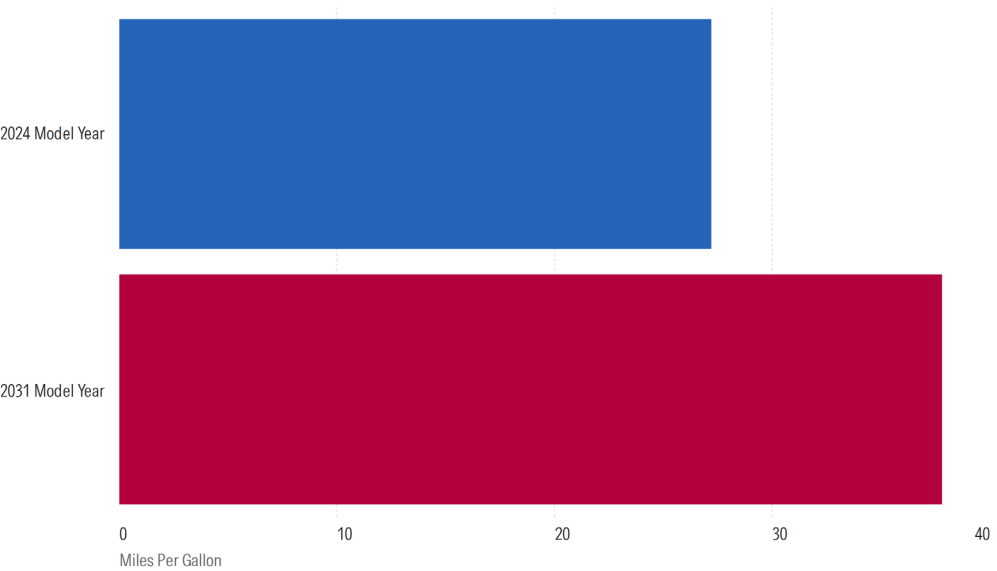
According to the *2024 EPA Automotive Trends Report* issued in November 2024, 2023 model year CO2 grams per mile for all automakers was 302 for compliance testing in laboratory tests and 319 in real world driving (also laboratory tests but a wider variety, such as hot and cold weather, varying speeds, acceleration rates, and weighted 57% for highway metrics versus compliance testing weighting of 45% highway). The EPA estimated light-duty per-vehicle technology costs rising by about \$1,200 for manufacturers across the 2027-32 model years. The agency estimated that a 2032 model year vehicle would save consumers about \$6,000 over that vehicle's life compared with a vehicle meeting the 2026 model year rules. The EPA stopped publishing CO2 fleet data in its 2025 trends report in light of its February removal of greenhouse gas emission standards.

Not surprisingly, the EPA under Trump wants to lower GHG emission rules because it believes the Biden administration was trying to force everyone to buy an EV. On March 12, 2025, the EPA announced it was undertaking 31 deregulation actions, including reconsidering GHG regulations for light-, medium-, and heavy-duty vehicles that it said “provided the foundation for the Biden-Harris electric vehicle mandate.” Specifics of new GHG regulations came on July 29, 2025, when the EPA announced a proposal to rescind

the Endangerment Finding of 2009, which has been used as justification for GHG regulations for vehicles. The EPA finalized that proposal on Feb. 12 this year, saying it will save American car buyers over \$2,400 per vehicle. With the rule final, all GHG standards for vehicles and engines are now rescinded, though we expect a future Democratic presidential administration to resume GHG standards. In March, the federal government filed a lawsuit against California for continuing to enforce GHG emission rules, which the Trump administration claims violates the Energy Policy and Conservation Act of 1975.

The Department of Transportation issues the fuel economy rules commonly known as CAFE. On June 7, 2024, the National Highway Traffic Safety Administration issued CAFE standards for model years 2027-31. Car and light-truck targets were to each increase 2% per model year, with the fleet averaging 50.4 miles per gallon for 2031, saving nearly 70 billion gallons of gasoline through 2050 and over 710 million metric tons of CO2 through 2050 per NHTSA. In the final rule document, NHTSA says that the 50.4 mpg would be 20%-30% lower in real-world driving, which at the midpoint is real-world mpg of 37.8 for the 2031 model year. The 2025 EPA trends report has 2024 model year real-world industry fuel economy at 27.2 mpg (25.6 mpg without the impact of BEV and PHEV). Relative to 37.8 mpg, that means a fleetwide improvement of 39% by the 2031 model year.

Exhibit 13 Biden CAFE Standards for 2031 Showed a Fleetwide Improvement of 39% in Miles Per Gallon US fleet fuel economy for 2024 versus Biden's 2031 CAFE standard.

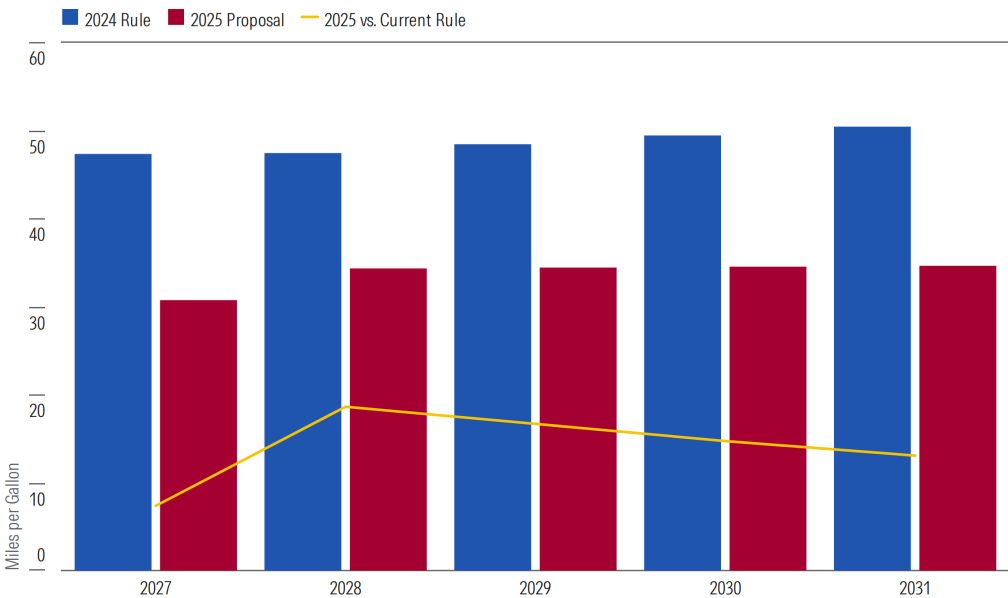


Source: NHTSA, Morningstar.

The Trump administration changed the Biden-era CAFE rules via two actions. In July 2025, Trump reset automaker CAFE penalties for noncompliance to \$0 as part of the Working Families Tax Cuts Act. The Biden-era penalty set in 2024 was \$17 per vehicle for every 0.1 mpg below the standard. Then on Dec. 3, 2025, NHTSA proposed new CAFE requirements, which are moot anyway, given that the penalty for noncompliance is \$0. The proposed rule calls for passenger car fuel economy standards to increase

0.5% annually for 2023-26, 0.35% for 2027, and 0.25% for 2029-31 model years. Light trucks would increase by 0.5% for 2023-26, 0.7% for 2027, and 0.25% for 2029-31 model years. The CAFE credit trading program, redundant with a \$0 penalty, is proposed to be eliminated with the 2028 model year. The proposed standard would lower the fleet average fuel economy to 34.5 mpg by the 2031 model year, from 50.4 mpg under Biden. We compare the two CAFE requirements in Exhibit 14.

Exhibit 14 Trump's CAFE Proposal Eliminates Cash Penalties and Is Far Less Strict Than Biden Standards
Comparison of combined car and light-truck mileage standards for 2025 CAFE proposal vs. 2024 standard by model year.



Source: NHTSA, Morningstar.

Trend 2: Electric Vehicle Mix Falls for First Time in Six Years

2025 saw US battery electric vehicles' share of new-vehicle sales fall by only 9 basis points to 7.75%, but this was the first share decline for BEVs since 2019. We calculate Tesla's share of the US BEV market fell in 2025 by 230 basis points to 45.1%, down from 77.4% in 2020. This is explained by competitors making more desirable BEVs than they used to, as well as CEO Elon Musk's political agenda angering some consumers. Tesla's volume losses came from the Model Y and Cybertruck, while the Model 3 rose 26%, helped by the expiring tax credit. Given no tax credit, we don't see 2026 share levels at 7% or 8% like in 2024-25, before the threat of the tax credit going away emerged.

As shown in Exhibit 15, we calculate GM finished second in BEV share at 13.5%, gaining about 440 basis points, while Ford's share fell by 120 basis points to 6.7%, putting it in third place. GM got a boost from the Mexican-made Equinox BEV, which doubled volume, as well as growth from the Silverado and Hummer BEV pickups and two new Cadillac crossovers, the Optiq and Vistiq. Other models also moved the needle, such as the Hyundai Ioniq 5 and VW ID.4. We calculate that combined US BEV share for Hyundai-Kia (including Hyundai's Genesis brand) was 8.3% in 2025, down 170 basis points from 2024 but up from 3.1% in 2020.

Exhibit 15 Tesla's Leadership in US BEV Share Has Fallen as the Market Expanded

Leading battery electric vehicle manufacturers by market share of annual new US BEV segment sales.

Automaker	2025	2024	2023	2022	2021	2020
Tesla	45.1%	47.4%	55.8%	61.6%	69.8%	77.4%
GM	13.5%	9.1%	6.5%	5.2%	5.4%	8.7%
Ford	6.7%	7.9%	6.2%	8.2%	5.9%	0.0%
Hyundai	5.6%	5.5%	5.3%	3.9%	2.4%	1.9%
VW Group	5.5%	3.8%	6.0%	5.9%	8.1%	5.2%
Honda	4.1%	3.2%	0.0%	0.0%	0.0%	0.0%
BMW	3.7%	4.1%	3.7%	1.9%	0.3%	0.6%
Rivian	3.4%	3.7%	3.5%	2.6%	0.1%	0.0%
Total US BEV Share	87.6%	84.6%	87.2%	89.4%	92.0%	93.9%

Source: Omdia, Morningstar calculations.

Total BEV sales in 2025 increased 1.2% from 2024 to 1.26 million, trailing the US industry's overall 2.4% sales rise. All electrified vehicle segments except plug-in hybrids and fuel cell posted sales growth in 2025. Americans who buy some type of new electrified vehicle (BEV, PHEV, or HEV) tend to stay electrified with their next new-vehicle purchase, as shown in Exhibit 16. For the 12 months ended October 2025, Experian said that among consumers who previously bought a new vehicle and replaced their vehicle with another new vehicle, those who had a BEV replaced it 74.4% of the time with another BEV, while about 16% went back to ICE. Among HEV owners, about 68% replaced their HEV with a new electrified vehicle. PHEV owners stayed electrified about 63% of the time with their next purchase but also switched to a BEV about 20% of the time, versus just about 9% of the time for HEV owners and about 5% of the time for ICE owners.

Exhibit 16 Powertrain Owners Mostly Stay Within Either Electrified or ICE When Buying a New Vehicle

Replacement powertrain choice among new-vehicle buyers whose trade-in was also bought new (12 months ended October 2025).

Previous Powertrain	New Powertrain Purchased				
	ICE	HEV	PHEV	BEV	Other
ICE	77.6%	12.0%	2.0%	5.2%	3.2%
HEV	31.1%	54.0%	4.4%	9.1%	1.4%
PHEV	36.3%	11.5%	31.2%	20.3%	0.7%
BEV	16.1%	4.9%	3.8%	74.4%	0.8%

Source: Experian, Morningstar. Other powertrains are anything besides the other four shown, such as diesel, hydrogen, and natural gas.

EV Sales Now Paying the Price for Pull-Forward Before Tax Credit Expired

Exhibit 17 shows the impact on BEV sales of the federal tax credit ending at the end of the third quarter of 2025. August and September saw BEVs surge once the tax credit's removal became law when Trump signed the One Big Beautiful Act in July. The fourth-quarter months' year-over-year changes were all down around 30% or more, which we see as the impact of pulling EV demand forward into August and September. BEVs' market share in the fourth quarter in the low to mid-5% range could uptick slightly in 2026 due to updates to the Tesla Model Y and S and the reintroduction of the Chevrolet Bolt, which

starts below \$30,000 before shipping, thanks to its cheaper lithium iron phosphate battery chemistry. Still, a return to share levels over 8% seems unlikely to us for 2026.

Exhibit 17 EV Tax Credit Ending on Sept. 30 Pulled EV Sales Out of Fourth Quarter to Third Quarter
Monthly US BEV share of new light-vehicle sales by month since 2024.

2024	US BEV Sales	YOY Growth	BEV Share
January	82,336	12.9%	7.7%
February	74,141	-8.6%	6.0%
March	96,743	5.1%	6.8%
April	99,313	6.9%	7.5%
May	107,423	12.0%	7.5%
June	100,242	-2.2%	7.7%
July	113,327	11.9%	8.8%
August	118,961	23.8%	8.4%
September	104,977	-7.4%	9.0%
October	98,289	6.3%	7.4%
November	114,564	12.0%	8.3%
December	133,103	9.4%	8.9%
2025			
January	94,035	14.2%	8.5%
February	86,040	16.0%	7.1%
March	117,882	21.9%	7.4%
April	96,462	-2.9%	6.6%
May	101,857	-5.2%	7.0%
June	92,514	-7.7%	7.4%
July	116,995	3.2%	8.5%
August	145,249	22.1%	9.9%
September	140,579	33.9%	11.3%
October	69,733	-29.1%	5.5%
November	69,580	-39.3%	5.4%
December	75,134	-43.6%	5.1%
2026			
January	71,287	-24.2%	6.5%
February	73,659	-14.4%	6.2%

Sales fell drastically as federal tax credit ended in Q3 2025. We don't see BEV share recovering to 7%-8% in 2026.

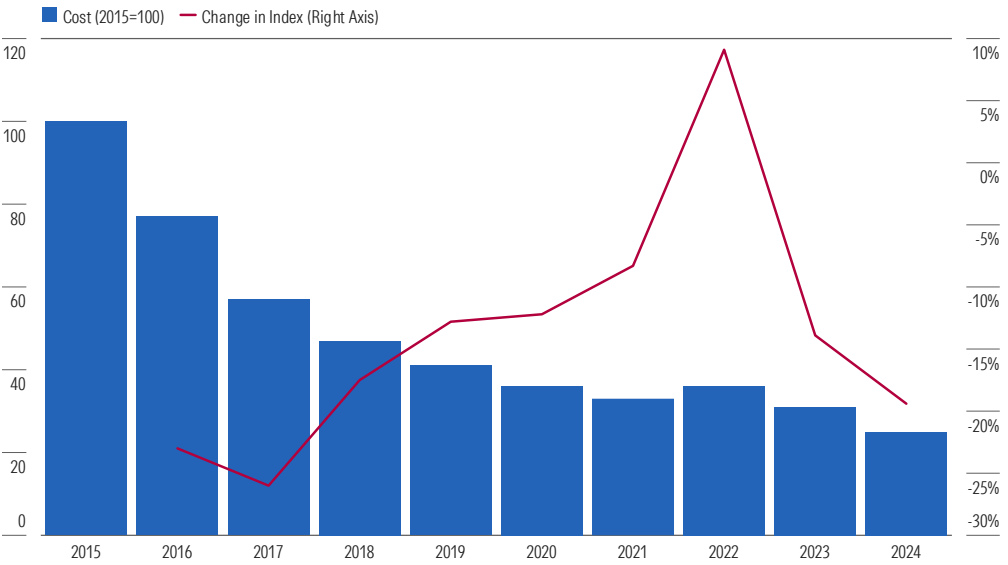
Source: Omdia, Morningstar.

Traditional hybrids (HEVs) have increased share in recent years as Toyota expanded its HEV lineup well beyond the Prius. They got new momentum in 2023 from the Ford Maverick compact pickup truck plus new-generation hybrid offerings of the Honda Accord sedan and Honda CR-V crossover. In 2025, the Toyota Camry midsize sedan was only sold as a HEV, and the company's electrified vehicles of any type totaled nearly 1.2 million vehicles, or 47% of Toyota and Lexus combined US deliveries. We calculate that of Toyota's total US electrified volume, 95% was HEV. Toyota's RAV4 and Honda's CR-V are the two leaders in the crossover segment, the single-largest vehicle segment at just under half of all 2025 US sales. The RAV4 sold about 479,000 units, and nearly 38% were HEV. Honda hit a CR-V record at nearly 404,000, and 54% of them were HEV. US industry hybrid sales increased 27.6% in 2025 from 2024, to 2.05

million, and rose 36.9% in 2024 from 2023. With HEVs' 2025 US industry volume about 63% higher than BEV, BEVs are not overtaking HEVs anytime soon.

Regardless of US tax laws and GHG and CAFE regulations, BEVs are fun to drive with their instant torque—full power at any speed—and gas remains far more expensive than electricity. So if battery costs keep coming down—which we think they will (see Exhibit 18) with more research and use of lithium iron phosphate and other alternative chemistries—we see a time in the midterm when BEVs come roaring back at the expense of ICE and HEV.

Exhibit 18 EV Battery Pack Cost Trend Is Down, and We Expect Continued Declines Due to New Chemistries and R&D
Lithium-ion battery pack cost index (2015=100).



Source: International Energy Agency, Morningstar.

Chinese automakers continue to develop EVs that we think will surprise many Americans with their quality and technology. So, we think it's important for US automakers to continue working on EVs despite currently zero GHG rules in the US. We summarize annual electrified vehicle US market share over time in Exhibit 19. For January and February 2026, HEVs' share is 13.6% (up 150 basis points year over year) while BEVs' is 6.3% (down 150 basis points).

Exhibit 19 BEV Sales in 2025 Only Grew 1.2%, While Hybrids (HEV) Were the Big Winners, Up 27.6%
US electrified vehicle market share as a percentage of annual new light-vehicle sales since 2011.

	Total US Light- Vehicle Sales	BEV Share	PHEV Share	Total BEV & PHEV Share	Hybrid (HEV) Share	Fuel Cell Share	Electrification Share
2011	12,778,885	0.08%	0.06%	0.14%	2.10%		2.24%
2012	14,493,092	0.10%	0.27%	0.37%	3.00%		3.36%
2013	15,603,678	0.31%	0.31%	0.62%	3.18%		3.80%
2014	16,522,663	0.38%	0.34%	0.72%	2.69%		3.40%
2015	17,482,841	0.41%	0.24%	0.65%	2.20%		2.85%
2016	17,553,429	0.45%	0.37%	0.82%	1.98%		2.80%
2017	17,238,915	0.61%	0.52%	1.13%	2.11%		3.24%
2018	17,318,961	1.39%	0.69%	2.09%	1.95%		4.04%
2019	17,104,792	1.37%	0.50%	1.87%	2.34%	0.01%	4.22%
2020	14,575,255	1.63%	0.48%	2.11%	3.12%	0.006%	5.24%
2021	14,946,973	2.91%	1.16%	4.07%	5.36%	0.02%	9.46%
2022	13,754,339	5.44%	1.33%	6.77%	5.57%	0.02%	12.36%
2023	15,502,479	7.51%	1.89%	9.41%	7.58%	0.019%	17.01%
2024	15,858,418	7.84%	2.01%	9.85%	10.15%	0.004%	20.00%
2025	16,233,363	7.75%	1.63%	9.37%	12.65%	0.002%	22.03%

Source: Automotive News, Electric Drive Transportation Association, Omdia, Department of Energy Alternative Fuels Data Center, Morningstar.

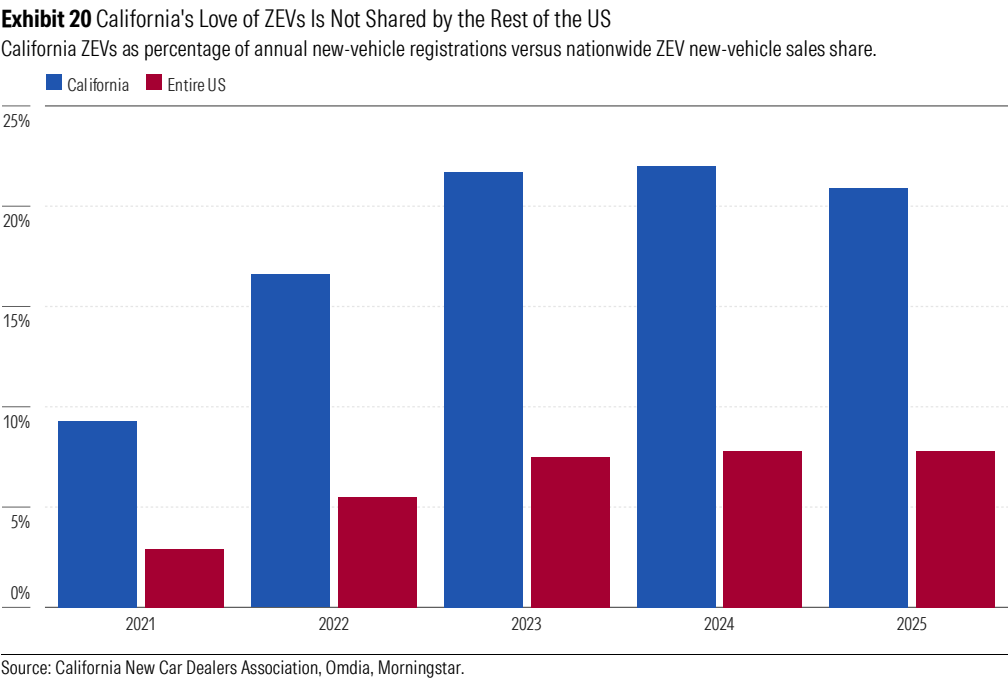
BEVs Are Not Finished

We believe BEVs desperately need more affordable models and more charging infrastructure, which is why we've previously written that the Chevrolet Equinox EV (then starting at under \$30,000 with the federal tax credit but now around \$35,000) was such a litmus test for how much BEV demand there is beyond Tesla. In 2025, Chevrolet had record BEV sales, and the Equinox EV doubled its volume to 57,945 units delivered. However, the fourth quarter of 2025 saw the vehicle's sales fall 72% following the expiration of the tax credit, and the Blazer EV did not fare better, falling 77%. Automakers have gained access to Tesla's Supercharger network, which should help greatly. Also helping will be any future federal government spending and automakers' own initiatives, such as GM and Pilot building out 2,000 charging stalls and the Ionna charging alliance of eight automakers: BMW, GM, Honda, Hyundai-Kia, Mercedes, Stellantis, and Toyota.

Transitioning the US fleet to 100% ZEV (typically BEV and fuel cell, but CARB also considers some PHEV as ZEV) is a multidecade process. There's a lot of infrastructure yet to be installed in both single-family and multifamily residences, as well as across the nation's roads. Also, more affordable models are needed to convince the non-Tesla crowd to make the switch. That will all take a lot of time and might eventually require California to change its 2035 timeline even if it beats the Trump administration in court—though CARB will be loath to do so—if EVs are still unrealistic for the masses by then.

We think BEV adoption is at an inflection point before another large penetration growth phase, rather than in an existential crisis. The problem now, other than no federal tax credit, is that there is a noticeable split in BEVs' popularity in and out of California. According to the California New Car Dealers Association, for 2025, BEVs were 20.9% of new-vehicle registrations in the state, but for the whole country including California, they were only about 8%. We show California new-vehicle ZEV registrations

versus nationwide ZEV sales since 2021 in Exhibit 20. California was 28.5% of US ZEV (nearly all of which is BEV, since fuel cell volume is minuscule) registrations, per the association.



