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Driving to Default in Unaffordable Used Cars

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BY DAVID FIELDHOUSE AND ALEX HEDGREN

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Lenders hit a bumpy road with used cars

Before the pandemic, delinquency rates among new and used vehicles moved in tandem. During the pandemic, delinquencies on both types of auto loans decreased because of stimulus payments, reduced spending and forbearance programs. Earlier this year, delinquencies[1] on used-vehicle loans surpassed pre-pandemic levels, while delinquencies on new-vehicle loans remained lower. As pandemic conditions normalize and used-car prices decrease, delinquencies are increasing more severely for used vehicles than new ones (see Chart 1).

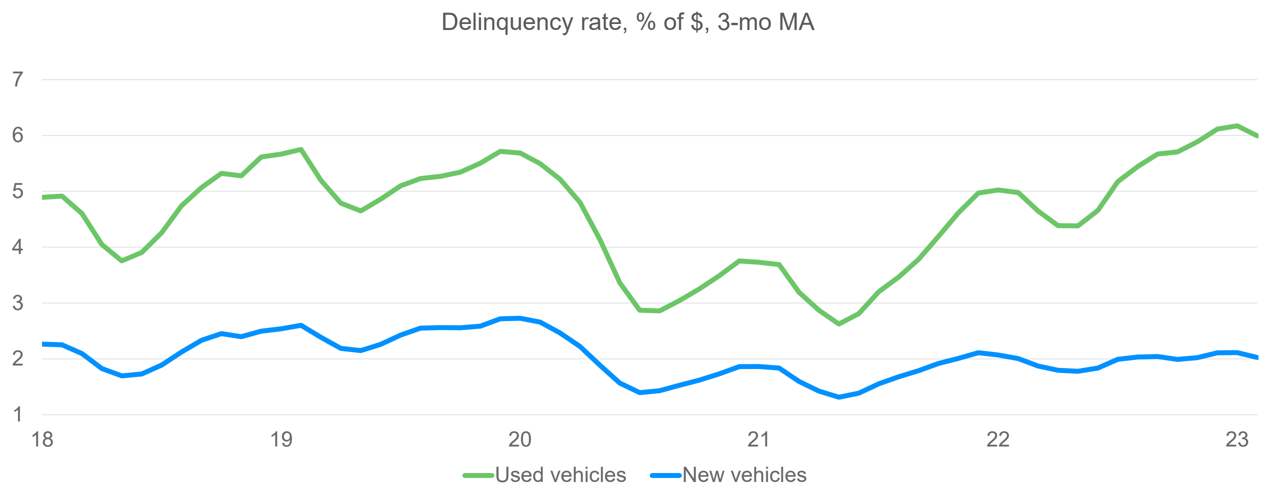
Auto lenders have faced a challenging situation during the pandemic as the average age of vehicles in their loan books has increased. Because of the shortage of new vehicles and the high prices of used ones, buyers have opted for older and less dependable vehicles to save on costs. This has put them at a higher risk of unexpected expenses in the future. Consequently, lenders' exposure to these risky assets has increased, making it a cause for concern.

All used up

The rise in used-car delinquency rates can be attributed to several factors. For one, the pandemic disrupted the supply chain for new cars, leading to a shortage. As a result, more people have turned to much older cars as a substitute, causing the average age of vehicles in a portfolio to increase (see Chart 2). This poses a challenge for lenders, as the age of a vehicle at the time of purchase is usually a reliable indicator of the likelihood of defaulting on an auto loan. Ultimately, the risk of default is linked to the vehicle's value, which is determined by its age. Older cars are more susceptible to breakdowns and do not come with warranties.