In prior years' reports, the equivalent of Exhibit 21 showed that BEV sales growth for all electrified vehicle types far outpaced that of internal combustion engines, but for 2025, that trend is over, with only HEV outpacing total US industry growth. We note, though, that BEVs excluding Tesla (which alone had 45.1% of US BEV share) did outpace industry growth. That math excluding Tesla is less likely to occur in 2026, given no more tax credit. In January, Newsom proposed a \$200 million new and used EV rebate as part of the state's budget, but that still needs to be approved by the state legislature. At say \$7,500 per EV purchase, \$200 million would subsidize fewer than 27,000 vehicles, just 7% of California's 2025 ZEV registrations. Early February news reports said the incentive would be price-capped and limited to first-time BEV buyers.

Exhibit 21 BEVs Excluding Tesla Still Grew More Than the Overall US Industry; Hybrids Gained Share From ICE

US sales growth and market share by propulsion type.

	2025 Year-Over-Year US Sales Growth by Propulsion	Market Share	2025 Year-Over-Year Share Change in Basis Points
Internal combustion	-0.2%	78.0%	-203
Hybrid	27.6%	12.7%	251
Plug-In hybrid	-17.2%	1.6%	-38
Battery electric vehicle (BEV)	1.2%	7.7%	-9
BEV ex-Tesla	5.5%	4.3%	13
Fuel cell	-42.5%	0.002%	Not meaningful
Total US light vehicle sales growth	2.4%	N/A	N/A

Source: Omdia, Morningstar calculations.

BEVs Are Cost-Competitive With Many, but Not All, Alternatives

Exhibit 22 shows our calculation of the annual cost of a Tesla Model 3 and Model Y against premium-brand ICE competitors, the Chevrolet Equinox EV, and the Toyota Camry hybrid and RAV4 ICE crossover as mass-market alternatives to a premium-priced BEV. Exhibit 23 shows the ongoing annual operating cost per mile other than for the purchase price. The payback period in years for a Tesla with or without tax credits has become a nonissue over time versus premium combustion or premium hybrid offerings, thanks to Tesla's price reductions. Therefore, many of those competitors are now more expensive than Tesla. However, the payback period for the premium of a Model 3 versus a mass-market offering such as the Camry hybrid is not possible: The upfront BEV price premium plus charger setup costs totaling nearly \$15,000 cannot be recouped due to the Model 3's ongoing annual costs that are higher than the Camry's due to insurance. Even if a gallon of regular gas costs \$15, we still calculate a 4.0-year payback for a Model Y relative to buying a RAV4.

Exhibit 22 Premium BEVs Not a Luxury vs. Premium ICE Competitors but Don't Make Financial Sense Relative to Mass-Market Models
Ownership cost per mile for Tesla Model 3 and Model Y against ICE competitors and more-affordable ICE and BEV offerings.

	Model 3 Premium RWD	Mercedes C300	BMW 330i	Toyota Camry LE Hybrid	Model Y Premium	Chevrolet Equinox LT EV	Lexus RX 350h	Toyota RAV4 LE
Purchase price	\$44,130	\$50,900	\$48,675	\$31,720	\$50,630	\$34,495	\$53,475	\$32,650
Tax credit(s)	-	-	-	-	-	-	-	-
240 volt outlet installation	2,000	-	-	-	2,000	2,000	-	-
Wall connector for home	450	-	-	-	450	1,999	-	-
Cost of electricity per year at 240 volt/32 or 48 amps	672	-	-	-	684	1,129	-	-
Cost of gas per year	-	2,520	2,357	1,197	-	-	2,030	1,995
Annual maintenance and repair	961	2,454	2,237	795	1,043	1,254	2,418	1,268
Annual insurance	5,631	4,427	4,515	3,112	5,120	2,697	4,221	3,230
Total cost in first year	\$53,843	\$60,301	\$57,784	\$36,823	\$59,927	\$43,574	\$62,144	\$39,142
Vehicle purchase and charger setup costs	\$46,580	\$50,900	\$48,675	\$31,720	\$53,080	\$38,494	\$53,475	\$32,650
Total cost per year after purchasing vehicle	\$7,263	\$9,401	\$9,109	\$5,103	\$6,847	\$5,080	\$8,669	\$6,492
Gas or electricity cost per mile	\$0.04	\$0.17	\$0.16	\$0.08	\$0.05	\$0.08	\$0.14	\$0.13
Cost per mile for gas/electricity, insurance, and maintenance	\$0.48	\$0.63	\$0.61	\$0.34	\$0.46	\$0.34	\$0.58	\$0.43

Payoff Period

Payback period (years) for Model 3 vs. Mercedes	N/A
Payback period for Model 3 vs. BMW 330i	N/A
Payback period for Model 3 vs. Toyota Camry hybrid	Not possible
Payback period for Model Y vs. Chevrolet Equinox EV	Not possible
Payback period for Model Y vs. Lexus RX 350 hybrid	N/A
Payback period for Model Y vs. Toyota RAV4	Not possible

Model 3 cheaper than Mercedes, and BMW at time of purchase and Model Y cheaper than Lexus, so no payback period. Not possible means higher upfront of cost of Tesla can never be recouped via lower ongoing annual costs.

Source: AAA, automakers' websites, Edmunds.com, US Energy Information Administration, fueleconomy.gov, Geico, Morningstar estimates.

Prices are for base RWD or AWD model and include delivery. Premium gas prices used except for the Camry and RAV4. Insurance based on downtown Los Angeles residency for a 50-year-old single male. Regular gallon gas price used was \$3.99 while premium gallon price was \$4.87.

2026 model year used except RAV4 is 2025. Model 3, C-Class, and BMW 330i are rear-wheel drive. Equinox EV is front-wheel drive. All others are all-wheel drive.

We assume all vehicles are paid for in cash rather than financed, so no monthly payment.

Wall connector needed for maximum charging speed at home.

Fuel and electricity usage based on 15,000 miles of driving a year. Gas mileage is EPA combined rating while EV ranges are the range given on the vehicle's website.

Electricity charge is national average of \$0.1745 kWh per EIA data. Using the California average of about \$0.3029 kWh raises both Tesla models' electricity cost per mile to \$0.08.

All insurance quotes include collision coverage.

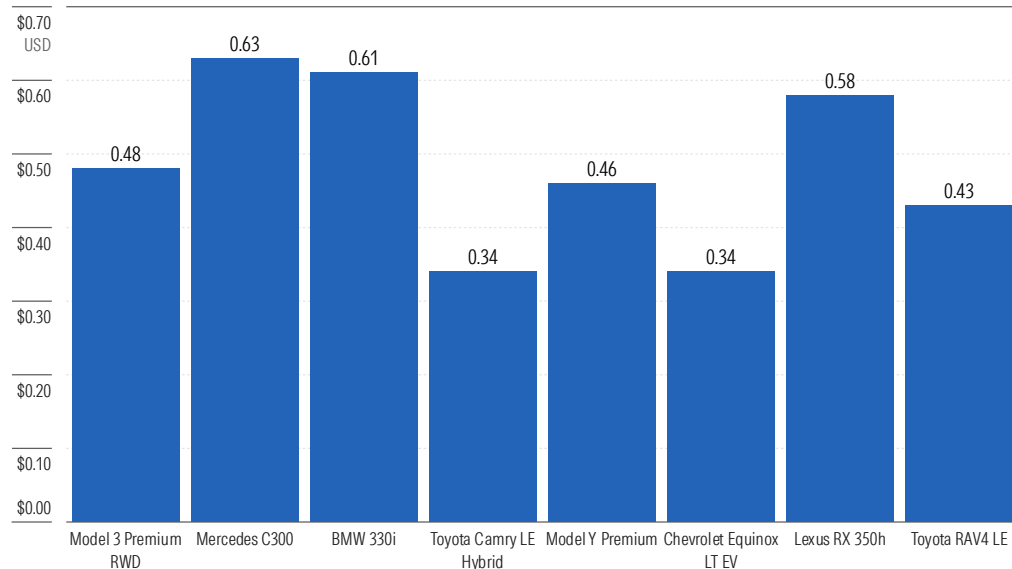
Maintenance costs are average over five years from Edmunds estimates for maintenance and repairs.

Wall connector costs assume no additional costs for any special circuit breaker.

At \$15 a gallon for regular gas and no tax credit, we calculate that the Model Y's payback period versus the RAV4 is 4.0 years.

Exhibit 23 Equinox Looks to Be a More Affordable EV Than Tesla Relative to Mass-Market Non-EVs

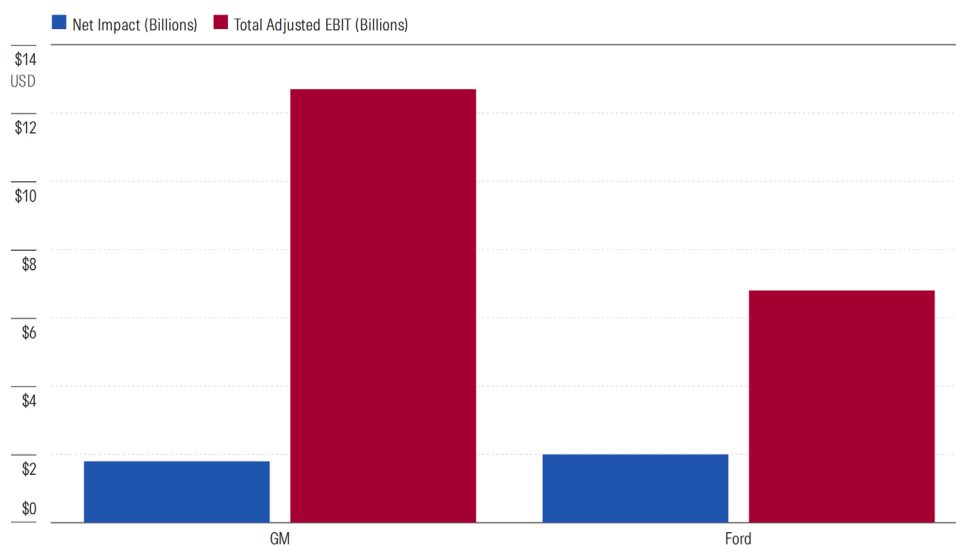
Annual operating cost per mile excluding purchasing vehicle.



Source: AAA, automakers' websites, Edmunds, US Energy Information Administration, fueleconomy.gov, Geico, Morningstar estimates.

Trend 3: Automakers Expect Trump Tariffs to Stay, and So Do We

The US auto industry has withstood the impact of tariffs better than we feared a year ago. However, we think this resilience is only because automakers—and to a much lesser extent suppliers—have shouldered the cost burden rather than passing it on to consumers. GM's 2025 gross tariff impact to adjusted EBIT was \$3.1 billion, with a net impact of about \$1.8 billion on total adjusted EBIT of \$12.7 billion. Ford's net impact was \$2 billion on total adjusted EBIT of \$6.8 billion, as shown in Exhibit 24.

Exhibit 24 GM's and Ford's 2025 Net Tariff Impact Cost Each Firm Billions in Adjusted EBIT

Source: Company filings, Morningstar estimates

Tariff rates fluctuated constantly throughout 2025, but as of early 2026, we believe tariff rates on light vehicles imported into the US are 25% from Canada and Mexico, 15% from the EU, Japan, and Korea, and 37.5% from China (EVs from China have an additional Biden-imposed tariff of 100%). The 25% Canada and Mexico tariffs are affected by US content in vehicles assembled in those two nations and USMCA compliance, however. USMCA-compliant finished vehicles from Canada and Mexico are only tariffed on their non-US content. On May 1, 2025, US Customs and Border Protection issued guidance that USMCA-compliant auto parts will not face tariffs. For US-assembled vehicles only, Trump issued an April 29, 2025, proclamation for a 3.75% rebate of a vehicle's manufacturer's suggested retail price to give US manufacturers some tariff relief on foreign parts. This MSRP rebate was amended via an Oct. 17 proclamation to go through April 2030 instead of April 2027.

We don't think the Supreme Court's recent rejection of reciprocal tariffs' legitimacy matters a lot to the auto industry, because the automotive tariffs are issued on the grounds of threats to national security under Section 232 of the Trade Expansion Act of 1962 rather than the reciprocal tariffs issued on April 2, 2025, under the 1977 International Emergency Economic Powers Act.

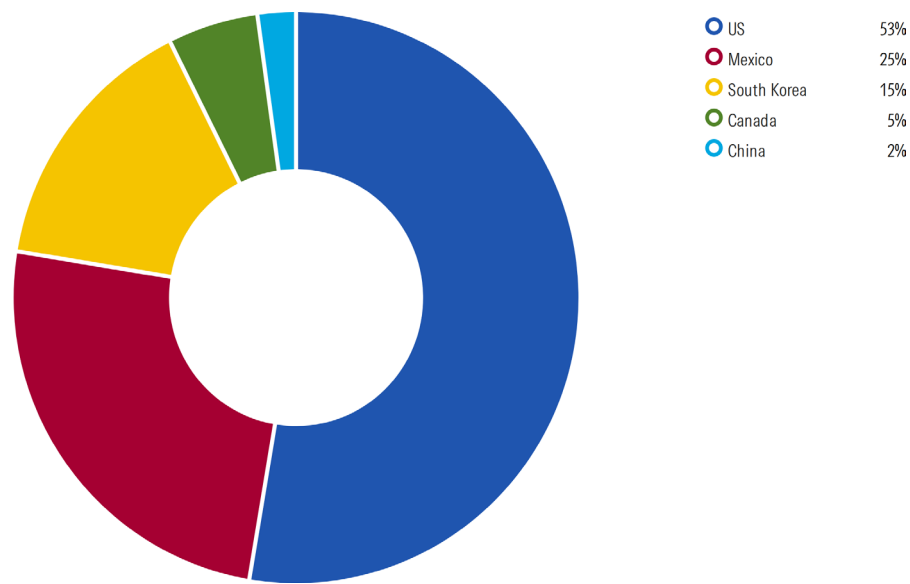
Tariffs Massively Disrupted the North American Auto Ecosystem

The problem for the industry is that North American trade had been tariff-free since the inception of the North American Free Trade Agreement in January 1994. For the US and Canada, autos were tariff-free since the Canada-United States Automotive Products Agreement signed in 1965. Parts can cross North American borders a high-single-digit number of times before ending up in a finished vehicle. Supply chains cannot be revamped quickly. Building plants in the US and coordinating supply chain changes would cost billions of dollars each for GM and Ford and take over a year, if not longer.

On June 10, 2025, GM announced a large shift toward increasing its US production. Although its press release did not mention tariffs, we think some of the moves were tariff-driven. GM's Kansas City area plant in Fairfax, Kansas, will produce gas-powered Chevrolet Equinox crossovers in mid-2027. That same year, the Spring Hill, Tennessee, plant will begin producing the Chevrolet Blazer crossover. Both the Equinox and Blazer are currently only made in Mexico. This announced investment, along with adding Cadillac Escalade full-size SUV capacity in Michigan's Orion Township to supplement current Texas SUV production, totals about \$4 billion. We don't think GM will end Mexican Equinox and Blazer production, but we do think more of those vehicles sold in the US will be Kansas- or Tennessee-built, while Mexican output will be used when needed during high US demand times despite any tariffs. Other Mexican output will need to find new customers outside the US, such as in Canada or Latin America, or perhaps these two plants will add another vehicle not for sale in the US. In late January, GM confirmed to WardsAuto that it is moving Buick Envision production to Fairfax from China in 2028.

We think GM made these moves because it does not expect tariffs to go away during Trump's remaining term. We think it's also possible that the tariffs will remain long after Trump leaves office, especially if a Republican succeeds him. We estimate that of GM's 2025 US sales volume, about 53% was assembled in the US, about 25% in Mexico, 15% in South Korea, 5% in Canada, and 2% in China.

Exhibit 25 GM's 2025 US Sales Mix by Where Vehicle Was Assembled



Source: Automotive News, Morningstar estimates.

Exhibit 26 shows automakers' North American production mix that is from Canada and Mexico as well as key vehicles either assembled solely (such as the Chevrolet Equinox and Blazer) or partially (Honda Civic) in those countries. The data shows that automakers are not affected equally. GM and Stellantis use Mexico and Canada production more than Ford, the VW and Audi brands heavily use Mexico, and Toyota and Honda favor Canada for non-US production on the continent.

This discrepancy means that tariffs do not hurt automakers equally within a vehicle segment. Compact crossovers, a very popular segment, are a good example, with all of GM's Equinox vehicles made in Mexico. A tariff places the Equinox at a disadvantage to the segment-leading Toyota RAV4 and Honda CR-V, which have some US production, unlike the Equinox (hence GM's 2027-28 plans discussed above). Full-size pickups are some of the most profitable vehicles that GM and Ford sell, and the tariff impact varies. Ford makes 100% of its F-Series trucks in the US (though some F-150 engines are only made in Mexico, some Super Duty engines are made only in Canada, and Ford plans to start Super Duty production in Canada this year). We calculate GM's 2025 Chevrolet Silverado and GMC Sierra production mix was 42.9% in Mexico and Canada, with Mexico alone 30.4% of the mix.

Exhibit 26 Tariffs of 25% on Canadian and Mexican Imports Don't Hurt Automakers Equally

Key risk exposures for 25% tariffs on US finished vehicle imports from Canada and Mexico.

	Mexican North American Production Mix	Key Mexican Made Vehicles and Parts	Canadian North American Production Mix	Key Canadian Made Vehicles and Parts
Ford	17.1%	Bronco Sport, Maverick, Mustang Mach-E EV, 3.5L F-150 engine	0.01%	Mustang GTD, 7.3L V-8 Super Duty in Windsor
GM	31.3%	Blazer, Blazer EV, Equinox, Equinox EV, Silverado, Sierra, Terrain	4.8%	Silverado
Stellantis	25.8%	Ram pickup, Ram ProMaster, Compass, Wagoneer	9.8%	Pacifica, Voyager, Charger
Honda	14.3%	HR-V, Prologue (in a GM factory)	25.5%	CR-V, Civic
Toyota	13.8%	Tacoma midsize pickup truck	24.0%	Lexus NX, Lexus RX 350, RAV4
Nissan	48.3%	Sentra, Versa, Kicks, pickup chassis	0.0%	N/A
BMW	18.8%	2-Series, 3-Series, M2	0.0%	N/A
Mercedes	15.7%	GLB	0.0%	N/A
VW & Audi	72.5%	Jetta, Taos, Tiguan, Audi Q5	0.0%	N/A
Hyundai-Kia	27.1%	Kia K3 and K4, Kia Forte	0.0%	N/A

Source: Automotive News, NHTSA's American Automobile Labeling Act Report, Morningstar calculations. Ford announced in July 2024 that is adding about 100,000 units of Super Duty pickup truck capacity in Canada in 2026. Ford makes no vehicles in Canada other than the Mustang GTD since ending Edge production in April 2024. For GM's Mexican production, Equinox, Equinox EV, Blazer, Blazer EV, and GMC Terrain are only made there. About 43% of GM's 2025 full-size pickup truck production (Silverado and Sierra) was in Mexico and Canada, with about 30% in Mexico. Stellantis' Ram pickup Mexican production mix is about 36%.

USMCA Is in Trouble

Hurting US automakers' profits and raising prices on US consumers to us sounds like the opposite of what the Trump administration wants to do for the economy, and we hope North America can always be a tariff-free trade zone. We may get clarification on this on July 1, when the three North American nations must decide in writing whether they want to extend the USMCA for another 16-year term. If not renewed then or at another review session, the agreement will expire on July 1, 2036, or more likely would just end as soon as this year. We expect Trump will want 2026 amendments that will give the US protection against drug trafficking and illegal immigration and, in Canada's case, access to critical minerals, rather than wanting to terminate the trade agreement that was his idea in his first term. That said, we believe the US' negotiating separate trade agreements with Canada and Mexico is more than a remote possibility, but it's too early to know for sure. *Automotive News* on Dec. 11, 2025, quoted Canada's minister for US-Canada trade, Dominic LeBlanc, as saying that for now, tearing up USCMA is not what the Americans want and that the US intends to have a review process that is traditional for these types of agreements. However, during a Jan. 13, 2026, visit to a Detroit Ford plant, Trump said he did not care about the USMCA.

An interesting aside on US-Canada trade relations is that US tariff policy likely forced Canadian Prime Minister Mark Carney to visit Beijing in January and strike a deal to lower Chinese tariffs on Canadian goods such as canola seed in exchange for Canada lowering tariffs on Chinese EVs to the most-favored-nation rate of 6.1% on 49,000 vehicles annually, down from 106%. It will be interesting to see how successful these vehicles are in gaining share in Canada—and how often these vehicles appear on US roads and start attracting US consumer interest.

No Escape From Tariffs, Even With US Assembly

Exhibit 27 shows vehicles by brand that GM and Ford sell in the US in 2026 and how much non-US content they have, using NHTSA's annual *American Automobile Labeling Act Report*. NHTSA's data only shows Canadian content combined with US content, but it does show Mexican content on its own. The

main takeaway, in our view, is how diverse beyond the US vehicle content is, even when the vehicle is assembled in the US. There is no escaping automotive tariffs, which is why we think unleashing them so broadly is painful for American automakers. Lower North American segment profits also means less profit-sharing for UAW members (Exhibit 28), the exact type of worker the Trump administration claims to be looking out for. Stellantis had so many struggles that its workers got zero profit-sharing for 2025.

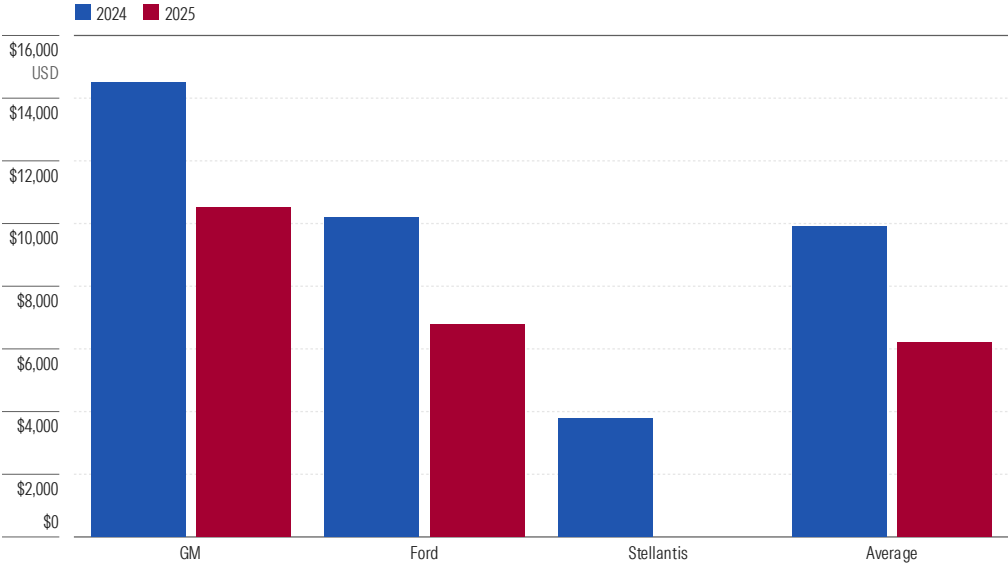
Exhibit 27 Assembling a Vehicle in America Does Not Keep an Automaker Immune From Tariffs Due to Sourcing of Parts Content
Vehicle content by nation for GM and Ford vehicles sold in the US in 2026.

General Motors				Ford			
Brand/Vehicle	Assembly	US/Canada Content	Other Content	Brand/Vehicle	Assembly	US/Canada Content	Other Content
Buick				Ford			
Enclave	USA	35%	27% Mexico	Bronco	USA	42%	16% Mexico
Encore GX	Korea	2%	50% Korea, 19% China	Bronco Sport	Mexico	20%	70% Mexico
Envision	China	6%	90% China	Escape	USA	45%	30% Mexico
Envista	Korea	3%	53% Korea, 20% China	Expedition	USA	55%	25% Mexico
Cadillac				Explorer	USA	55%	20% Mexico
CT4	USA	35%	23% Mexico, 15% China	F-Series	USA	45%	All 3.5L engines made in Mexico
CT5	USA	35%	23% Mexico, 15% China	Maverick	Mexico	25%	65% Mexico
Escalade	USA	38%	36% Mexico	Mustang	USA	55%	30% Mexico
Escalade IQ EV	USA	56%	19% Mexico	Mustang Mach-E	Mexico	13%	78% Mexico
Lyriq	USA	43%	18% China, 17% Korea	Ranger	USA	46%	20% Mexico
Optiq	Mexico	43%	18% China, 17% Korea	Transit	USA	No data	No data
Vistiq	USA	43%	18% China, 17% Korea	Lincoln			
XT5	USA	31%	35% Mexico	Aviator	USA	55%	20% Mexico
XT6	USA	31%	35% Mexico	Corsair	USA	50%	30% Mexico
Chevrolet				Nautilus	China	10%	90% China
Blazer	Mexico	31%	35% Mexico	Navigator	USA	55%	30% Mexico
Blazer EV	Mexico	43%	18% China, 17% Korea				
Corvette	USA	39%	29% Mexico				
Colorado	USA	49%	23% Mexico				
Equinox	Mexico	11%	55% Mexico				
Equinox EV	Mexico	43%	18% China, 17% Korea				
Trailblazer	Korea	3%	53% Korea, 20% China				
Traverse	USA	35%	27% Mexico				
Trax	Korea	2%	50% Korea, 19% China				
Express	USA	53%	24% Mexico				
Silverado	USA, Can., Mex.	38%	36% Mexico				
Silverado EV	USA	56%	19% Mexico				
Suburban	USA	38%	36% Mexico				
Tahoe	USA	38%	36% Mexico				
GMC							
Acadia	USA	35%	27% Mexico				
Canyon	USA	49%	23% Mexico				
Hummer EV	USA	56%	19% Mexico				
Savana	USA	53%	24% Mexico				
Sierra	USA, Mexico	38%	36% Mexico				
Sierra EV	USA	56%	19% Mexico				
Terrain	Mexico	11%	55% Mexico				
Yukon	USA	38%	36% Mexico				

Even US assembled vehicles have plenty of foreign content. We think assembling a vehicle in America does not keep US automakers immune from tariffs, as a lot of their parts are sourced from foreign countries.

Exhibit 28 Average UAW Profit-Sharing Fell Nearly 40% as Tariffs Hurt All Three Firms

Profit-sharing payouts per Detroit Three UAW member for 2024 and 2025 results.



Source: Automotive News, Morningstar.

Trend 4: New-Vehicle Production Mostly Down in 2025; 2026 Also Sluggish

We show 2025 North American light-vehicle production in Exhibit 29. As in 2024, Nissan and Stellantis are outliers. In 2024, their production declines were for inventory reduction. In 2025, both firms had supply chain issues beyond their control, such as the Novelis aluminum plant fire, and Stellantis paused some production in the spring on tariff fears.

Toyota cranked up output to try to meet its strong demand, but its dealers would still like more RAV4 inventory. The Camry (which does not offer a pure internal combustion option anymore), RAV4, and Tacoma midsize pickup were notable contributors. GM discontinued the Chevrolet Malibu at the end of 2024, so car production suffered, though car segment mix is a low-single-digit percentage across the Detroit Three. We calculate that excluding the Malibu, industry car production fell 7.4% from 2024. GM's light-truck models saw growth across crossovers like Equinox, Traverse, and Acadia but also from SUVs such as Escalade. Cadillac also launched two new EV crossovers, Optiq and Vistiq. Ford fell on the F-Series, which suffered badly late in 2025 from the Novelis fire due to its all-aluminum body. Tesla saw all its models decline, though Model 3 sales grew about 26% following a refresh. Hyundai-Kia rose on a full year of EV6 production as well as growth from the EV9, Tucson, and Ioniq 5.

Exhibit 29 Stellantis and Nissan Production Lagged Peers in 2025

2025 North American light-vehicle year-over-year production change by firm.

	Car	Light Truck	Total
Industry	-11.3%	-2.5%	-4.0%
GM	-66.6%	0.5%	-4.0%
Ford	17.5%	-4.0%	-3.5%
Stellantis	-61.4%	-12.7%	-13.7%
Detroit Three	-48.5%	-4.5%	-6.2%
Toyota	5.2%	10.9%	9.4%
Honda	-7.2%	-5.9%	-6.2%
Nissan	-16.6%	-9.3%	-12.6%
Japan Three	-5.8%	1.3%	-1.0%
Hyundai-Kia	5.3%	9.4%	8.3%
BMW	0.3%	4.2%	3.5%
Mercedes	N/A	-6.6%	-6.6%
Audi	N/A	1.6%	1.6%
Tesla	-18.1%	-20.7%	-19.8%
VW Group	-14.6%	-0.9%	-3.1%

Stellantis and Nissan struggled to produce vehicles in 2025 due to issues such as plant fires and tariff fears.

Source: Automotive News, Morningstar calculations. Lexus and Cadillac numbers are within Toyota and GM, respectively. VW Group includes Audi. Ford includes medium-/heavy-truck production. Mercedes includes Sprinter/Metris. Tesla is an Automotive News estimate.

Exhibit 30 shows our US new light-vehicle sales forecast from our Feb. 20 report, [No, Tariffs Will Not Wipe Out US Auto Sales](#). Although credit remains readily available, we don't see it getting looser for traditional auto loans and leasing. We think leasing will not always be over 30% of new-vehicle sales annually (it's currently below that) because automakers' captives won't want to assume residual value risk as used-vehicle prices decline or if they fear another downturn is coming. We see leasing rising over time to help drive new-vehicle sales growth, but we expect a decline in 2026 sales versus 2025 in light of consumer affordability woes. With the worst of the pandemic and the chip shortage in the rearview mirror, credit remaining available, and high used-vehicle prices meaning strong trade-in values for at least 2026, we are optimistic about US auto demand long-term, even if the US has a recession.

Exhibit 30 We See a Return to 17 Million Units as a Ways Off

Morningstar's US new light-vehicle sales forecast (figures in millions).

	2026	2027	2028	2029	2030
United States	15.8-16.0	16.0-16.2	16.3-16.5	16.8-17.0	16.9-17.1
% Change	-2.1%	1.3%	1.9%	3.0%	0.6%

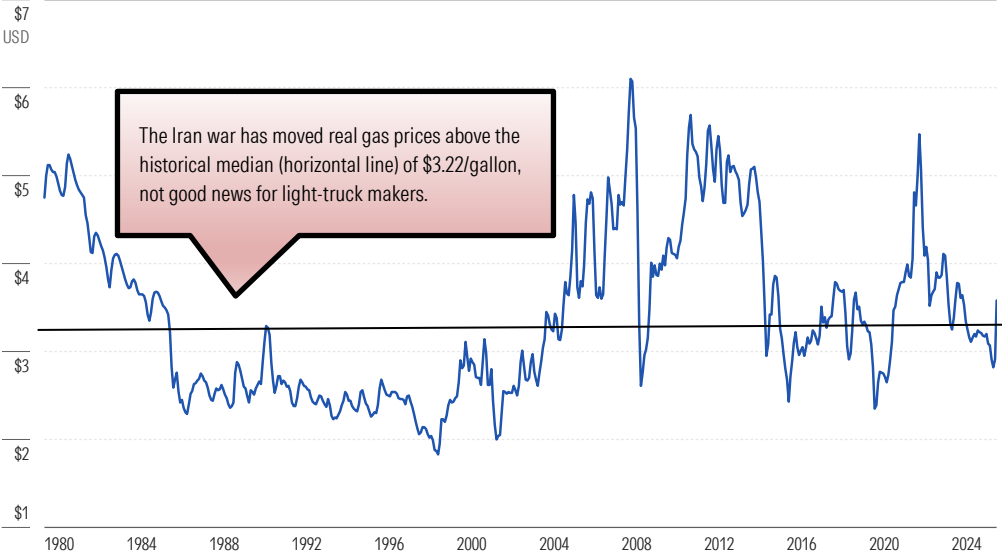
Source: Morningstar. Change is calculated from the midpoint of each year's range.

Trend 5: Light-Truck Mix Increased in 2025 for 13th Straight Year, but Streak Is in Jeopardy

We think cheap gas is especially important because of the implications of a mix shift toward light-truck models (crossovers, SUVs, pickups, and vans) over car models, though BEVs are slowly taking gas prices out of the equation. Americans love their large vehicles, and gas prices before the Iran war, other than a surge in mid-2022, were not out of control. Also, an old fleet gives people a reason to come to the showroom. Using real-dollar gas price data from the US Energy Information Administration in Exhibit 31,

we calculate that the average price of \$3.58 a gallon in March is down 35% from the most recent peak of \$5.47 in June 2022 and 41% from \$6.10 in June 2008, the highest real-dollar value since at least 1976. Before the Iran war, these respective declines were 46% and 51%.

Exhibit 31 Real Gas Prices Still Below Inflation-Adjusted Peaks, but March Levels Not Good for Light-Truck Makers
Monthly real-dollar gallon of regular gas prices in the US, 1980-March 2026.

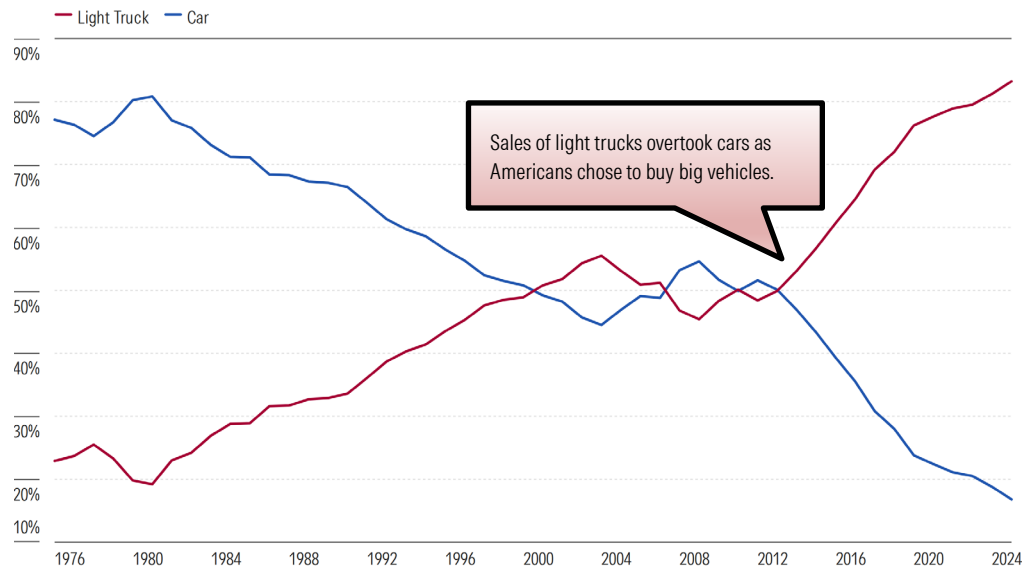


Source: US Energy Information Administration, Morningstar.

The mix shift away from cars in the US is very noticeable and is shown over time in Exhibit 32. As automakers expanded crossover offerings, the light-truck mix accelerated, with some year-over-year increases since 2014 of 300-400 basis points. Light-truck share even increased in years when overall US light-vehicle sales fell.

Exhibit 32 Data Confirms That Americans Love Their Big Vehicles

US new light-vehicle sales annual car and light-truck mix since 1976.



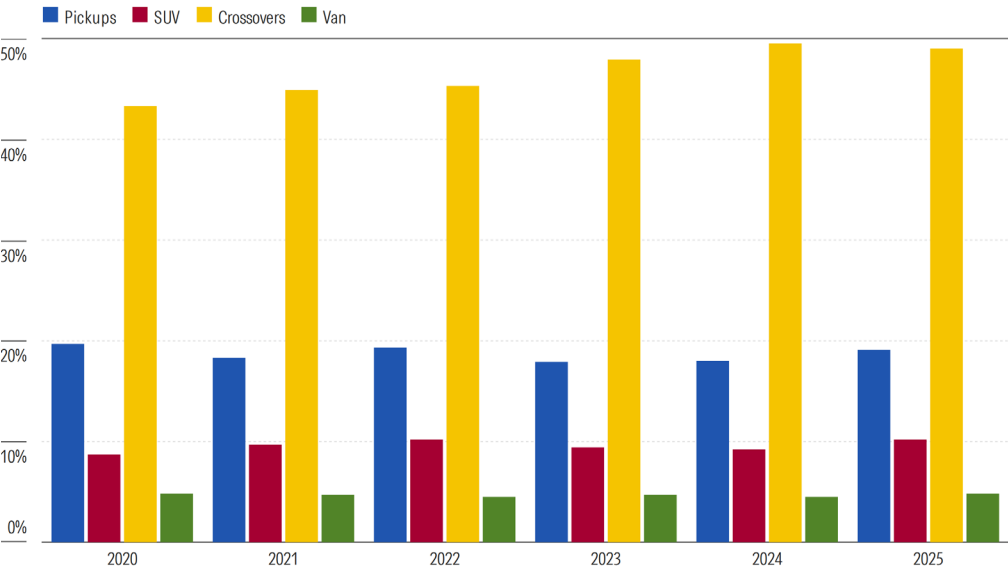
Source: Automotive News, Bureau of Economic Analysis, NADA Data, Morningstar.

We show recent trends in light-truck share in Exhibit 33 and Exhibit 34. In 2021, light trucks gained 140 basis points of share to 77.6%, with crossovers and SUVs gaining share while pickup trucks lost share. We believe this was due to the chip shortage constraining the Detroit Three's pickup production rather than consumer preferences shifting away from pickups. Crossovers rose but struggled in 2022, as segment leaders Toyota and Honda saw RAV4 and CR-V output constrained by the chip shortage. Just as the Detroit Three's pickups rebounded in 2022, 2023 saw Japanese automaker crossover production improve, which helped crossovers gain 260 basis points to be 47.9% of new light-vehicle sales.

2024 saw only crossovers (up 160 basis points) and pickups (up 10 basis points) up year over year. The only other vehicle segment increasing penetration in 2024 was small cars (up 60 basis points), which we attribute to some consumers seeking affordability, but that segment lost share in 2025. 2025 saw light trucks gain nearly 200 basis points to 83.0%. Crossovers, however, actually lost share for the first time in over a decade, albeit only 50 basis points, partly on supply chain problems at Honda. Pickups and SUVs drove the 2025 light-truck penetration increase, each up about 100 basis points.

Exhibit 33 Light-Truck Share Moves Upward Despite Supply Chain Problems Since 2020

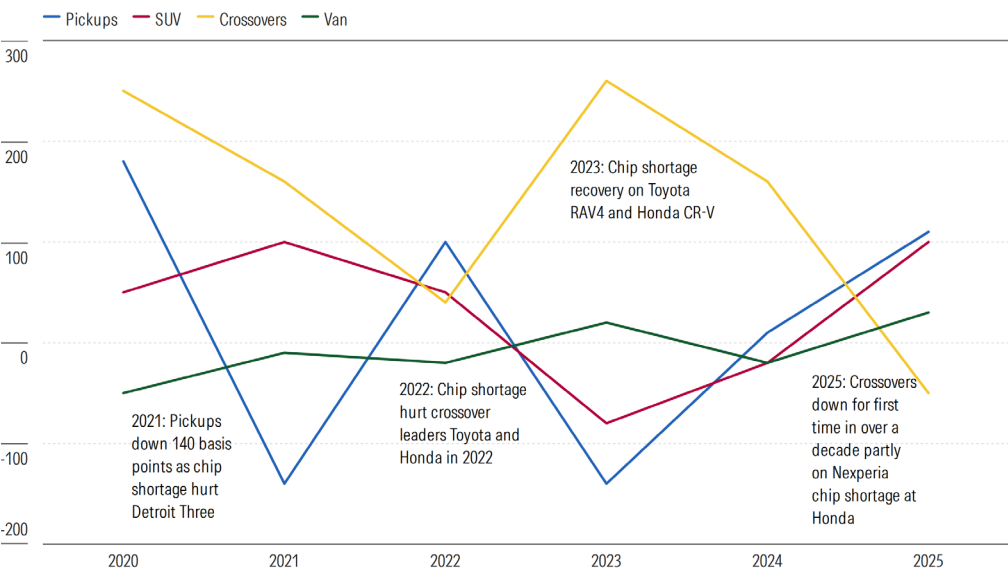
Light-truck share by vehicle segment of overall US new light-vehicle sales, 2020-25.



Source: Omdia, Morningstar.

Exhibit 34 Crossovers Posted a Rare Market Share Decline in 2025

Year-over-year basis-point change of each light-truck vehicle segment of overall new US light-vehicle sales, 2020-25.



Source: Omdia, Morningstar calculations.

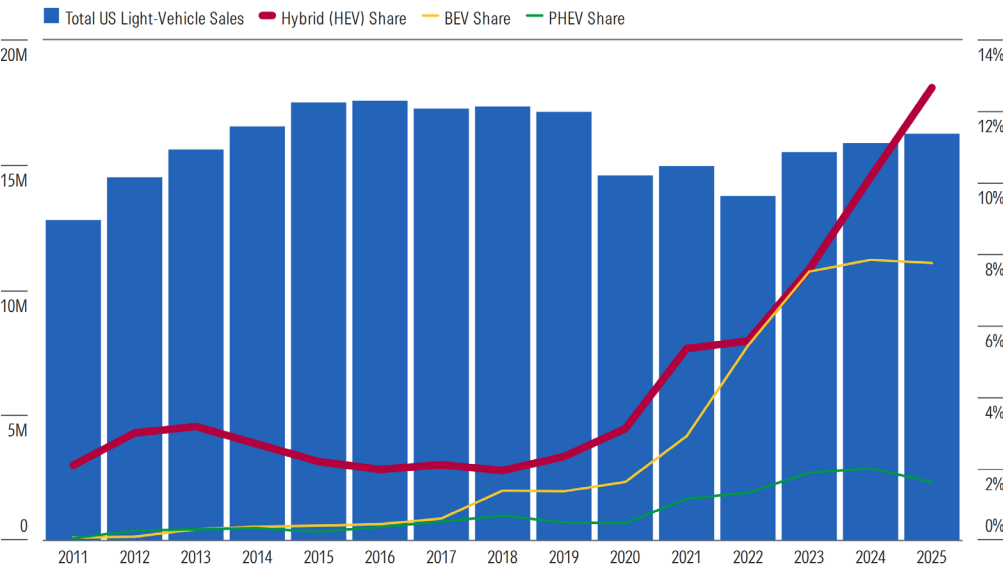
Affordability Woes and Now Rising Gas Prices May Slow Light-Truck Growth Soon

Gas prices cheaper than those in other parts of the world have long enabled Americans to love big vehicles, and the move to crossovers has been ongoing for years. Light trucks have come a long way from their 45.4% share in 2009, in part thanks to cheap gas but also because crossovers now have

similar fuel economy to large sedans. This is one reason we think the Detroit Three decided that, for the most part, it is no longer worth competing with the Japanese in mass-market sedans. The Chevrolet Malibu midsize sedan was the notable exception, fighting the Toyota Camry, Honda Accord, and other firms' offerings following the stoppage of the Chrysler 200 and Ford Fusion. However, GM discontinued the Malibu (which we thought was an excellent vehicle, competitive with Camry and Accord) in November 2024 so it could retool its Fairfax plant to make the new version of the Bolt electric vehicle starting earlier this year as well as the gas-powered Chevrolet Equinox crossover in mid-2027 and Buick Envision in 2028 (Equinox is currently only made in Mexico and Envision only in China). With light trucks constituting now over 80% of the market, there just is not room for every automaker to offer a compact, midsize, or full-size sedan.

However, with consumer affordability struggles, the Detroit Three pulling back on EVs, and hybrid market share of annual new light-vehicle sales now over 12% (see Exhibit 35), automakers are thinking of reentering car segments. A Feb. 13 article in *The Wall Street Journal* quotes GM President Mark Reuss saying, “I would kill to have a hybrid-electric sedan” at a recent GM town hall, and that GM is working on doing that. The same article said Ford is studying whether it can add sedan production to the midsize EV pickup capacity it is adding in 2027 at its Louisville, Kentucky, plant. The paper quoted CEO Jim Farley at the Detroit auto show this year saying about its now-discontinued Fusion midsize sedan that there was demand, but Ford could not meet it profitably. Another quote was from then-Chrysler CEO Chris Feuell, who said in 2025 that they are working on a small car priced under \$30,000 that would be aspirational and fun to drive. With car market share under 20%, we don't see the story ending well if everyone reenters car segments, but if a worthy player like the Malibu were the only one, it could have success if it offered good value and were a hybrid (it previously did come in a hybrid).

Exhibit 35 HEV Share Jumped in 2023-25 on More Offerings From Honda and Toyota



Source: Automotive News, Electric Drive Transportation Association, Omdia, Department of Energy Alternative Fuels Data Center, Morningstar.

The challenge is twofold, though: Car segment share continues to fall, and even if new offerings reverse that shift, sedans don't make much money. The same *Wall Street Journal* story quoted Toyota North American sales head David Christ on its leading compact sedan, the Corolla, saying Toyota makes money on it but not a lot. Even if the Detroit Three have some market share success reentering car segments, we don't see that move as a massive needle mover for profits or stock prices. However, it would help US industry sales levels by bringing more consumers back to the new-vehicle market.

Exhibit 36 illustrates the good fuel economy of light trucks by comparing a 2026 Honda CR-V crossover with four cylinders and front-wheel drive to a similarly equipped entry-level Accord midsize sedan. Both vehicles seat five people, and the Accord's starting MSRP is lower than the CR-V's. However, the CR-V offers nearly 5 times the maximum cargo volume of the Accord. As shown in Exhibit 37, the main loser from crossovers' share increase remains the classic midsize family sedan. Fortunately for automakers, consumers are willing to pay for more space.

Exhibit 36 Crossovers Offer More Space Than Sedans Without a Big Markup or Fuel Economy Sacrifice
Fuel economy, price, and cargo specifications of the entry-level Honda Accord sedan and Honda CR-V crossover.

	2026 Honda CR-V LX	2026 Honda Accord LX
Miles per gallon - City	28	30
Miles per gallon - Highway	33	38
Miles per gallon - Combined	30	33
Cost to fill up gas tank	\$55.86	\$59.05
Passenger volume (cubic feet)	106.0	105.7
Maximum cubic feet of storage	76.5	16.7
Starting MSRP excluding shipping	\$30,920	\$28,395

Source: Honda website, fueleconomy.gov, Morningstar calculations. Both vehicles are front-wheel drive, 1.5L 4-cylinder turbo engines.

With spec differences this noticeable and no severe falloff in fuel economy, consumers believe they are getting more vehicle for their money in light trucks. As shown in Exhibit 37, the 2025 total light-truck mix increased 180 basis points year over year, a gain in line with some of the greater year-over-year changes in recent years. We expect the overall industry light-truck mix will eventually top out at around 85%-87%, as more consumers still need to trade in a vehicle that is on average nearly 13 years old, and some customers will always want a sedan for various reasons, such as being easier to get into or living alone. However, we think most of those consumers with older vehicles are likely to follow the market trend and buy a light-truck model. Also, automakers' new products are likely to be skewed toward light trucks for the foreseeable future, as that was what was under development.

Toyota years ago said that it thought light trucks would top out at 70%, a prediction that was proved incorrect with time. The automaker discontinued its full-size Avalon sedan, launched in 1994, after the 2022 model year. Toyota also ended the Yaris subcompact car in 2020. Still, small cars have a place as entry-level vehicles, and we do not see midsize sedan stalwarts like the Toyota Camry or Honda Accord going away, nor the compact Corolla and Civic. We show 2025 sales by automaker, split between car and light truck, in Exhibit 38.

Exhibit 37 Pickups and SUVs Drove 2025's Light-Truck Penetration Instead of Crossovers

2025 US market share change year over year by vehicle segment for new light-vehicle sales.

Vehicle Segment	2025 Share %	2024 Share %	Percentage Point Change
Small car	7.3	7.6	(0.3)
Mid-size car	5.8	6.8	(1.0)
Full-size car	0.02	0.25	(0.2)
Luxury car	3.9	4.2	(0.3)
Total car	17.0	18.8	(1.8)
Crossover	49.0	49.5	(0.5)
SUV	10.2	9.2	0.9
Pickup	19.1	18.0	1.1
Van	4.8	4.5	0.3
Total light-truck	83.0	81.2	1.8
Total	100.0	100.0	(0.0)

Source: Omdia, Morningstar. Numbers may not foot due to rounding.

Exhibit 38 Light Trucks, as Usual, Outperformed Cars in 2025

2025 US light-vehicle sales year-over-year change.

Industry	Car -8.4%	Light Truck 4.7%	Total 2.2%
GM	-69.4%	11.2%	5.6%
Ford	3.0%	6.3%	6.2%
Stellantis	-77.9%	0.9%	-3.5%
Detroit Three	-60.9%	7.3%	3.9%
Toyota	2.9%	10.1%	8.0%
Honda	-4.4%	2.6%	0.5%
Nissan	-6.6%	4.0%	0.2%
Japan Three	-1.4%	6.7%	4.2%
Hyundai-Kia	4.7%	8.6%	7.5%
Tesla	13.7%	-22.3%	-13.1%
BMW	4.3%	5.4%	5.0%
Mercedes	-10.5%	5.4%	0.5%
Audi	-27.4%	-11.6%	-16.1%
Lexus	-6.3%	10.4%	7.1%
Cadillac	5.3%	8.8%	8.3%
Lincoln	N/A	2.0%	2.0%

Source: Automotive News, Morningstar calculations. Lincoln, Lexus, and Cadillac numbers are also within Ford, Toyota, and GM, respectively. Mercedes excludes Sprinter and Metris commercial vans. Nissan excludes Mitsubishi. Lincoln discontinued the Continental and MKZ sedans in 2020. Tesla numbers are an Automotive News estimate.

John Krafcik, who previously was CEO of Waymo, president of TrueCar, and chief of Hyundai Motor America, said in fall 2014, when he was TrueCar president, that crossover variants of sedan platforms (for example, the Ford Escape crossover at the time was made on the same platform as the Ford Focus

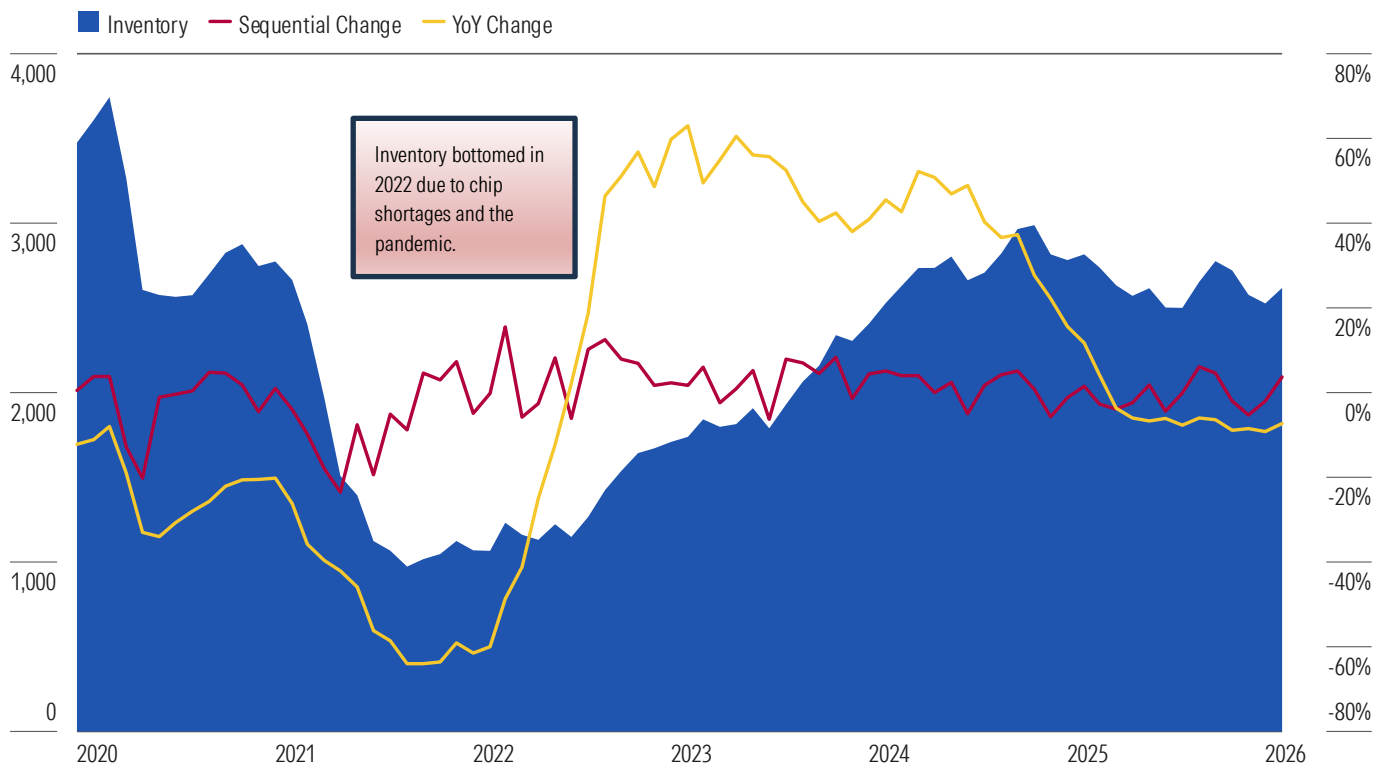
compact sedan now discontinued in the US market) add \$1,000-\$1,500 in variable cost but increase unit profitability by \$4,000-\$5,000 because consumers are willing to pay a premium for a larger vehicle. This trend of continued light-truck share gains is very good news for the Detroit Three, as GM's 2025 US sales mix was 98.0% light trucks, Ford's mix was 97.9%, and Stellantis' mix was 98.7%. Toyota's mix was only 71.8%, and Honda's was 70.8%.

Trend 6: Inventory Remains Below 3 Million Units, but 2026 Could Bring It There

Exhibit 39 shows monthly US light-vehicle inventory levels since 2020, as well as the year-over-year and sequential change each month, to show how inventory plummeted in 2021 because of the chip shortage and is currently recovering.

Exhibit 39 Inventory Remains Below 3 Million Units, but We Expect Stock to End 2026 Higher Than 2025

Monthly US light-vehicle inventory (in thousands) since January 2020 and its month-over-month change and year-over-year change.



Source: Omdia, Morningstar calculations. Data is through February 2026.

2025 inventory fell year over year every month after March, as supply chain issues came up late in the year and we think automakers were cautious about adding inventory after tariff fears pulled sales into the first quarter. There's also some question on how tariffs will affect broader US consumer health in 2026, so we think automakers remained cautious. The industry finished 2025 down 8.5% year over year to 2.58 million. Inventory likely finished down due to some second-half supply chain issues, namely the Nexperia chip shortage hurting firms like Honda and the Novelis aluminum plant fire affecting Ford's F-Series pickup production as well as other automakers. Early 2026 saw a further decline at the end of

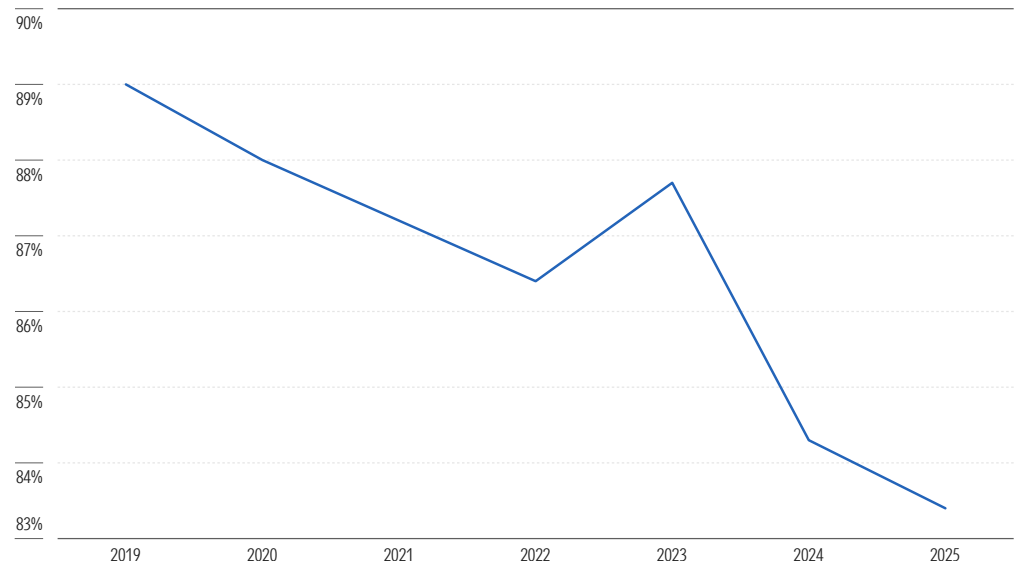
January to 2.53 million and then a 4% sequential increase in February to 2.62 million, 35.5% lower than February 2019. Given late 2025 supply chain issues on some high-volume vehicles such as the F-Series, we expect year-end 2026 US industry inventory to finish higher than 2025.

The good thing about lean inventory is that no automaker or dealer has a reason to excessively discount vehicles. The big uncertainty that matters longer-term is where inventory will eventually normalize. We think it will be in the low 3 million or very high 2 million range, provided that automakers stay committed to not overproducing, as GM and Ford have claimed for several years now and backed up with action. However, the billions of dollars of incremental EBIT from pricing that automakers have enjoyed since the chip shortage is not something GM and Ford want to see completely disappear.

Trend 7: Used-Vehicle Affordability Worsened in 2025, and Leasing Also Slowed

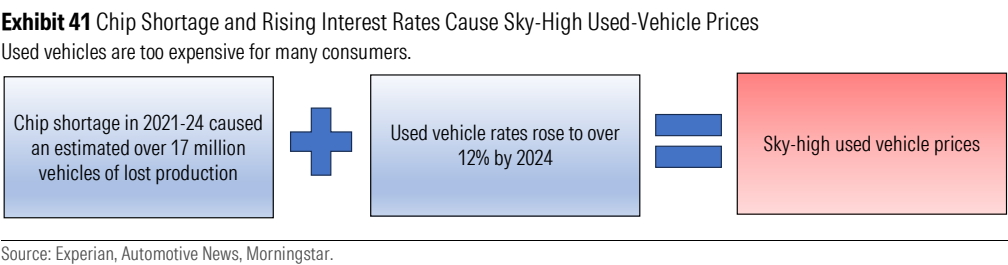
Used vehicles are not the substitute for new-vehicle purchases that some may think, because the supply of used vehicles is a function of new-vehicle sales in prior years. New-vehicle sales bottomed out in 2009 at 10.4 million, resulting in lower used-vehicle sales during 2013-14. 2013-14 was when many vehicles would have normally come off lease, but these vehicles never entered the used fleet because they were never sold as new vehicles during the recession. The US' overall fleet mix of vehicles as much as 20 model years old has declined this decade, as consumers extend a vehicle's life via aftermarket parts and are scared off by new-vehicle transaction prices averaging nearly \$50,000 amid reduced desirable used-vehicle supply. Recent years of lower-than-normal new-vehicle sales caused lower used-vehicle supply and high used-vehicle prices, illustrated graphically in Exhibit 41. According to Experian, vehicles for the past 20 model years, through the 2025 model year, were 83.4% of US vehicles in operation in the fourth quarter of 2025, down from 89% in 2019, as shown in Exhibit 40.

Exhibit 40 Low New-Vehicle Sales Are Reducing Used-Vehicle Supply and Raising Used-Vehicle Prices
Mix of US light-vehicle fleet up to 20 model years old since 2019.

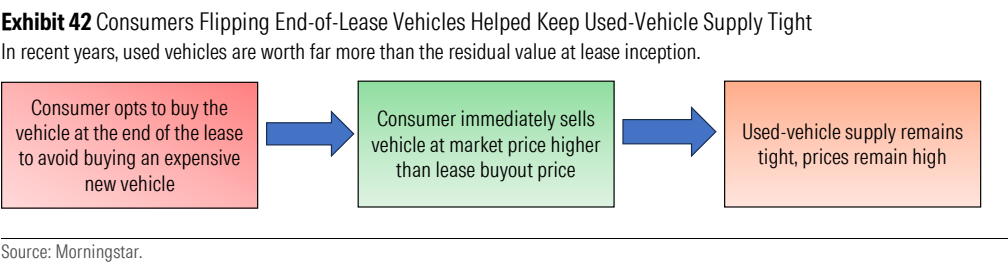


Source: Experian, Morningstar.

We expect used pricing to come down materially by year-end 2027 as new-vehicle inventory increases and as the past three years have seen used-vehicle consumers say enough to sky-high used-vehicle pricing induced by the chip shortage and exacerbated by rising interest rates. Current used prices are clearly a high outlier when viewed with historical data, but we do not see a bubble in used pricing that will abruptly burst. There will be a shortage of late-model (under about five years old) used vehicles for 2026 and at least some of 2027 due to poor new-vehicle sales for most of 2020 and summer 2021 through 2024. Leasing, as shown later, declined drastically after the pandemic and chip shortage as a percentage of the new-vehicle sales mix, so off-lease vehicles will be in short supply as there's no incremental supply of used vehicles that can be manufactured. Their availability is all a function of prior new-vehicle sales.



In December 2023, *Automotive News* reported on an October leasing panel at the Auto Finance Summit in Las Vegas. Jonathan Gregory, an economics and industry insights senior manager at Cox Automotive (which owns Manheim, the largest used-vehicle auction firm), said the number of off-lease vehicles at auction at the time was just 24% of 2019's level, up from an even worse 14% in 2022. This massive dearth of supply comes from fewer leases written in 2020 but also is a byproduct of abnormally high used-vehicle equity at lease-end. In other words, at the end of the lease, the vehicle is worth far more than the contractual residual value set at the lease's inception. This equity means consumers had recently been better off buying the vehicle at the end of the lease because they could then either immediately sell ("flip") the vehicle to monetize the equity or avoid buying a different new or used vehicle at a price they may not be comfortable with or able to afford, further keeping used-vehicle supply down, as illustrated in Exhibit 42.



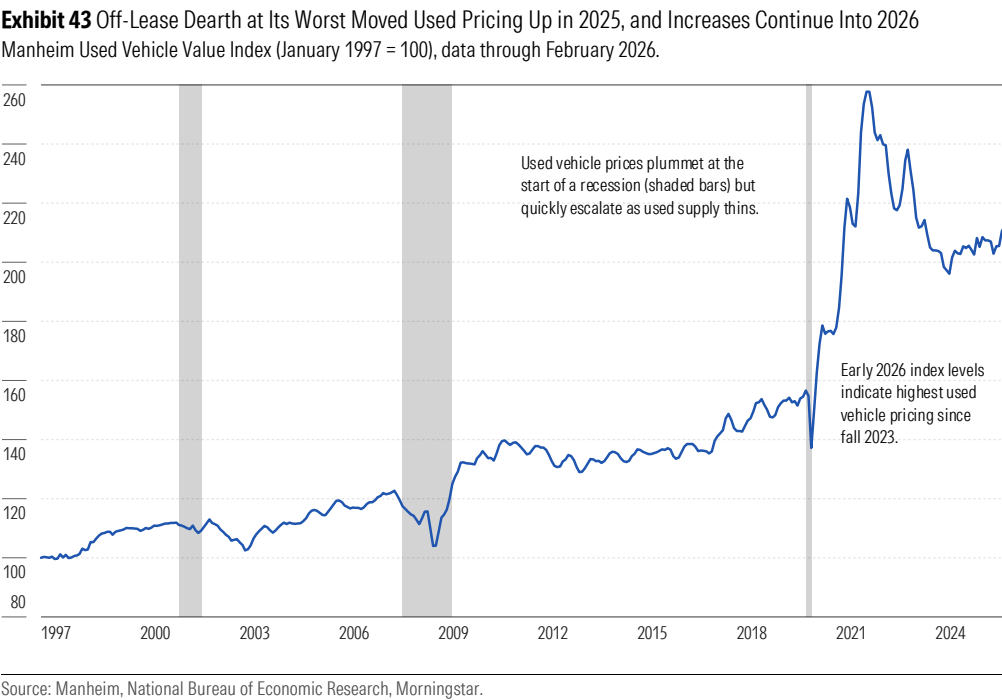
Lease contracts have a residual value at lease-end that is set at their inception. Automaker captive finance arms estimate, typically three years in advance, what the vehicle will be worth at the end of the lease. Actual values can be good or bad for finance arms' results, depending on market conditions at

lease-end. Beyond leasing, high residual values extend to all used vehicles, including ones already owned by consumers, which in turn affects trade-in values for used vehicles toward the purchase of another new or used vehicle. As new-vehicle inventory collapsed over time because of the pandemic and chip shortage, consumers had more trade-in equity, which dealers in the past have told us was helping mitigate some of the new- and used-vehicle sticker shock. Although this equity is now declining because used-vehicle prices are down relative to 2022 levels, equity should remain available in 2026 to give consumers some help.

Used-Vehicle Pricing Has Still Not Recovered From the Pandemic

Exhibit 43 shows how used-vehicle pricing crashed initially during the financial crisis but skyrocketed as supply thinned. History repeated in 2020 as the pandemic dried up new-vehicle sales and, in turn, used-vehicle supply. With 2022's new-vehicle sales the post-pandemic low, that meant the worst of the off-lease availability was in 2025, which caused 2025's index average to rise 1.9% from 2024. We don't see record-high pricing lasting long-term, especially as new-vehicle inventory and sales rise, which should help increase used-vehicle inventory as consumers bring trade-ins to the used market. However, we don't foresee major affordability improvement (that is, a decline in the index) until the second half of 2026.

Exhibit 43 shows the widely followed Manheim Used Vehicle Value Index, which generally moves up over time. However, Manheim does not make a quality adjustment that J.D. Power's index does, so it is probably biased upward. Also, the index may see some squeeze upward early in the year, as retailers stock up on used inventory in anticipation of tax refund season, a popular time to buy a used vehicle. However, we expect the index to decline after tax season.



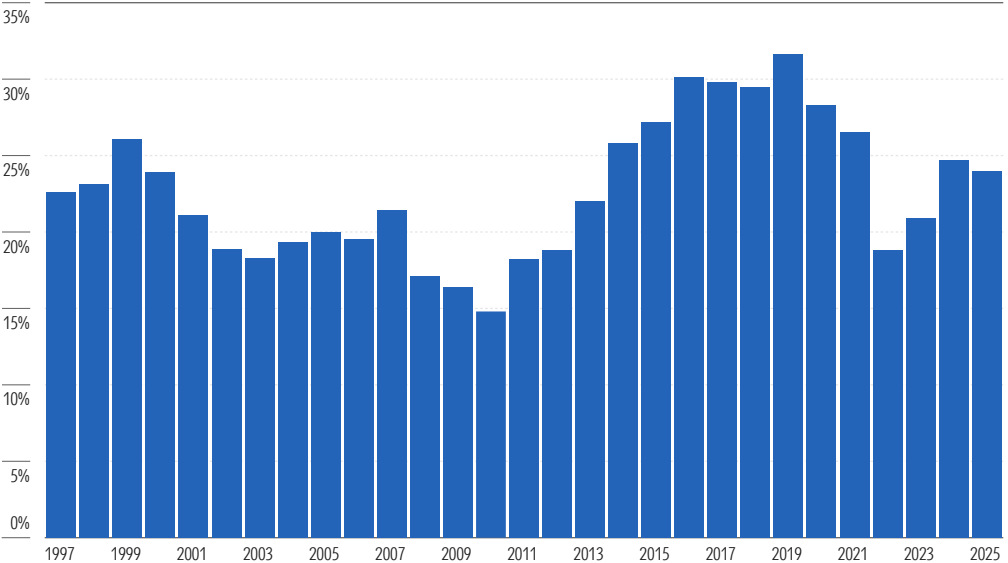
We See More Leasing as Inevitable

As new-vehicle inventory improves, we expect leasing penetration to increase this year and for several years more relative to what we see as depressed penetration levels for 2021-23. We made this prediction in early 2025, and it proved incorrect, as we did not account for less leasing in the surge to buy more vehicles to avoid tariffs and less EV leasing once the tax credit ended. So we expect more normalized leasing activity in 2026 than 2025 and a penetration level higher than about 24%-25% the past two years. Automakers will use it to sell vehicles and offer consumers a more affordable monthly payment.

We don't expect leasing to get well above 30% of US industry new-vehicle sales over time, though, because of the residual value risk borne by automakers' captive finance arms. Falling used prices can make leasing less desirable because automakers' captive finance arms must lower their residual value estimates, which means higher monthly payments for lessees. However, at constant interest rates, we think consumers would not see burdensome higher payments when residuals decline. Possibly lower interest rates coming in 2026 with a new Federal Reserve chair would also help lease payments.

Leasing in 2021-23 was hard to do; consumers were deterred by high interest rates, and captive finance arms must guess residual values three years in the future, when they will probably be lower but to an uncertain degree, giving them incentive to write less paper. We expect this whole process to now slowly unwind itself to increase leasing penetration, as evident in 2024's 380-basis-point rise in leasing penetration, the largest increase since 2014. Exhibit 44 shows how leasing accelerated its penetration of the US new light-vehicle sales mix to its highest levels since at least the late 1990s but started declining year over year in 2017 and dropped off after the pandemic started. 2025 saw a 70-basis-point decline to 24%.

Exhibit 44 Leasing Penetration Fell in 2025, but we Expect Upward Growth in 2026
Leasing as a percentage of new US light-vehicle sales.

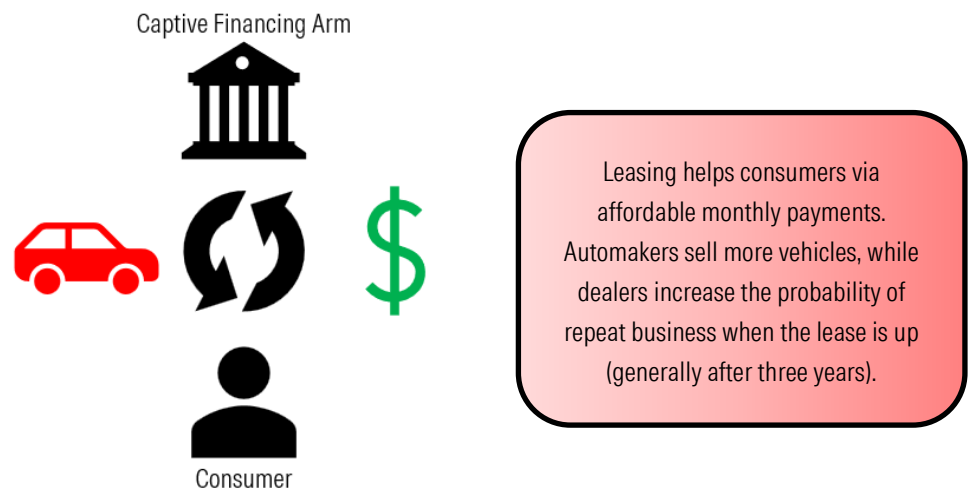


Source: Automotive News, Experian, NADA Data, Wards Intelligence. 2019 and beyond have a change in Experian methodology. Restated data before 2019 isn't available.

As illustrated in Exhibit 45, leasing is attractive to consumers because the monthly payment is lower than buying the vehicle outright via cash or a loan, and because all residual value risk is borne by the lessor (lender) rather than the consumer. With easy credit, consumers embraced leasing once the Great Recession ended, and some automakers even dabbled in leasing used vehicles. However, leasing does come with risks, most notably the residual value risk retained by the lessor, typically the original equipment manufacturer's captive finance arm. Lenders make an estimate on a three-year lease as to what the resale value of that vehicle will be, and there is incentive to estimate a high residual to make a low monthly payment for the lessee and sell more vehicles. But if the estimate proves too high and the lessee has returned the vehicle, then the lender must eat the difference between the vehicle's carrying value and its actual resale value.

OEMs can mitigate this risk to a degree with a healthy certified preowned program and by keeping used prices for a brand robust, but that is no guarantee; there are factors beyond the lender's control, including macroeconomic conditions and supply shocks like the chip shortage. Products may prove undesirable as they come off lease, such as in summer 2008, when high gas prices decimated demand for used SUVs.

Exhibit 45 Leasing Is Attractive for Consumers as They Avoid Buying the Vehicle Outright and Residual Value Risk
Leasing from captive financing arms is attractive for consumers relative to buying the vehicle outright.



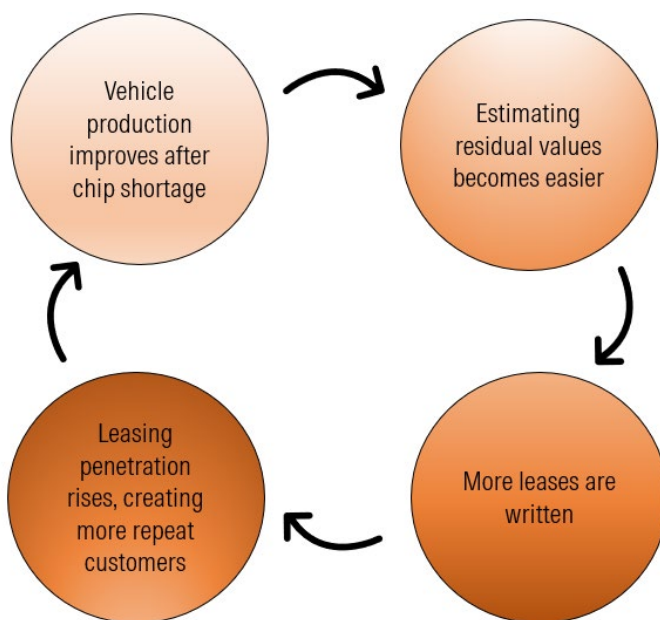
Source: Morningstar.

2025's leasing mix of new light-vehicle sales declined 70 basis points to 24%. Per Experian, the year-over-year changes were a 98-basis-point rise in the first quarter, a 250-basis-point decline in the second quarter, an 80-basis-point fall in the third quarter, and a 50-basis-point decline in the fourth quarter. The second quarter likely fell so much because consumers whose vehicles came off lease chose to buy out the lease rather than lease or purchase another vehicle to avoid tariffs for as long as possible beyond 2025.

We said in our [March 2023 Observer](#) that we expected leasing in 2023 to begin its journey back up to the low 30s, but it would take perhaps four or five years or even longer to get there. We shortened that timeline a year ago, but in light of 2025's decline, we have changed our mind back to the original timeline of around at least 2027-28. Once new- and used-vehicle supply and demand are more balanced, that could bring more certainty to estimating three-year residuals, which could lead to new-vehicle leasing accelerating more than we expect soon.

For perspective, the largest full-year leasing penetration increase back to the late 1990s came in 2014 with a 390-basis-point rise, while the largest annual decreases before 2022's collapse were 430 basis points in 2008 (the Detroit Three all but abandoned leasing in late 2008 due to the recession) and 320 basis points in 2020. We said in the [March 2023 Observer](#) that we didn't believe recent negative deltas at the time were a long-term normal; so far, the data supports that view, other than the second-quarter 2025 decline, which we think was tariff shock-driven. We expect a healthy lending environment for consumers with good credit, and higher—or at least stable—vehicle production will mean more incentive to write leases to help move vehicles off the lot, so we expect leasing penetration to rise medium-term on the positive feedback loop illustrated in Exhibit 46. The challenge will be to get customers who would have normally leased but instead bought a vehicle in 2021-22 back into the showroom in 2026 and 2027.

Exhibit 46 Production Stability Creates a Positive Feedback Loop for Leasing Penetration to Rise



Source: Morningstar Research.

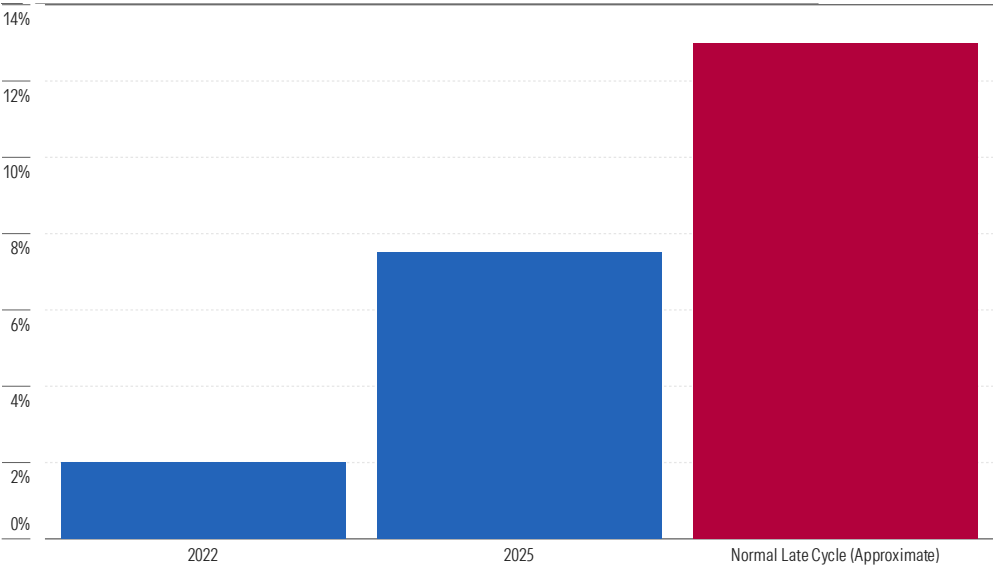
Support for the 30% leasing benchmark came from Toyota brand North America boss David Christ, speaking to *Automotive News* during the Los Angeles Auto Show in November 2022. Christ said, "Toyota's leasing percentage right now is about 14% [of total sales], and it would normally be [near]

30%, so that's 15% of business which is now in a retail contract instead of a lease. ... That's a concern, because a customer on a lease cycle is normally back in three years, and it's an automatic opportunity to re-lease them a new car or sell them a new car." He added that Toyota getting those customers back on close to a normal leasing cycle "is something we've got to create, because historically we've had 30% of our portfolio just automatically coming back."

Trend 8: We See Interest Rate Headwinds Diminishing for Consumers

Automakers have more levers to fight inflation than consumers do, in our view, because companies can in an extreme case eliminate jobs, whereas households cannot fire family members to reduce expenses. Households still need a vehicle to go to work, look for work, get groceries, and do many other activities, so higher interest rates raise the issue of affordability. Between the chip shortage and automakers prioritizing production of expensive trims, new-vehicle average transaction prices skyrocketed about 30% from just before the pandemic but may be leveling out because of affordability and macroeconomic concerns. Kelley Blue Book data has the sequential ATP change down for six months of 2025, though up year-over-year every month. Continued inventory growth and the slowing demand we expect this year should, in our opinion, drive ATPs down from recent levels of about \$50,000, though probably not by a lot. A favorable variable for automakers fighting inflation, should a recession occur soon, is that the chip shortage enabled a very low level of vehicle incentives—down to barely above 2% of ATPs in 2022. That percentage at year-end 2025 was 7.5%, which was the highest level of the year, but normally, this metric would be in the low double digits just before a recession, as shown in Exhibit 47. This dynamic means that automakers have more room than normal in a recession to give pricing back in a downturn, to help volume via raising incentives without destroying profitability.

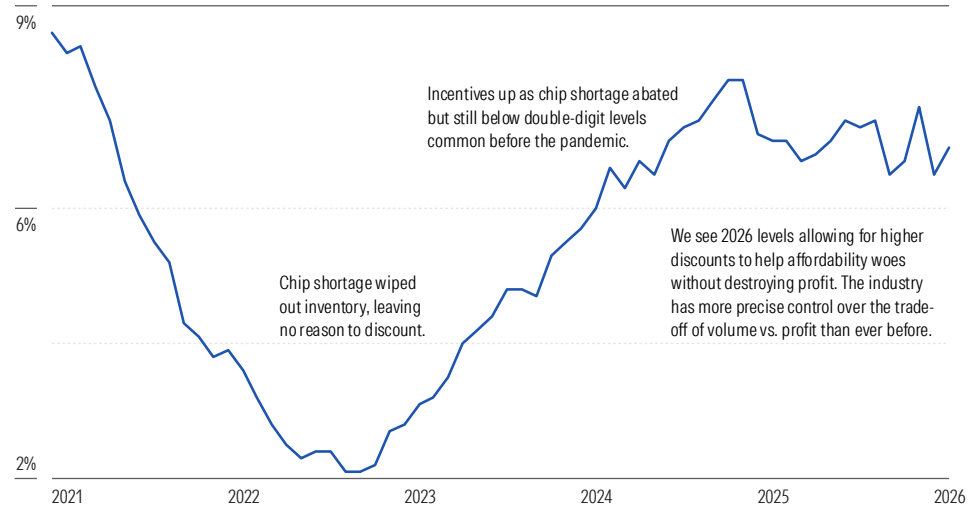
Exhibit 47 New-Vehicle Incentives Increased to 7.5% of ATP in 2025 but Still Are Not in Double-Digit Territory



Source: Cox Automotive, Morningstar.

Cox Automotive, which owns Kelley Blue Book, said in a Jan. 12 press release that December's new-vehicle incentives as a percentage of average transaction price were 7.5%. This was the highest level of 2025, up 80 basis points from November, but down from 7.9% in December 2024. Still, it's comfortably below normal low-double-digit levels before the pandemic. With no inventory during the chip shortage, there was little reason to discount, and low incentives give automakers robust pricing to help profits. That pricing dynamic is now unwinding. We expect continued incentive increases in 2026 as the industry keeps rebounding off abnormally low 2022 discounting levels induced by the chip shortage. However, January 2026's ratio declined to 6.5% from December's 7.5%, while February rose 40 basis points from January to 6.9%. Monthly incentives as a percentage of ATP are shown in Exhibit 48.

Exhibit 48 Discounts Are Well Below Double-Digit Percentage of Sale Price
US light-vehicle incentives as a percentage of average transaction price through February 2026.

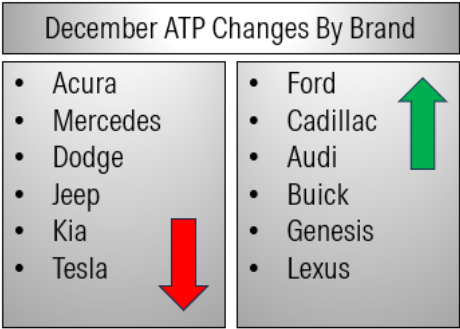


Source: Cox Automotive, Morningstar.

Pricing Is Not Collapsing, However

Even though some brands saw December pricing down considerably year over year, such as Acura, Mercedes, Dodge, and Jeep, other brands saw healthy increases, such as Cadillac up 8.1% and Ford up 1.7% per Cox's Kelley Blue Book, as summarized in Exhibit 49. December is a popular month for premium and luxury brands, and Cox cited Blue Book data that December saw almost 20% of consumers buy a luxury vehicle, which does not even include high-end pickup trucks. The ATP for a full-size pickup in December was \$66,386, just below a record set in October. Cadillac's ATP may surprise some readers: At \$86,923, it is higher than those of the German Three and Lexus and higher than those of all major brands except Land Rover and Porsche, both of which are over \$100,000.

Exhibit 49 Pricing Remains Robust for Some Brands
Year-over-year directional price change for average transaction price by various brands.

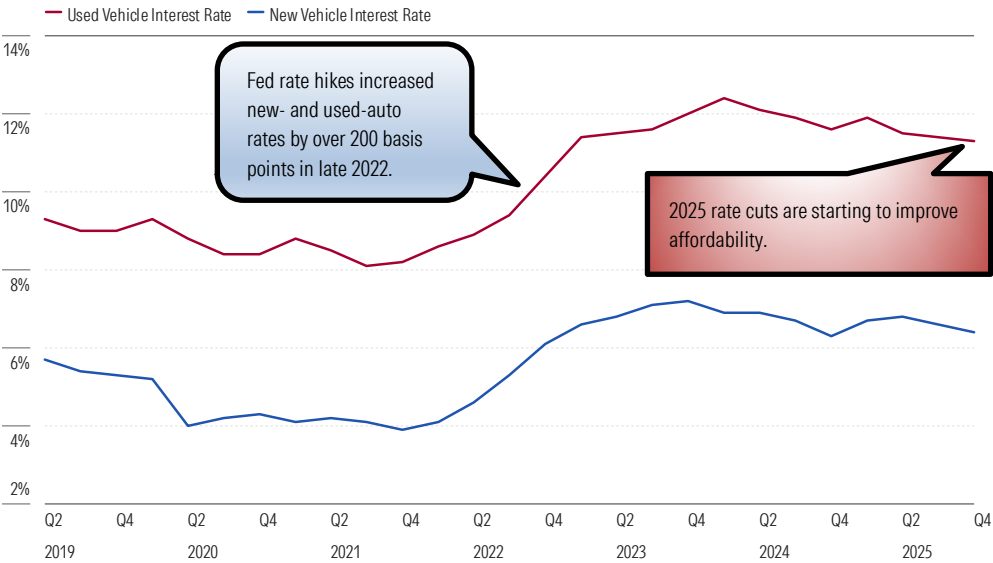


Source: Cox Automotive.

Exhibit 50 shows how US monetary policy actions to raise interest rates to combat inflation affected auto loans. 2022 saw rates increase at an accelerating rate as the year progressed, with sequential new-vehicle loan rates increasing between 21 and 82 basis points in each quarter. 2024 finally saw multiple Fed rate cuts, starting with a 50-basis point move down that September. New-vehicle loan rates fell sequentially before then, however, with a 31-basis point decline in the first quarter of 2024, then no increase in the second quarter, followed by a 20-basis-point decline in the third quarter and another 30-basis-point fall for the fourth quarter. 2025 did not see a sequential fall until the third and fourth quarters of 24 and 19 basis points, respectively. We see affordability remaining a challenge in 2026, but we don't see higher interest rates than 2024 and early 2025 levels. More inventory may lower ATPs as well, which would lower the amount financed and yield lower monthly payments, assuming interest rates stay constant or decline further in 2026.

Consumers who think they can avoid the new-vehicle affordability problem by buying used will be disappointed, given that used supply will remain tight in 2026, though gradually improve. Also, average used-vehicle loan rates are typically 400-500 basis points higher than average new-vehicle loan rates. The higher used rate relative to new reflects a generally lower-credit-quality customer and less desirable collateral in the form of the vehicle being financed. Experian put the fourth-quarter 2025 used-vehicle loan average rate at 11.3% versus 6.4% for new. Used-vehicle sequential rate changes were negative for the second, third, and fourth quarters of 2025, while year-over-year rates have fallen for five straight quarters through the fourth quarter of 2025.

Exhibit 50 Auto Loan Rates Remain an Affordability Headwind, but We See More Relief Coming in 2026
New- and used-auto loan interest rates.



Source: Experian, Morningstar.

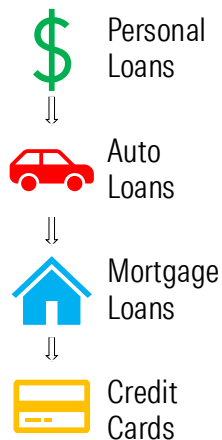
Trend 9: Credit Stress Is Building but Not Breaking

Credit is the blood flow of the US auto industry. Before the pandemic, about 85% to nearly 90% of new-vehicle purchases were financed, and over 50% of used vehicles were bought via credit. More-affluent customers buying expensive vehicles outright at the time of sale has moved those ratios down in recent years to about 82% and 37% for new and used, respectively, in the fourth quarter of 2025. Easy credit was one of many reasons sales went up in the years before the pandemic, but both then and now, we do not see data indicating a credit bubble.

Exhibit 51 shows credit bureau TransUnion's May 2017 payment hierarchy study, which found that consumers prioritize debt repayments as follows: unsecured personal loans, auto loans, mortgages, and finally credit cards. A 2021 update has a person's primary credit card ahead of personal loans, likely because of the pandemic. However, an Oct. 17, 2022, TransUnion press release says that consumers with multiple credit sources value auto loans almost as much as mortgages and far more than credit cards.

Exhibit 51 Consumers Prioritize Repaying Auto Loans

TransUnion's 2017 payment hierarchy for debt repayments.



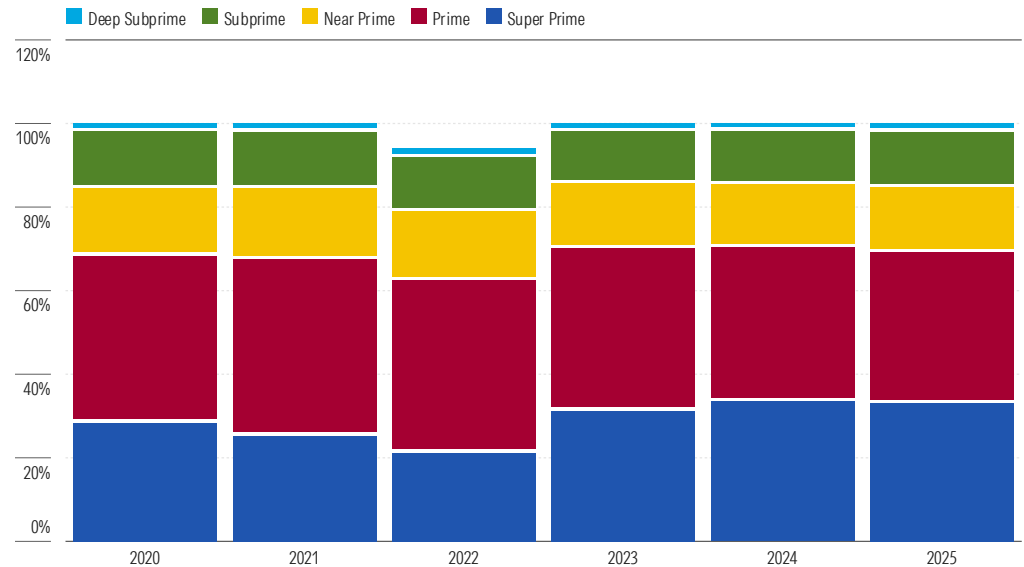
Source: TransUnion, Morningstar.

As more time passes since the pandemic and with the US government ending the student loan repayment moratorium in fall 2023, we think personal loans could reclaim their top spot in consumers' debt priority chain. TransUnion in 2017 said it believed personal loans were a top priority because with their relatively shorter durations—below 30 months—borrowers feel they are accomplishing something by fully paying off an obligation with a near-term maturity, compared with other loan types that have longer end dates or, in credit cards' case, no end date. CarMax management once told us, "You can sleep in your car, but you can't drive your house to work." We think this dynamic explains why consumers also prioritize auto loans, so we are not worried about an automotive credit crisis. We think some observers extrapolate to autos what they've seen in mortgage or credit card loans when they should not do so.

Credit bureau Experian said the average credit score for new- and used-vehicle loans was stable year over year in the fourth quarter of 2025 at 753 and 689, respectively. Experian also said in the fourth quarter (and illustrated in Exhibit 52) that subprime and deep subprime's combined mix of new- and used-auto loans and leases was 15.31%, up slightly from 14.54% in the fourth quarter of 2024 and well below 19.49% in the fourth quarter of 2019.

Exhibit 52 Subprime and Deep Subprime Mix of Auto Loans Lower Than Before the Pandemic

Distribution of auto loans (new, used, and leases) by Experian Vantage credit score.



Source: Experian, Morningstar.

This downward move since the pandemic makes sense, given that we've heard from our dealer coverage in recent years that there has been some credit availability reduction at the subprime level. The deepest subprime bucket was just 1.99% of outstanding auto debt and leases in the fourth quarter, up 18 basis points year over year. The data suggests a move toward more responsible lending rather than a subprime auto lending bubble poised to destroy the economy, as we've seen suggested many times in the media over the years. It also suggests that subprime customers will continue to have a harder time buying a new or used vehicle in 2026 than before the pandemic. However, we don't mind responsible lending practices even at the expense of incremental auto sales.

Data from the Federal Reserve Bank of New York in Exhibit 53 gives us no significant cause for alarm with respect to a potential credit bubble, nor do we see signs of credit contracting widely. However, the 90-day auto loan delinquency rate of 5.21% in the fourth quarter of 2025 is the highest since 5.27% in the fourth quarter of 2010. The metric has been trending upward since the third quarter of 2023, with sequential increases for seven straight quarters through the first quarter of 2025. The third quarter of 2025's 5.02% at the time was the highest level since the second quarter of 2020's 5.03%, and the fourth quarter's 19-basis-point move was the largest sequential increase for the year. This trend is concerning, but GM and Ford captive finance delinquencies are well below these levels, as they mostly lend to credit profiles better than the overall market profile. GM Financial's year-end 2025 over 60-day delinquency rate was 1.1% of its consumer loan portfolio, up 20 basis points year over year, while Ford Credit's rate was only 0.4% (it skews more prime than GM's captive). We expect some increases in 2026 90-day delinquencies, but not large ones, as long as employment remains healthy.

Unlike in the immediate quarters after the onset of the Great Recession in fall 2008, 90-day auto loan delinquencies did not spike after the onset of the pandemic in March 2020. The rate has never returned to levels shortly before the Great Recession—a low of 1.99% in the second quarter of 2005—but until the fourth quarter of 2023, it had been trending roughly stable in recent years, which was a good sign, given ongoing fears of a coming recession and because total delinquencies (over 30 days late) rose sequentially every quarter since 2022 until a 4-basis-point decline in the fourth quarter of 2024. Total auto loan delinquencies have declined sequentially for all 2025 quarters, so the 90-day increase is not bleeding into total delinquencies. Still, the fourth-quarter 2023 spike looks like a negative inflection point for 90-day.

Exhibit 53 Over 90-Day Delinquencies Up Slightly From 2024 and Could Worsen With 2026 Job Losses
Automotive loan (new and used) 90-day-plus delinquency rate.



Source: Federal Reserve Bank of New York, Morningstar.

Healthier credit spectrum originations likely played a role in falling 90-day delinquencies in 2021, and perhaps consumers were even more eager than normal to keep their vehicle to ensure private mobility in a postpandemic world. Lack of inventory kept some price-conscious consumers out of the market, too, which means that for the most part, only the financially healthiest consumers were participating in the market since the pandemic began, a trend that is now unwinding, given that inventory is higher than in 2021-23. Still, we've seen nothing from lenders or dealers indicating things are at a crisis level or that credit needs to be curtailed. We don't expect a repeat of the Great Recession, and we don't see a credit bubble forming anytime soon for autos.

The New York Fed in November 2017 issued a one-time disclosure on 90-plus-day delinquencies: When looking at rates for loans to borrowers originated by specialty finance companies versus banks and credit unions, the problem is with the specialty finance companies. The bank followed up in February 2019 with a [blog post](#) repeating that the problem is with specialty finance companies and with

subprime borrowers with credit scores under 620, because under-620 borrowers' over 90-day delinquency rate was nearly double the national rate. Automaker captive finance arms' subprime mix generally remains in the single digits today. GM is the exception at 12.8% at year-end 2025, due to its origins as subprime lender AmeriCredit before the automaker acquired it in 2010. Therefore, we are not worried about a subprime credit storm for our automotive coverage, although smaller auto finance companies may have a problem in a recession with this part of their business.

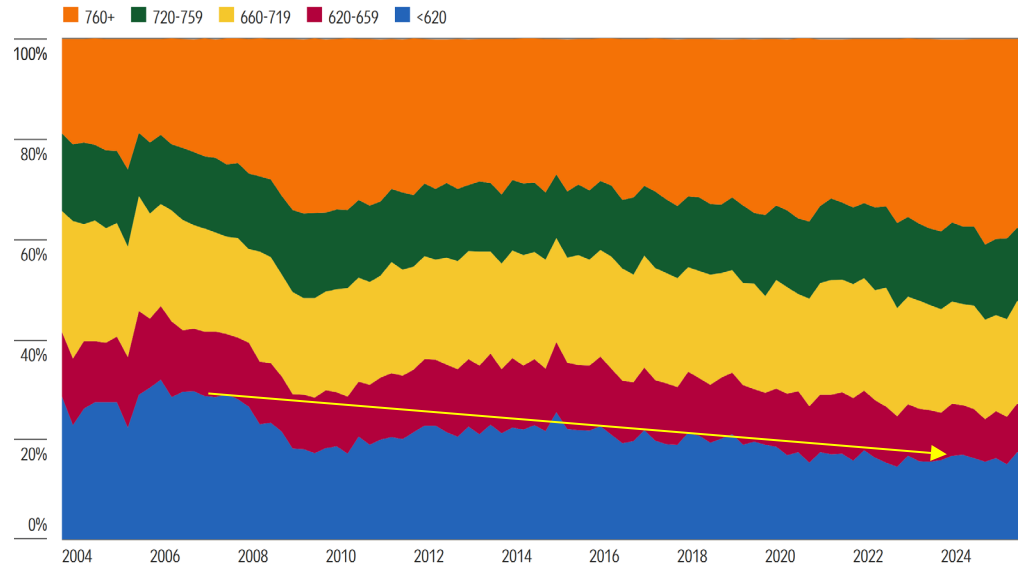
Subprime Is Not Running Wild in the Auto Lending Market

The New York Fed's quarterly *Household Debt and Credit Report* shows the subprime (credit scores at origination below 620) mix of auto loan originations as well as 30-day or higher delinquencies, which we have graphed in Exhibits 54 and 55. Nonprime loans (credit scores at origination below 660) made up 27.3% of fourth-quarter 2025 automotive loan originations, up 130 basis points year over year but nowhere near the 46.6% peak before the Great Recession in the second quarter of 2006. The most recent rate is below the 28.3% low in the fourth quarter of 2009, when credit availability severely contracted after the September 2008 collapse of Lehman Brothers, but we have not heard of any dealer complaining about a lack of customer credit availability recently, beyond saying some subprime availability is gone. Dealertrack, a part of Cox Automotive, said its credit availability index in December reached its highest level since October 2022 on easing credit conditions and then held that level in January. Some dealers have said negative equity is a challenge, but not to the point that it's hurting sales.

The mix of loans with a credit score at origination below 620 is nowhere near pre-Great Recession levels, with the fourth-quarter 2025 level at 17.6% (up 140 basis points year over year) versus over 30% at times during 2006. The most recent below-620 mix is on the low end of years shortly after the Great Recession, when the metric was about 17%-20% in late 2010. The sub-620 mix of 15.0% for the third quarter of 2025 was down 190 basis points year over year and the lowest since 14.5% in the first quarter of 2023. Still, the sub-620 mix has not reached or exceeded 20% since 21% in the second quarter of 2019, so we can't say the penetration is spiraling out of control. Recent levels are the lowest of the Fed's data set for any quarter back through 2004. We see any near-term rises as a bump up from cyclically low levels rather than signaling a ticking time bomb in credit. The sequential move for the third quarter of 2025's below-620 mix was down 120 basis points, while the fourth quarter's sequential move was up 260 basis points. The latter suggests that the third-quarter mix was a bit too low, hence the large bounce up. Most subprime originations are for used vehicles. Experian has the fourth-quarter new-vehicle loan subprime loan mix at 6.1% versus 19.3% for used-vehicle loans.

Exhibit 54 Mix of Loans With Credit Scores Below 620 Is Still Nowhere Near Pre-Great Recession Levels

Mix of auto loan originations by credit score.

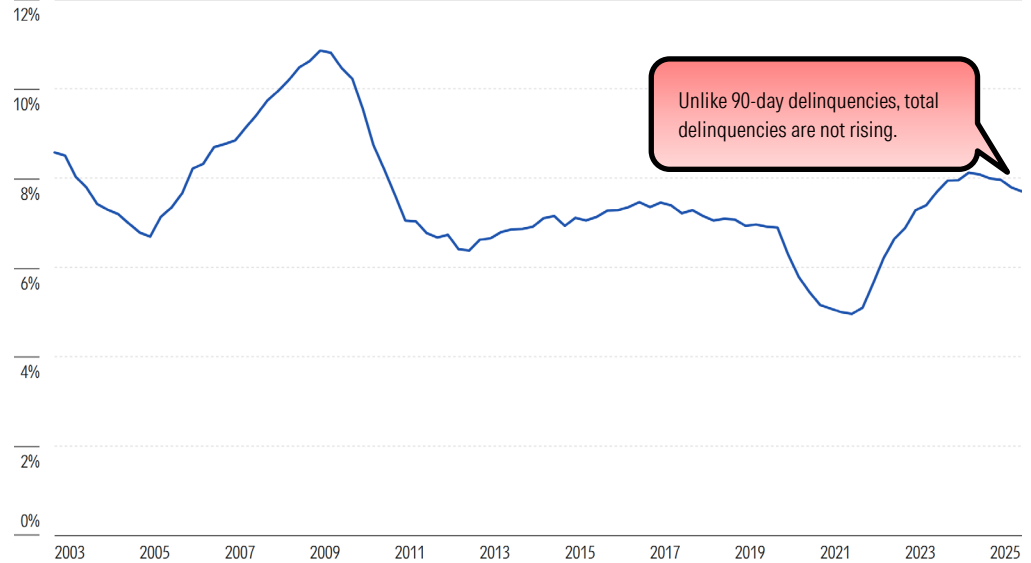


Source: Federal Reserve Bank of New York, Morningstar.

Total auto loan delinquencies (30 days or more in Exhibit 55) are down despite some affordability woes for consumers. The fourth-quarter 2025 rate for loans 30 days or more past due was 7.70%, only slightly below the over 8% levels during what some would call a credit bubble in early 2006. The 2024 third-quarter rate of 8.12% was the highest level since 8.20% in the fourth quarter of 2010, so we are glad to see sequential declines for the past five straight quarters. Current levels are still below late 2007 rates of nearly 9.5%. The 30-day delinquency rate rose to 9.73% in the first quarter of 2008 and peaked during the Great Recession at 10.85% in the second quarter of 2009. The New York Fed's third-quarter 2021 household debt report said some (the exact mix was not given) auto borrowers were still using lender-provided forbearance options and cited government stimulus for keeping new delinquencies in check. Therefore, it's possible that a lack of government stimulus since 2022 contributed to rising delinquencies. The fall 2023 resumption of federal student loan payments has not helped auto delinquencies, and neither have higher interest rates or rising vehicle prices. So far, though, we'd say delinquencies are elevated relative to levels just before the pandemic but not out of control.

Exhibit 55 Auto Loan Delinquencies Stopped Rising in 2025

Automotive loan (new and used) total delinquency rate (30-plus days late).



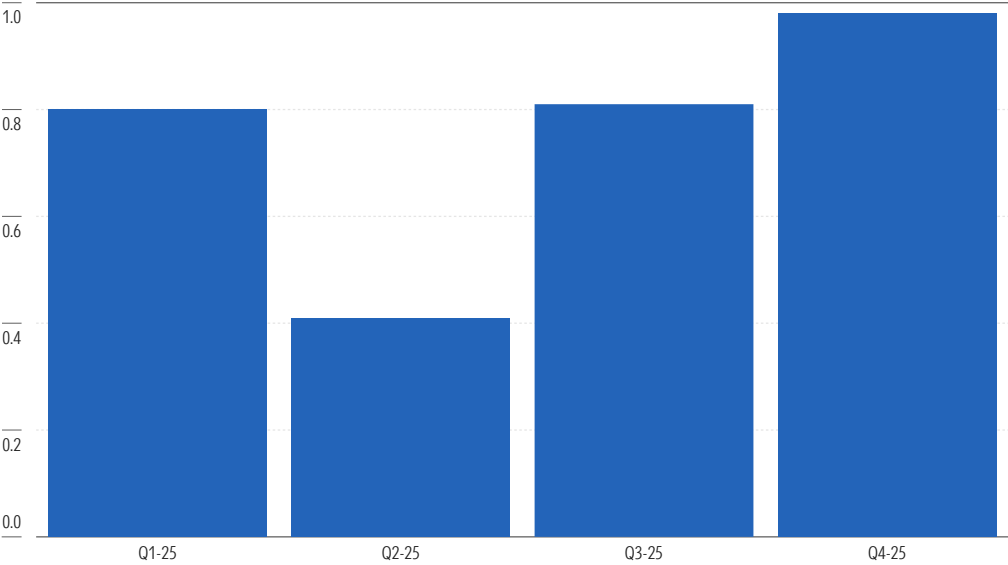
Source: Federal Reserve Bank of New York, Morningstar.

Further Rate Cuts in 2026 Should Help Delinquencies

Auto loan interest rates remain low in 2026 relative to some periods like the early 1980s, but they rose rapidly as a result of 2022-23 monetary policy actions by the Federal Reserve. The Fed's multiple rate cuts since 2024 have helped, and there could be more coming if Trump gets his way once the new Fed chair takes over this year. Through the third quarter of 2025, new loan rates had declined year over year for five straight quarters (they rose only 3 basis points in the fourth quarter) and are now about 80 basis points below recent highs in the low 7% range in late 2023. The expectation of further rate cuts this year should mean that the worst impact of high interest rates on auto demand is past. New-vehicle loan rates peaked for this recent rate increase cycle in the fourth quarter of 2023 at 7.18%, still far below early 1980s levels in the high teens.

Consumers often respond to higher rates and pricing by moving durations up to lower the monthly payment. 2025 saw durations increase year over year for all four quarters (Exhibit 56), with increases of 0.8 months for the first quarter, 0.41 months for the second quarter, 0.81 months for the third quarter, and 0.98 months for the fourth quarter to end at 68.94 months. Affordability concerns are driving this increase, as well as consumers opting for expensive trim packages. GM said in its fourth-quarter sales release that GMC's Denali trim and Cadillac's V-Series racing trim set full-year US sales records.

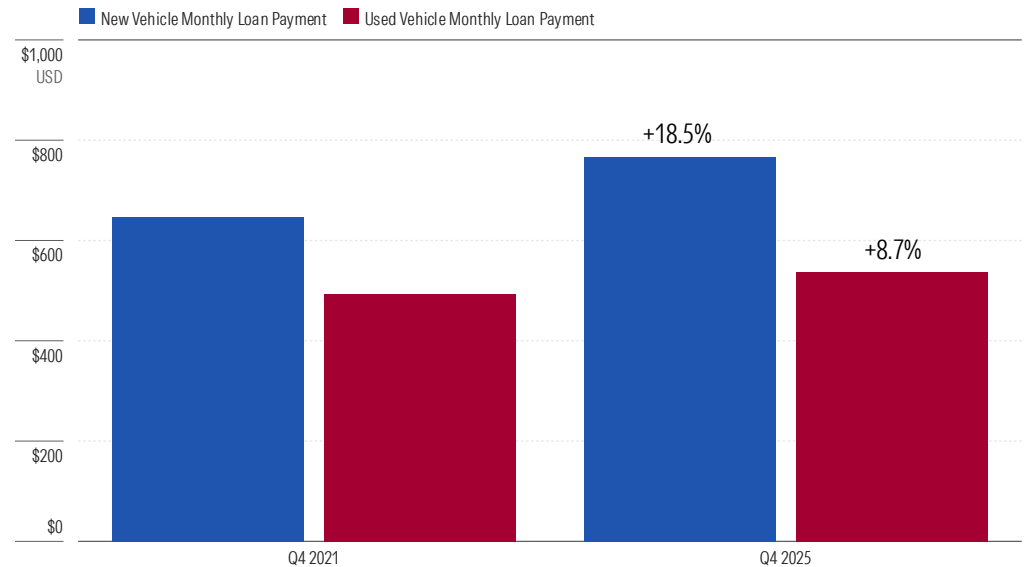
Exhibit 56 New-Vehicle Loan Durations Crept Up in 2025 to Help With Affordability
Year-over-year change in 2025 new-vehicle loan duration in months.



Source: Experian, Morningstar.

Edmunds on Jan. 5 said that 20.8% of auto loans originated in the fourth quarter were 84 months or longer, down 120 basis points from the third quarter but up 290 basis points from the fourth quarter of 2024. Edmunds also said that 20.3% of fourth-quarter new-vehicle loan originations had monthly payments of at least \$1,000, up 140 basis points year over year and a record high. Experian puts fourth-quarter monthly loan payments on average at \$767 for new and \$537 for used-vehicle loans versus \$647 for new and \$494 for used-vehicle loans in the fourth quarter of 2021, as shown in Exhibit 57. A duration of 68.94 months in the fourth quarter of 2025 versus 68.87 months in the fourth quarter of 2019 is not a large difference. We don't think lenders want to write paper for 15- or 30-year auto loans, given the depreciating nature of the asset and that most borrowers don't keep a vehicle as long as they might a house.

Exhibit 57 New- and Used-Vehicle Loan Monthly Payments Up About 19% and 9%, Respectively, Since 2021
New- and used-auto loan monthly payment, 2021 versus 2025.



Source: Experian, Morningstar.

Monthly Payments Are a Key Purchase Consideration for Many Consumers

Recent years' interest rate increases may seem alarming to some, given the ultralow rate environment borrowers enjoyed for a long time after the Great Recession, but marginal rate increases in isolation are not massively detrimental to monthly payments. We calculate that a 100-basis-point increase raises the monthly new-vehicle payment by \$20 (the Experian fourth-quarter average for a new-vehicle loan is \$43,582 financed at 6.37% annually for 68.94 months), so we think consumers can stomach further rate increases, which probably won't even occur in 2026. Consumers' trade-ins are also worth more than prior to the pandemic because the chip shortage hurt new-vehicle sales; lower new sales in turn hurts used-vehicle supply via lower trade-in volume and lower off-lease volume.

At Morningstar's September 2022 Management Behind the Moat stock conference, David Hult, CEO of auto dealer Asbury Automotive Group, said he thinks new-vehicle loan rates going much above 8% is a problem. They have not done so in this cycle. He also referenced his experience as a finance manager going back to 1987, saying it amazed him as to how high a monthly payment a customer is willing to have (something still in effect, given the Edmunds data cited above on \$1,000 monthly payments). He said that luxury customers don't focus on the rate at all, and midline import buyers focus on the monthly payment rather than the rate, which is something we've heard about the entire US auto industry from other dealers. Per Experian, fourth-quarter new-vehicle loan rates averaged 6.37%, so there is still room for rates to rise before we'd be concerned.

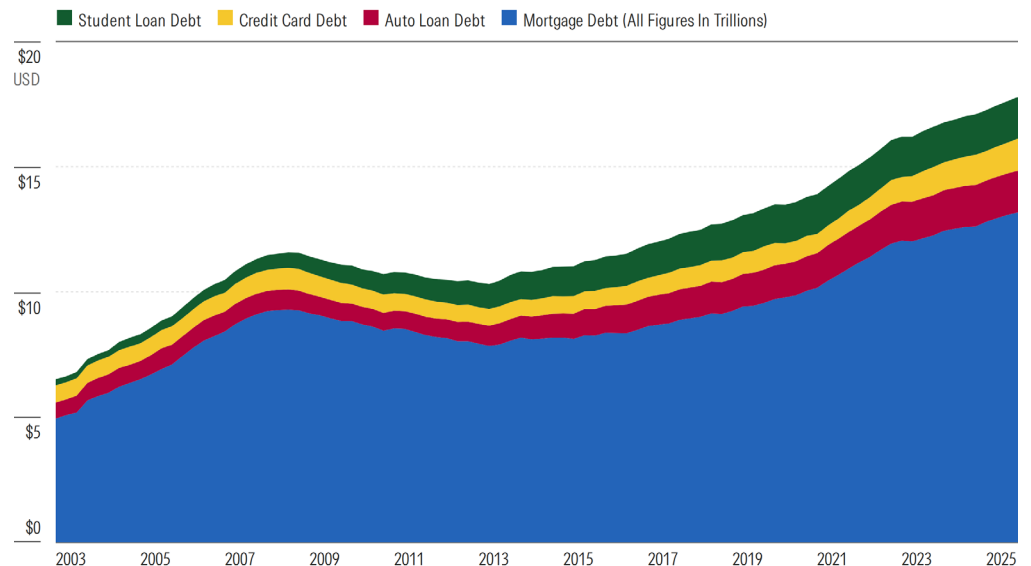
Auto Loans Are Not the Big Risk Some Reports Make Them Out to Be

Ample credit availability and low rates do not have to mean a sales bubble, and a vehicle costs far less than a house. Therefore, we do not agree with those who compare the auto lending risks of a credit

bubble with the subprime mortgage crisis of 2008. In the fourth quarter of 2025, as shown in Exhibit 58, mortgage debt outstanding totaled \$13.17 trillion, 7.9 times larger than auto loans outstanding of \$1.67 trillion, according to New York Fed data. Mortgage debt outstanding increased year over year by 4.4% versus 0.9% for auto loans. Since the end of 2019, mortgage debt is up 37.8% versus 25.6% for autos. Given that mortgage debt is a much bigger needle to move, this suggests that we should not be sounding alarms about auto debt. We still see variables such as low inventory from supply chain shocks, recession fears, high vehicle prices, and to a lesser extent interest rates—rather than irresponsible subprime lending—as the largest risks to US new-vehicle demand today.

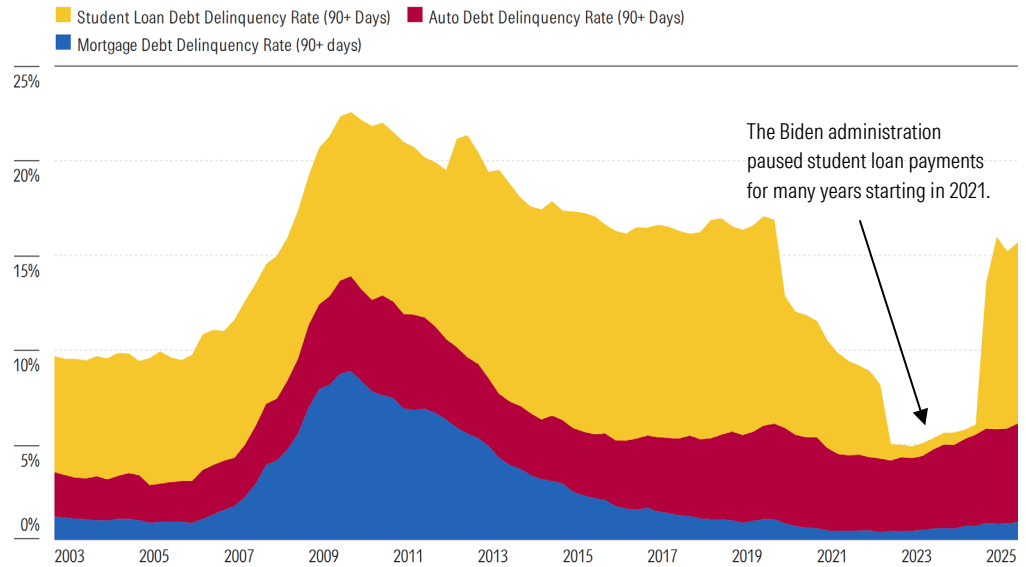
Exhibit 58 Mortgage Debt Is About 8 Times Larger Than Auto Loans Outstanding

Auto loan debt is less than 10% of total debt in the United States.



Source: Federal Reserve Bank of New York, Morningstar.

As we wrote in our [2017 midyear automotive update](#), we think the market should worry more about the ramifications of student loan debt if it wants to worry about a lending sector, yet we at times see more dramatic headlines for auto loans. Student loan debt was essentially equal to total auto loans outstanding in the fourth quarter of 2025, with a balance of \$1.66 trillion. We said in the past that student loan delinquencies may see a large early 2025 spike because the New York Fed's fourth-quarter 2024 report said missed federal student loan payments weren't reported to credit bureaus between the second quarter of 2020 and the third quarter of 2024. The Fed at the time said missed student loan payments would likely start to appear on borrowers' credit reports in the first quarter of 2025. The student loan 90-plus-day delinquent rate went from 0.53% in the fourth quarter of 2024 to 7.74% in the first quarter of 2025. For the fourth quarter of 2025, it was 9.57%, far higher than 5.21% for autos (Exhibit 59). Furthermore, the New York Fed often estimates that the delinquency rate for student loans in the repayment cycle is roughly twice the reported amount because about half of student loans are in deferment or forbearance.

Exhibit 59 90-Day Auto Loan Delinquency Rates Are Far Below Student Loan Delinquency Rates

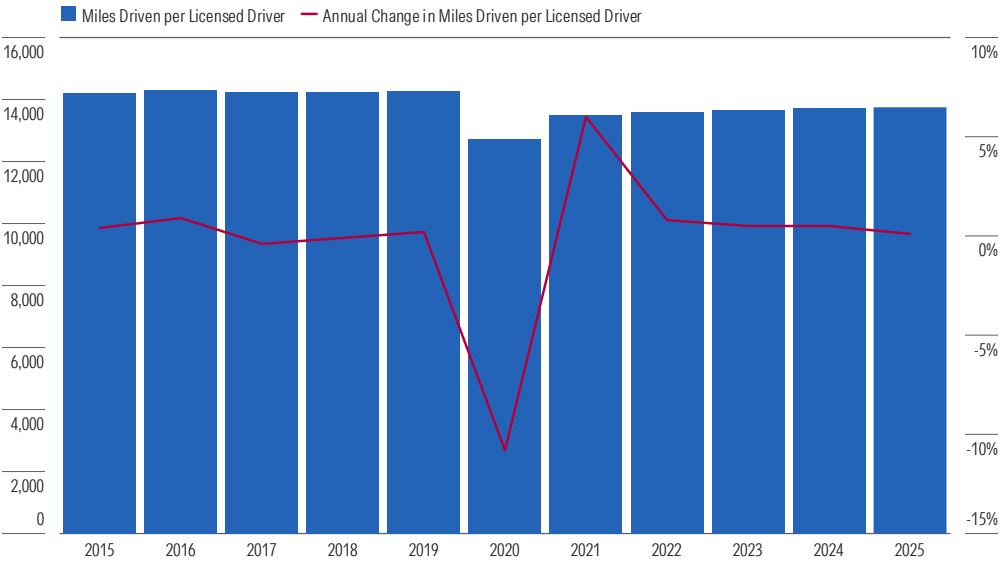
Source: Federal Reserve Bank of New York, Morningstar.

Trend 10: Annual Miles Driven Extends Growth Streak to Five Years

On the positive side for vehicle demand, the fleet remains old, and recently released vehicles have more safety and infotainment features than ever before. Also, people and goods still need to be moved. Exhibit 61 shows miles driven in the US since 1970, while Exhibit 62 shows miles driven by month since 2020 to illustrate the impact of covid-19 on driving. In a March 2015 press release, the Federal Highway Administration said that 3 trillion miles driven in 2014 was the second highest in the 79 years it had collected data. This growth continued through 2019, with 2015-19 all record years.

2020 was a different story because of the pandemic. Miles driven declined 11.0% from 2019 to 2.90 trillion, the first annual decline since 2011's 0.6% fall and the worst annual decline on record back through 1970. On an annual basis, miles driven has declined year over year in only seven years since 1971, with two of those years in the Great Recession of 2008-09. 2020 was such a severe drop that at the time it lowered the compound average annual growth rate since 1970 by 30 basis points to 1.9%. Miles driven per capita (per licensed driver) fell 10.8% in 2020, by our calculation. We calculate that until 2020, US miles driven per capita declined annually three times since 2010. We also calculate that miles driven per licensed driver for 2017-20 declined for three of those four years, with the only increase a 0.2% rise in 2019 to 14,263 miles per driver. 2021 miles per driver increased 6.0% from 2020, while 2022 rose 0.8%, 2023 and 2024 each rose 0.5%, with 2024 at 13,735 miles per driver (Exhibit 60). From the start of the pandemic in March 2020, it took until November 2021 for any single month to exceed its 2019 total.

Exhibit 60 Recent Year-Over-Year Changes in Miles Driven per Driver More in Line With 0.6% Average Since 1971
Year-over-year change in US miles driven per licensed driver, 2015-25.

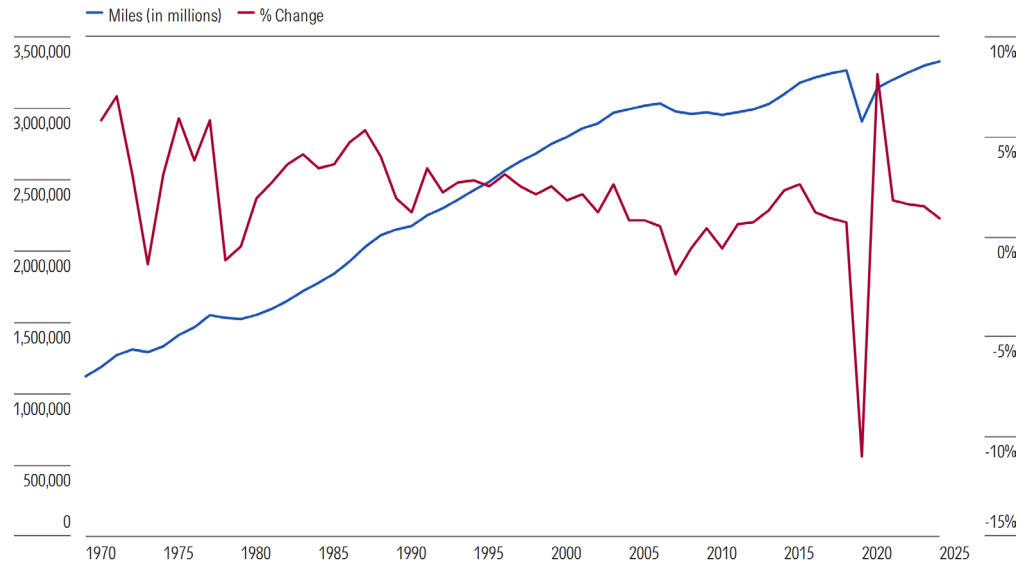


Source: Federal Highway Administration, Morningstar.

2024 finally saw total miles eclipse 2019's total, with 3.29 trillion exceeding 2019 by nearly 1%. 2025 saw 0.9% year-over-year growth to 3.32 trillion, and every month except February increased year over year. We calculate that the CAGR since 1970 compared with a year ago is unchanged at 2.0%. We've said in prior reports that we didn't expect everyone to work from home forever, a prediction that seems to be playing out as firms like GM, JPMorgan, Stellantis, Toyota, UPS, and Amazon mandate in-office work. The rise in demand for private mobility—even in New York City—reported in 2020 makes us think that saying people will no longer drive much is premature.

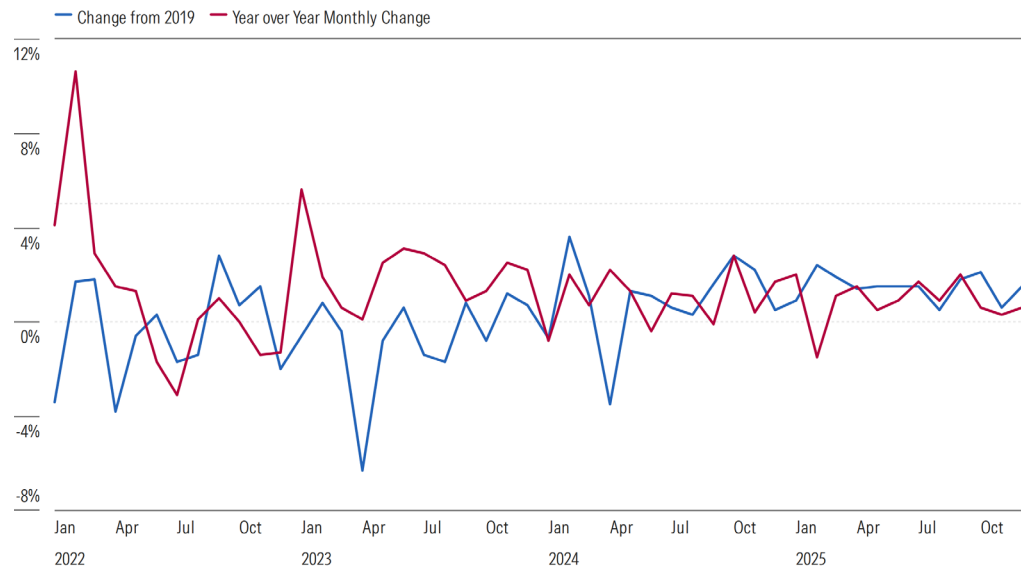
It's a positive sign to see full-year miles driven rise over the prior year for the fifth consecutive year in 2025. Barring a recession, we expect more mileage growth. More miles driven can also mean more accidents, which is good for salvage auction leader Copart, and more vehicle wear, which increases demand for buying vehicles at dealerships as well as for their lucrative service departments, which bring gross margins of 45%-55% regardless of warranty status.

Exhibit 61 Annual Miles Driven in 2025 Grew for the Fifth Straight Year
US miles driven 1970-2025 and year-over-year change.



Source: Federal Highway Administration, Morningstar.

Exhibit 62 2025 Monthly Miles Higher Than 2019 for Every Month
Monthly year-over-year changes in US miles driven, 2022-25.



Source: Federal Highway Administration, Morningstar calculations.

Gentex: A Narrow-Moat Best-in-Class Supplier That's Rarely Cheap

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Gentex Boasts a Fortress Balance Sheet and Massive Market Share

Based in western Michigan, Gentex was founded in 1974 as a maker of fire alarm products. It expanded into electromechanical interior auto-dimming rearview mirrors in the early 1980s, developed an electrochromic auto-dimming mirror in the late 1980s, and added exterior EC auto-dimming in the early '90s. We estimate that in 2025, about 31% of all light vehicles produced had interior auto-dimming mirrors, and exterior auto-dimming penetration is roughly half that of interior. Innovations have continued in both automotive and nonautomotive uses. CEO Steve Downing has publicly said many times that Gentex must outinnovate itself or another company will. Over the years, it has added inventions such as SmartBeam, which uses Gentex's expertise in lighting and cameras to integrate automatic high-beam control (automatically turning your brights on and off or keeping your brights on and moving the light around oncoming traffic to not blind the other driver) into the mirror, camera monitoring systems with displays integrated into the mirror, a universal toll payment system, and our favorite: the full-display mirror (commonly called FDM), which replaces a reflection with a full-screen panoramic LCD video display so the driver can see behind the vehicle at any speed regardless of cargo in the backseat blocking the view.

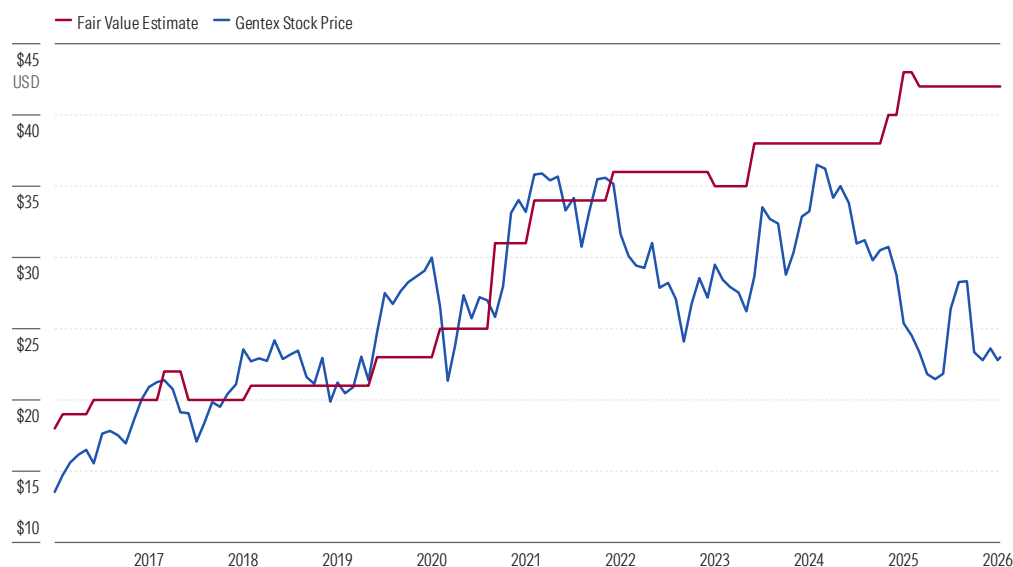
Exhibit 63 Gentex's Mirror Products Have a Variety of Technology
Summary of key Gentex mirror features.

Product		
SmartBeam		Cameras in the mirror automatically turn high beams (brights) on and off based on oncoming traffic. Advanced versions in Europe allow the driver to keep brights on all the time and move the vehicle's lights around oncoming traffic to not blind the other vehicle's driver.
Integrated Toll Module		The mirror-integrated toll payment system works on 98% of US toll roads across 15 toll collection brands.
Full Display Mirror		At the driver's option, the mirror shows a reflection or an LCD image from rear-mounted cameras. This dual functionality is available at any speed. Display mode gives a wider field of view and allows drivers to still see behind them if the rear window is obstructed by people or cargo.

Lower Vehicle Production Creates a Bargain, in Our View

Gentex's leading profit metrics among auto suppliers and debt-free balance sheet mean that the stock is usually undervalued only in recessions or other calamities, such as the chip shortage. However, lower vehicle production since the pandemic and chip shortage have led to what we see as a rare buying opportunity.

Exhibit 64 Gentex Is Now Trading at a Significant Discount to Our Fair Value Estimate



Source: PitchBook. Data as of March 27, 2026.

In 2025, the stock traded around five-year lows for several reasons. In response to consumers in many countries struggling with vehicle affordability, some automakers—particularly two European customers—are reducing their exterior auto-dimming mirror buys. Management has noted to us a rising number of vehicles globally with base-level trim packages (which may not have an auto-dimming mirror) to help consumer affordability, a trend we see continuing in 2026. China, which contributed 9% of 2024 total revenue at \$207.5 million, was about 26% lower in dollar sales in 2025 due to tariffs and management's frustration with undesirable vendor payment terms by many Chinese automakers, which has led Gentex to not pursue more Chinese automaker penetration. China has never been a critical part of Gentex's business, however, so we see its revenue mix falling to the midsingle digits as not a catastrophe for profits. Also, Tesla has been reducing exterior auto-dimming mirror offerings on both the passenger and driver sides, limiting them to higher-priced models that are now being discontinued. We summarize key issues with Gentex's stock in Exhibit 65.

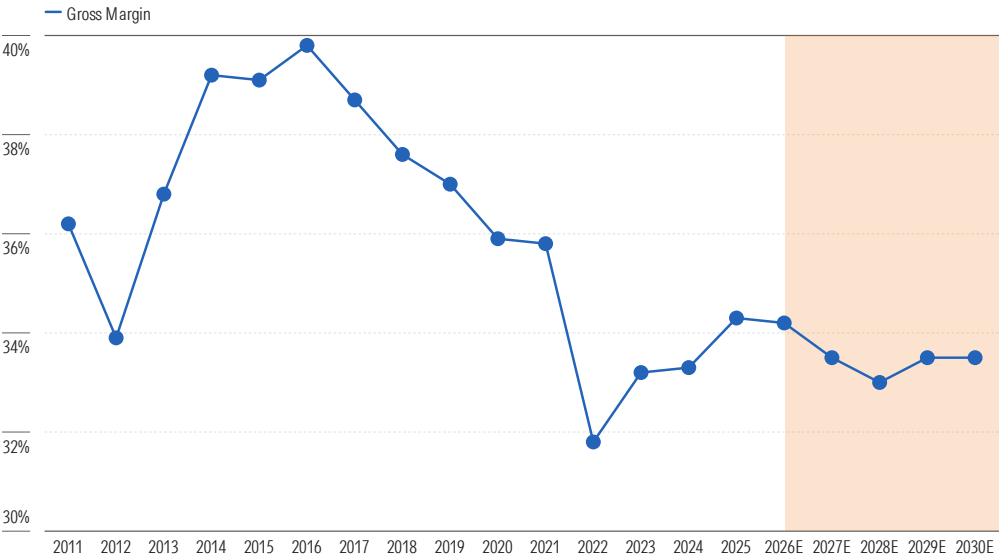
Exhibit 65 Our Take on the Market's Concerns About Gentex

Market Concerns	Our Take
Some automakers are increasing base-level trims that may not use an auto-dimming mirror.	We expect this trend to be cyclical rather than permanent. Gentex's always innovating new products to drive growth.
China sales fell 26.5% in 2025 due to tariffs and undesirable vendor payment terms.	China's revenue mix was 6% last year and was previously a low-double-digit figure. China is not a critical part of our investment thesis.
Tesla has reduced its exterior auto-dimming mirror business.	Tesla is not 10% of total revenue, and we see potential for FDM growth with Tesla over time.

Source: Gentex company filings, Morningstar.

The company also worked—sometimes contentiously—with its own suppliers to bring gross margins higher, which has been successful excluding the Voxx acquisition, which closed in April 2025. Fourth-quarter core gross margin (which excludes Voxx) rose 300 basis points year over year to 35.5% despite about 150 basis points of tariff headwind, and the company reached its year-end 2025 target pace for core of 35%-36%. Consolidated gross margin is generally at least 50 basis points lower than core because Voxx gross margins run in the high 20s to low 30s. Voxx annual revenue is about \$350 million-\$400 million. We model flat consolidated gross margin growth in the outer years of our five-year explicit forecast period (Exhibit 66) and still see the stock as well undervalued. Gentex dominates the auto-dimming mirror market, with global share at 79% last year. Exhibit 67 shows the firm's revenue mix. Customer mix is across the whole auto industry, with the largest automaker customers in 2025 as a percentage of revenue being Toyota at 18%, VW Group at 11%, and GM at 10%. Gentex also supplies newer automakers such as Nio, Rivian, and Tesla.

Exhibit 66 Our Valuation Does Not Require Significant Gross Margin Expansion
Our midcycle gross margin estimate is 33.5%, less than 2025's gross margin of 34.3%.



Source: Gentex company filings, Morningstar valuation model.

Exhibit 67 Gentex Is a Global Auto Supplier with New Revenue Streams From Voxx and Other Research Efforts
Gentex's 2025 revenue mix.

	2025	2024
Automotive		
US	27.6%	27.8%
Japan	14.9%	16.0%
Germany	9.6%	11.7%
Korea	7.1%	7.1%
Mexico	7.2%	8.1%
China	6.0%	9.0%
Other	16.7%	18.2%
Total Automotive	89.0%	97.9%
Premium Audio (VOXX)		
US	3.5%	0.0%
Other	2.4%	0.0%
Total Premium Audio	6.0%	0.0%
Other		
Fire Protection	1.0%	1.2%
Airplane Windows	0.7%	0.9%
Medical Products	0.1%	0.1%
Aftermarket Electronics	2.1%	0.0%
Consumer Electronics	0.9%	0.0%
Biometric Products	0.2%	0.0%
Total Other	5.0%	2.1%
Total	100%	100%

Revenue from China declined due to tariffs reducing exports of Gentex's products to Chinese customers.

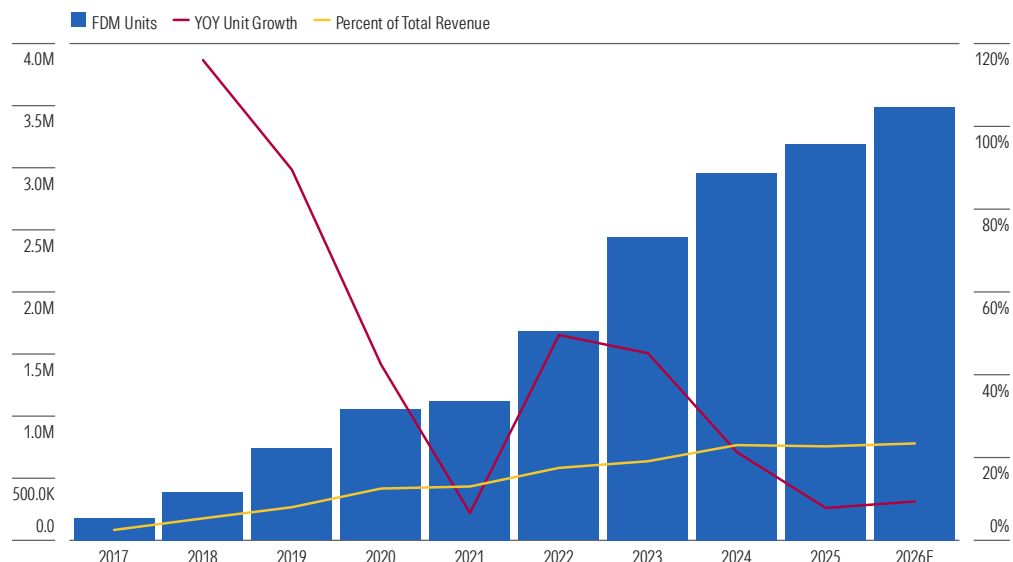
Meanwhile, US mix held steady as Gentex's exclusion on some base trims is more of a European issue.

Source: Gentex's 10-K, Morningstar calculations. Voxx acquisition closed April 1, 2025.

Full-Display Mirror a Key Growth Product Generating Over 20% of Revenue

FDMs have been an ever-growing product for Gentex since the 2016 launch, and we think every vehicle in the world should have one. As of early 2026, the company is shipping FDMs to over 33 automotive brands. We show FDM's unit growth over time in Exhibit 68. 2025's nearly 3.2 million units constituted 7.1% of Gentex's total mirror volume and we estimate made up over 20% of total revenue in 2024 and 2025. 2026 guidance is for 200,000-400,000 units of growth over 2025. Recent FDM advancements include the ability for the mirror to also act as a digital video recorder, a trailer camera system, a touch screen, and a mirror-integrated camera for in-vehicle selfies. At CES 2026, Gentex showed its next-generation FDM, which has dynamic viewing. Examples include the ability for the camera to tilt lower when the vehicle is in reverse and automatically adjust the zoom, depending on the distance of objects behind the vehicle. A short video showing the new FDM tech can be viewed [here](#).

Exhibit 68 Gentex Expects 2026 FDM Growth of as Much as 400,000 Units Over 2025's 3.19 Million
Gentex's full-display mirror shipment data.



Source: Gentex Securities and Exchange Commission filings, Morningstar valuation model and calculations.

Also, Gentex acquired HomeLink from Johnson Controls in 2013 and has expanded that business from operating the garage door from one's vehicle into an Internet of Things capability for home devices (lights, security, and so on) controlled from the vehicle. Gentex unveiled a new generation of HomeLink at CES 2025 that can activate smart devices in the home via radio frequency, long-range Bluetooth, and cloud-based API for a variety of products from brands such as Samsung and Amazon. Gentex's scale from its dominant market share and tech-industry-like margins make the company the envy of the auto supplier industry, as shown in Exhibit 69.

Exhibit 69 Gentex's Profit Metrics Number One in Our Auto Supplier Coverage and Are More Like a Tech Company's
Our projected profit metrics for Gentex versus other top auto suppliers and selected technology firms we cover.

	EBIT Margin	EBITDA Margin	ROIC	Free Cash Flow to the Firm/Sales
Gentex	20.6%	24.7%	18.8%	14.7%
Magna	5.9%	9.7%	9.6%	4.8%
BorgWarner	9.2%	13.3%	9.7%	5.7%
Adient	4.7%	7.1%	11.9%	3.4%
Aumovio	2.6%	8.5%	2.6%	2.4%
Denso	8.2%	13.4%	9.9%	4.1%
Apple	34.3%	37.2%	74.7%	27.9%
Garmin	26.1%	29.7%	21.6%	25.5%

Source: Morningstar's discounted cash flow models. Apple and Garmin used per suggestions from our technology team, given that they build their own hardware and operating systems around the hardware. Table metrics are five-year averages across our stage one explicit forecast period in our models. Data as of March 30, 2026.

Cameras Are Not Replacing Mirrors

We have been hearing skeptics tell us for over a decade that cameras are replacing mirrors and Gentex will soon be obsolete. However, Gentex simply keeps growing and innovating. Per our discussion with automakers, replacing mirrors with cameras is not something they are focused on because costs and regulation don't make it feasible. In the US, Federal Motor Vehicle Safety Standard 111 requires all passenger cars to have a rearview mirror, a driver-side mirror, and in some cases a passenger-side mirror. There have been some lobbying efforts to make camera monitoring systems an alternative to mirrors, but regulators have not embraced the idea, and if that changes, Gentex does make CMS products. The FDM product gives automakers a nice driver-controlled balance between cameras and mirrors via its dual functionality of mirror and display, which the driver can easily toggle between. The industry seems to prefer that, perhaps as a way to protect itself from lawsuits, because mirrors are a safety-critical item. Ford has told us in the past that so many cameras are in use in autos already that further meaningful scale benefits from replacing the mirror with cameras would not be worth the transition efforts. A rule making mirrors optional in Europe and Japan under UNECE Regulation 46, effective in June 2016, has not led to a loss of business for Gentex in those markets.

Exhibit 70 We Don't See Cameras Replacing Mirrors

Factor	Cameras	Mirrors
• Reliability	• Cameras are notoriously unreliable during nighttime and bad weather	• Excellent visibility and offer instant view without lag
• Use	• A small portion of drivers get motion sick when using camera displays	• Avoid the motion sickness problem
• Cost	• Expensive, with average cameras costing hundreds of dollars • Automakers say more cameras aren't worth it	• Lower cost but still effective
• Regulation	• Not universally approved due to safety concerns	• Required by law in many countries around the world

Source: Morningstar Research.

CEO Downing has pointed out on earnings calls that cameras can have performance issues in certain conditions, such as inclement weather or nighttime driving, and some drivers are not comfortable with a camera display because it gives a two-dimensional view of a three-dimensional world. In addition, some people with bifocals can have problems with displays. Downing also said automaker customers are not comfortable with the extra cost, not only in production but because they sell Gentex's products for way more than what Gentex charges them and they don't want to lose some of that profit. These factors mean automakers need to offer things that will be accepted by the marketplace in high volume. The familiarity of a mirror offers that high likelihood of acceptance. In an October 2020 earnings call, Downing said about cameras replacing exterior mirrors, "the talk and a lot of the movement that

happened over the last couple of years has actually slowed down a little bit, primarily because of the cost structure, the difficulty engineering and getting those products in the space, and the cost once you do."

Verticals Beyond Automotive and New Automotive Products Offer New Revenue Streams

Exhibit 71 Gentex's Present and Future Products Have Numerous Use Cases
Products fall under three broad categories: vision systems, connected car, and dimmable devices.

Factor	Vision Systems	Connected Car	Dimmable Devices
Product	Airplane windows, driver and camera monitoring systems, FDM	HomeLink, ITM, Simplenight, robotaxi communication	Dimmable visors and sunroofs. Smart lighting for surgery
Use Cases	- Auto-dimming airplane windows, monitoring driver alertness and robotaxi customers - FDM gives wider field of view	- Connects vehicle to Internet of Things in the home; in-vehicle e-commerce - Multijurisdictional toll payments - Help robotaxi firms maximize fleet efficiency	- Increases driver's frontal view - Optimizes vehicle HVAC efficiency - Partnership with Mayo Clinic to make dynamic surgical lighting

Source: Gentex website, Morningstar Research.

Auto-dimming passenger windows are for the Boeing 787 and 777X and Airbus A350. We find aviation to be an interesting growth runway, especially if other aircraft makers become customers as well. We've used these windows on the 787, and they quickly darken or reveal the window view to perfection, as far as the human eye can tell. Gentex has also used its lighting expertise for smart lighting in aircraft passenger cabins that will follow a service cart or flight attendant while keeping the rest of the cabin dark. It is currently in partnership with the Mayo Clinic for smart lighting during surgery, though this product is not yet commercialized. Gentex's adjustable LED lighting dynamically adjusts itself to focus light when and where the surgeon needs it.

Other projects in development include the November 2023 acquisition of eSight to provide digital vision assistance via smart glasses for people with poor eyesight from conditions like macular degeneration, a partnership with RetiSpec to commercialize early detection of Alzheimer's disease by finding biomarkers in the eye, in-vehicle e-commerce functions via partnerships with Simplenight and PayByCar, biometric recognition and experience customization for the back of airplane seats as well as in autonomous vehicles, and polluted air particle detection for airplanes and AVs. January 2024 saw Gentex make an investment in Solace Power, a wireless power transfer company including proximity sensing.

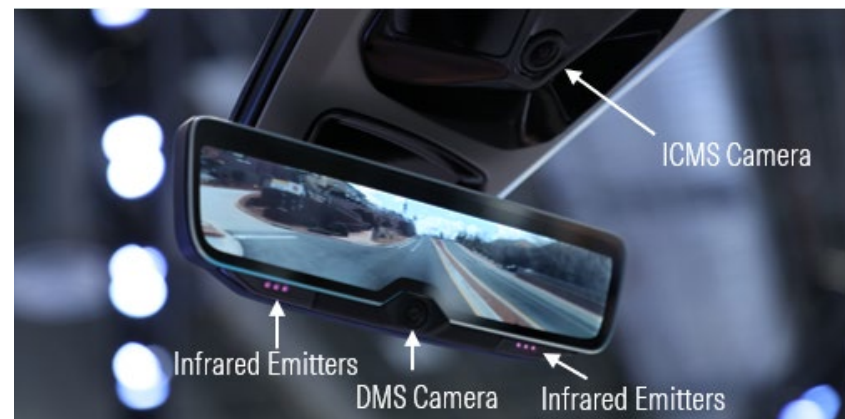
In November 2025, Gentex announced the acquisition of Toronto-based BioConnect. Gentex sees synergies with BioConnect's biometric security technology and Voxx's EyeLock iris biometric tech. Gentex first invested in Voxx in October 2023 and wanted to secure Voxx's algorithm for iris recognition technology, likely to help with its efforts to supply robotaxi fleet operators. Gentex can also bring

EyeLock's biometrics across other automotive uses, aerospace, and healthcare applications that the company has relationships with, and BioConnect adds to that capability.

Vision Systems and Dimmable Devices Have Large Potential; Connected Car Tech Helps Robotaxis

Present and future products fall under three broad categories: vision systems, connected car, and dimmable devices. Vision systems would be all variations of EC auto-dimming mirrors like FDM. We also place driver monitoring systems in this bucket. DMS can monitor driver alertness and help the vehicle decide when to hand control back to the driver in a Level 3 autonomous vehicle. DMS launched with Rivian in 2024 and added Volvo and Polestar in the fourth quarter of 2025, which combined contributed full-year 2025 revenue of about \$10 million. Two more customers (yet to be named) will launch in early 2026, per Gentex management. Gentex expects DMS revenue to double in 2026 and 2027. We diagram DMS' features in Exhibit 72. DMS helps automakers meet 5-star European safety requirements, such as detecting fatigued or impaired drivers, while internal cabin monitoring systems contribute significantly to meeting 3-star and 4-star criteria there. DMS continuously scans and tracks every vehicle occupant, even without direct line of sight, using two-dimensional video image recognition with three-dimensional mapping and motion analysis. It can detect very slight movements, including heartbeats.

Exhibit 72 Driver Monitoring Systems Are One of Several New Growth Avenues for Gentex
Layout of Gentex's DMS.

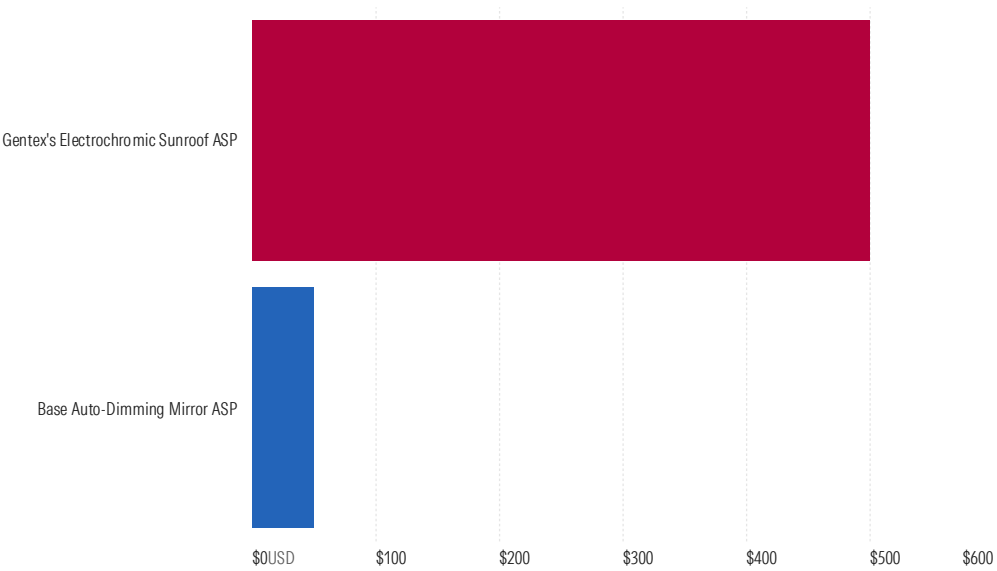


Source: Gentex.

We include AV innovations in the connected car bucket. In 2021, Gentex made two acquisitions—Guardian Optical Technologies and Vaporsens—that along with its sensing expertise from fire detection enable it to integrate nanosensing technology into an offering for robotaxi operators. Gentex can sense the number of occupants in a cabin, what they are doing to a certain degree, and if they are smoking/vaping or have otherwise soiled the vehicle. The operator can then automatically assess a fine and remove an AV from service for cleaning. This technology also has microvibration detection, which can help recognize a child left in a vehicle, for example. This detection happens even without a camera having a line of sight to the child seat.

Dimmable devices use Gentex's expertise in chemistry, coatings, and auto-dimming to make auto-dimming devices beyond the mirror, such as sunroofs (which can even be segmented for each occupant's desired dimming level), sun visors, and perhaps longer term, car windows. Large-area dimmable devices are where Gentex sees the largest opportunity it's ever had. The company has about 40 years of dimmable technology via electrochromic expertise and is ready to move this technology into larger-area surfaces beyond mirrors and airplane windows. Visors and sunroofs will be the first vehicle areas, but over time, side windows and eventually the front windshield are possible. Ideally, Gentex will not make the glass itself, due to the large size, but will supply the electrochromic tech and coatings to the Tier 1 supplier, similar to what it does now with PPG Aerospace for auto-dimming airplane windows in wide-body Boeing and Airbus jets. Gentex could sell its electrochromic tech in a sunroof for \$300-\$700 to a sunroof maker, far above company-average mirror unit prices, which we calculate at slightly under \$50 (see Exhibit 73).

Exhibit 73 Gentex's New Large-Area Dimmable Device Products Can Sell for a Hefty Premium
Potential average selling price of a dimmable sunroof versus a base auto-dimming mirror.



Source: Morningstar estimates.

New manufacturing equipment custom-made for Gentex, since the company writes its own specifications for variables such as temperature control, has taken time to finalize but is expected to be operational by late in the first quarter or early in the second quarter. On its third-quarter 2025 earnings call, the company said it will have large-area dimmable production brought to the market within 1.5 years. Gentex likes products that are scalable, such as sunroofs and visors in millions of vehicles, rather than custom-sized surfaces such as office building windows. Rivian currently has a dynamic sunroof (not Gentex-supplied) that uses polymer-dispersed liquid crystal, which is not electrochromic. Electrochromic tech is better suited for customizing how much light passes into the vehicle. Dimmable visors, shown in Exhibit 74, which can be transparent or opaque, change the viewing experience for

drivers and front-seat passengers. We also see potential longer-term to integrate displays into visors so one could watch video or have a video call.

Exhibit 74 Large-Area Dimmable Devices Could Be the Top Growth Driver in a Few Years

Dimmable devices include sunroofs and sun visors.



Source: Gentex.

We think Gentex's products are best experienced visually, so we encourage investors to watch two 10- to 15-minute CES interviews from 2020 and 2022 with Downing doing product walkthroughs. The [2020 one](#) devotes extensive time to aerospace and healthcare applications, while the [2022 one](#) has demos of the yet-to-be-commercialized EC auto-dimming sunroof. A CES 2026 Gentex interview that discusses the need to reduce glare, the aftermarket to retrofit vehicles already on the road, and has a short video demonstration of the transparency of the dimmable visor can be found [here](#). This second short CES 2026 [video](#) shows an actual visor at the show dimming and its dimmable mirror capability for night driving. The visor has a customer contract (customer not yet named) and is due to start shipping in late 2027.

We See Gentex's Stock on a Rare Sale

We don't see Gentex's stock offering vast multibagger potential, but we do see it as attractively undervalued now in the low \$20s. With its debt-free and cash-rich balance sheet, dominant market share, and profit margins that are outstanding for the auto sector, we see Gentex as a good name for investors who are normally loath to invest in the auto industry due to its cyclical and capital-intensive nature. We don't believe Gentex is recession-resistant, but we would expect its stock to fall far less than a name such as GM, Ford, or a highly leveraged auto-parts supplier, should the US have a recession.

One change Downing brought when he took over in January 2018 was a more explicit capital allocation policy. In the roughly 18 years that Morningstar's US autos analyst has covered Gentex, the company has had debt just twice: after acquiring HomeLink, which was paid off quickly, and then it drew \$75 million on the credit line when the pandemic started, just to remind its lender that it was still there in case the lender was looking to pull credit at the onset of the pandemic. The normally debt-free fortress of a balance sheet, rich in cash and mostly low-risk bonds, has at times led some to make a cost-of-capital argument for Gentex holding too much cash or question the firm's capital allocation. Since

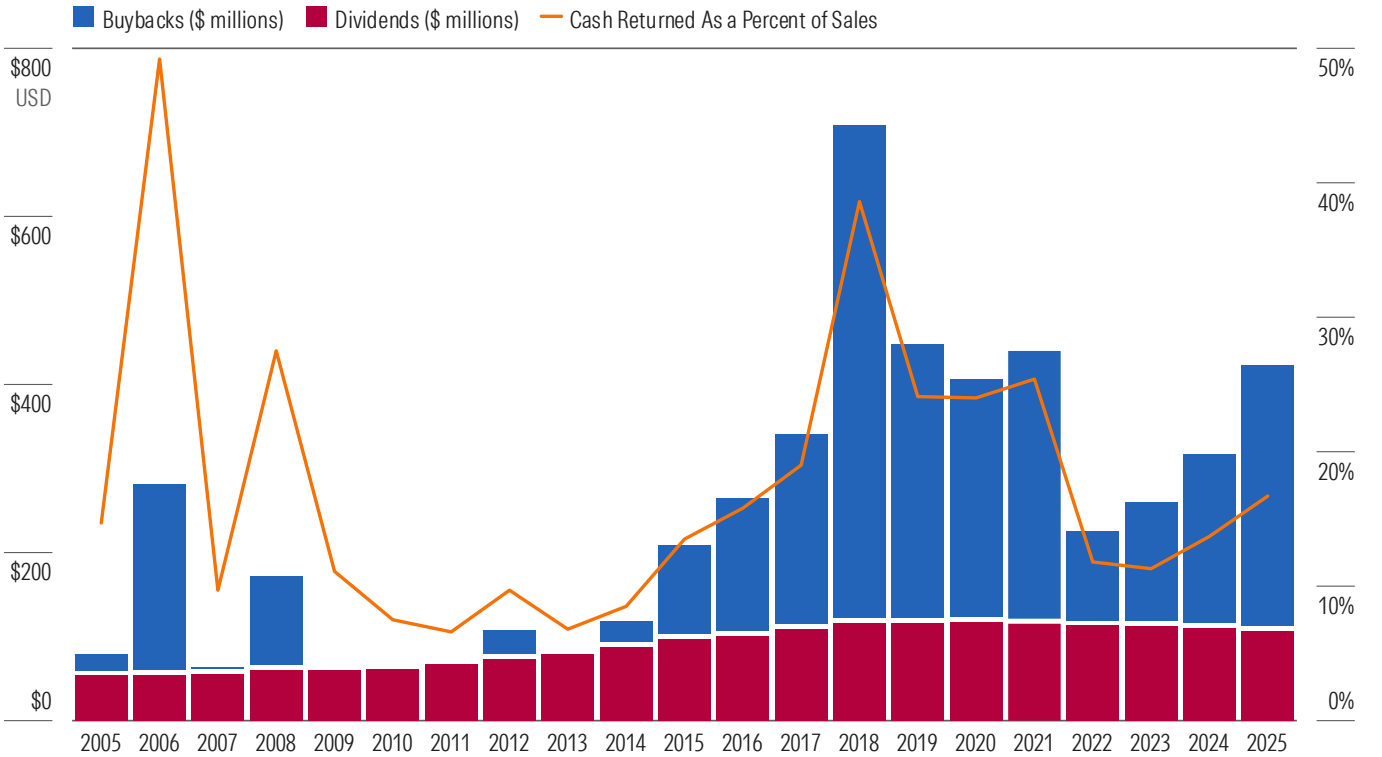
founder Fred Bauer retired in 2018, Gentex has said that its cash and investments target is roughly \$525 million, whereas previously the actual balance could total around \$800 million. At the end of 2025, it was \$424 million, or 14.5% of total assets and \$1.95 per diluted share. Gentex wants this much cash in case it needs to quickly close an acquisition, and because it likes showing its own suppliers that it has the cash to pay them. This liquidity strength is helpful to ensure access to raw material inventory in times of crisis, such as the chip shortage or after the 2011 tsunami in Japan.

As shown in Exhibit 75, Gentex has decreased its cash and investment hoard by returning more cash to shareholders. Total dividends and share repurchases as a percentage of revenue ranged from a single-digit to midteens percentage under Bauer, but under Downing, it has often been above 20%-30%. 2022-25 percentages have been below 20%, due to less dollar spending on share repurchases, likely in response to customers cutting production because of the chip shortage, but buyback spending increased 53% in 2025 over 2024. Downing has emphasized more buybacks because he believes that the stock is cheap. Downing as CEO is a biased source, but he said at a November 2025 stock conference, "Right now, the share price makes absolutely no sense as best I can tell, based on the numbers and the trajectory we see." We expect buyback spending to remain robust, now that the chip shortage is behind the industry. The dividend has not increased since just before the start of the pandemic in early 2020, but management has told us that 70% of shareholders prefer buybacks to dividends and that the dividend will not increase until net income surpasses 2018's record \$437.9 million, which we model to occur in 2027.

We calculate that the diluted share count since Downing took over as CEO at the start of 2018 through 2025 has fallen by 24.4%. We like that management is more aggressive in deploying cash than when Bauer led the company, while still maintaining what we see as a fortress balance sheet. Bauer was very fiscally conservative and did not want Gentex to ever be responsible for shutting down an automaker's production line. Some may say Gentex's cost of capital is too high with no debt, but no one ever complains about the company hoarding cash in dark times, which we've seen plenty of since spring 2020 and during the Great Recession. A very strong balance sheet is not what we would call a problem.

Exhibit 75 Under Downing's Leadership, Gentex Is Returning More Cash to Shareholders

Gentex dividends and share buybacks (in millions) since 2005.

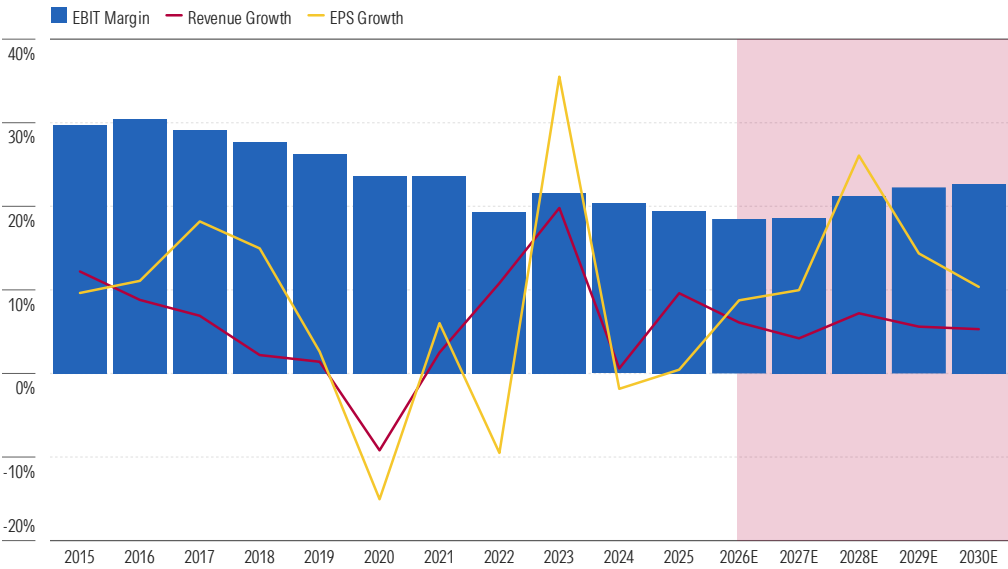


Source: Gentex 10-Ks and investor presentation, Morningstar calculations. Steve Downing became CEO at the start of 2018.

In 2025, Gentex's interior auto-dimming mirror penetration of global light-vehicle production was about 31%, by our calculation, and we estimate its exterior auto-dimming penetration in the high teens. This means that there is likely a long growth runway as more emerging markets become wealthier and their consumers or regulators want more safety content like auto-dimming mirrors. Developed markets can contribute to growth via new products such as FDM variants, driver and cabin monitoring, and dimmable surfaces like sunroofs. Gentex's direct tariff risk is minimal too, with 2026 gross exposure estimated by management at \$50 million, mostly from electronics and reciprocal levies by China.

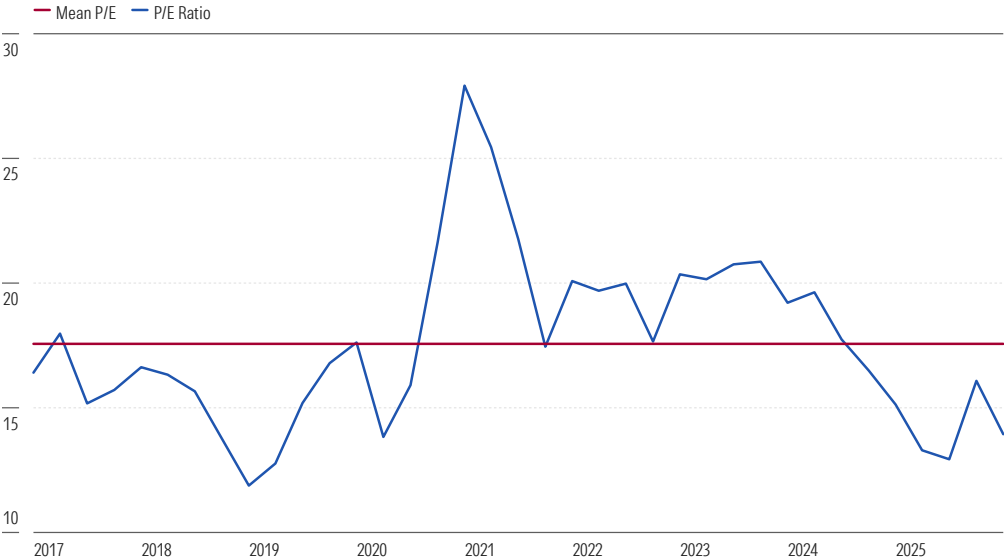
Management is seeking about \$30 million in customer tariff recoveries, which at a net \$20 million operating profit exposure is less than 1% of 2025 revenue and 4% of last year's operating income. The firm is not immune from lower customer production caused by tariffs, but we see less risk of that in 2026 than in 2025. Exhibit 76 summarizes our model's key metrics, which we don't consider to be aggressive. Exhibit 77 shows that Gentex looks undervalued on a P/E basis. We don't get to talk about Gentex often, because we almost never see its stock as undervalued, given its high quality. We think early 2026 is one of those rare times.

Exhibit 76 We Consider Our Gentex Modeling Assumptions to Be Conservative
Summary of Gentex's key valuation model drivers.



Source: Morningstar valuation model.

Exhibit 77 Gentex's Current Trailing P/E Ratio of 13 Is Below Its 10-Year Mean P/E of 17.5
We see Gentex as significantly undervalued.



Source: PitchBook. Data is through fourth quarter of 2025.

We consider Gentex to be one of the highest-quality names we cover, thanks to its fortress debt-free balance sheet, commitment to innovation, and dominant market share. Its high degree of vertical integration, making its own CMOS and cameras, enables it to capture more value in the auto supply chain than normal auto suppliers in our coverage. For those reasons, we believe the stock is rarely

undervalued, but low customer volume and tariff fears have kept the stock at levels last seen about seven years ago. With new products like DMS scaling next year and other new offerings like a next-generation FDM and dimmable visors and sunroofs coming, we don't see the stock staying cheap for years to come. ○

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. We think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (mines, for example), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's Equity Research Group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating:

- ▶ our assessment of the firm's economic moat.
- ▶ our estimate of the stock's fair value.
- ▶ our uncertainty around that fair value estimate.
- ▶ the current market price.

This process ultimately culminates in our single-point star rating.

Economic Moat

The Morningstar Economic Moat Rating is a structural feature that Morningstar believes positions a firm to earn durable excess profits over a long period of time, with excess profits defined as returns on invested capital above our estimate of a firm's cost of capital. The economic moat rating is not an indicator of the investment performance of the investment highlighted in this report. Narrow-moat companies are those that Morningstar believes are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those that Morningstar believes will earn excess returns for 10 years, with excess returns more likely than not to remain for at least 20 years. Firms without a moat, including those that have a substantial threat of value destruction-related risks related to environmental, social, and governance; industry disruption; financial health; or other idiosyncratic issues, are more susceptible to competition. Morningstar has identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Fair Value Estimate

Each stock's fair value is estimated by using a proprietary discounted cash flow model, which assumes that the stock's value is equal to the total of the free cash flows of the company is expected to generate in the future, discounted back to the present at the rate commensurate with the riskiness of the cash flows. As with any DCF model, the ending value is highly sensitive to Morningstar's projections of future growth.

Fair Value Uncertainty

The Morningstar Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, exposure to material ESG risks, and other company-specific factors. Based on these factors, analysts classify the stock into one of several uncertainty levels: Low, Medium, High, Very High, or Extreme. Our recommended margin of safety—the discount to fair value demanded before we'd recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases.

Market Price

The market prices used in this analysis and noted in the report come from exchanges on which the stock is listed, which we believe is a reliable source.

Morningstar Rating for Stocks

The Morningstar Rating for Stocks is a forward-looking, analyst-driven measure of a stock's current price relative to the analyst's estimate of what the shares are worth. Stock star ratings indicate whether a stock, in the equity analyst's educated opinion, is cheap, expensive, or fairly priced. To rate a stock, analysts estimate what they think it is worth (its "fair value"), using a detailed, long-term cash flow forecast for the company. A stock's star rating depends on whether its current market price is above or below the fair value estimate. Those stocks trading at large discounts to their fair values receive the highest ratings (4 or 5 stars). Stocks trading at large premiums to their fair values receive lower ratings (1 or 2 stars). A 3-star rating means the current stock price is close to the analyst's fair value estimate.

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