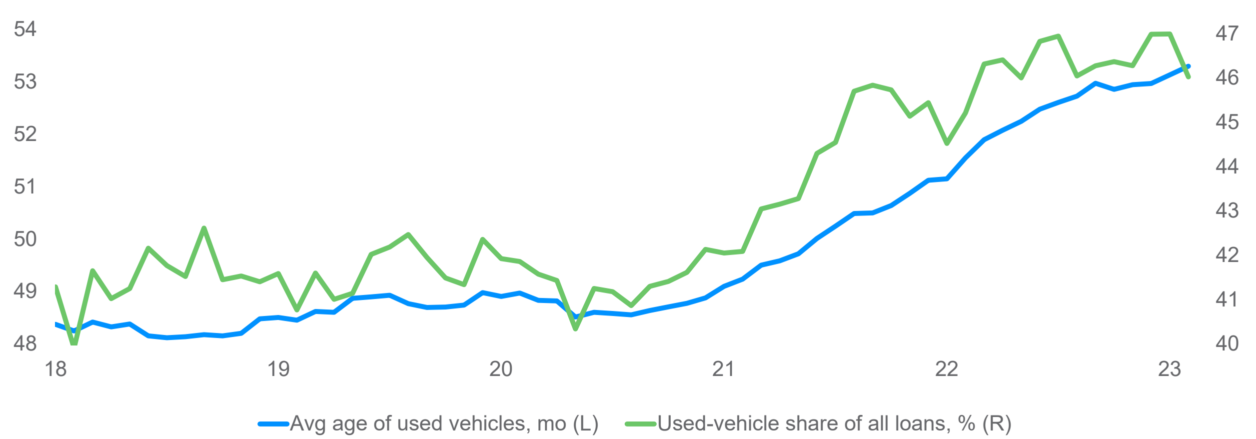
1 Data from EDGAR.

Chart 1: Two Cars Diverge at a Yellow Light…



Sources: SEC, Moody's Analytics

Chart 2: …And Old, Used Cars Are the Ones More Traveled By

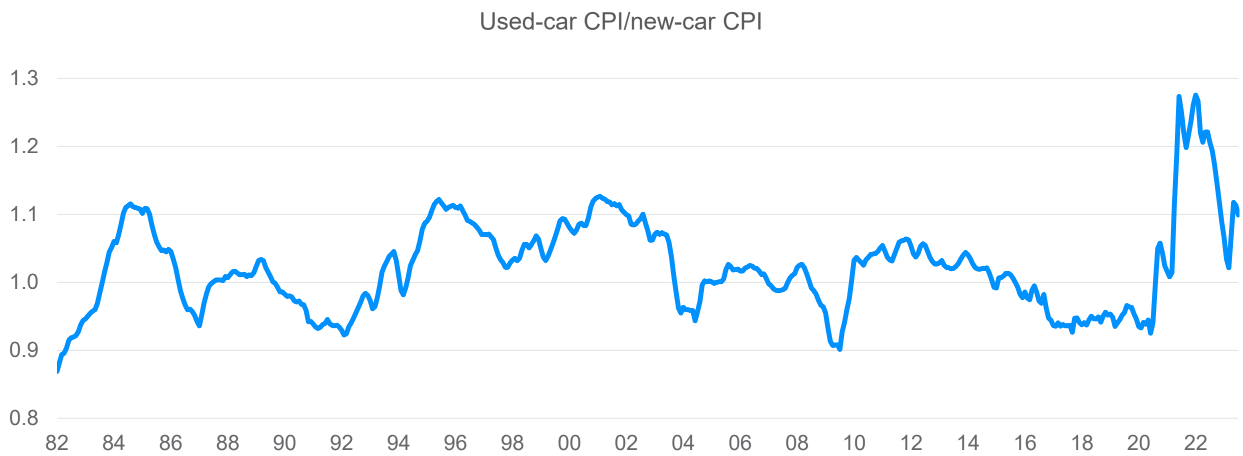


Sources: SEC, Moody's Analytics

The fast lane to buyer's remorse

Used-car price increases blew past those of new vehicles during the pandemic, making them particularly expensive purchases. While inflation especially hurts lower-income borrowers, it can be challenging for any borrower to justify making payments on a rapidly depreciating asset. Used-vehicle prices, once rapidly outpacing broader inflation pressures and new-vehicle prices, have now fallen 9% to 15% from their peak, depending on the month of observation (see Chart 3). They are expected to continue dropping, save for another shock to production such as an auto worker strike. A significant share of buyers who purchased used vehicles at the peak in late 2021 and early 2022 will be underwater on their loans by now.

Chart 3: Are Used Cars Worth the Ride?

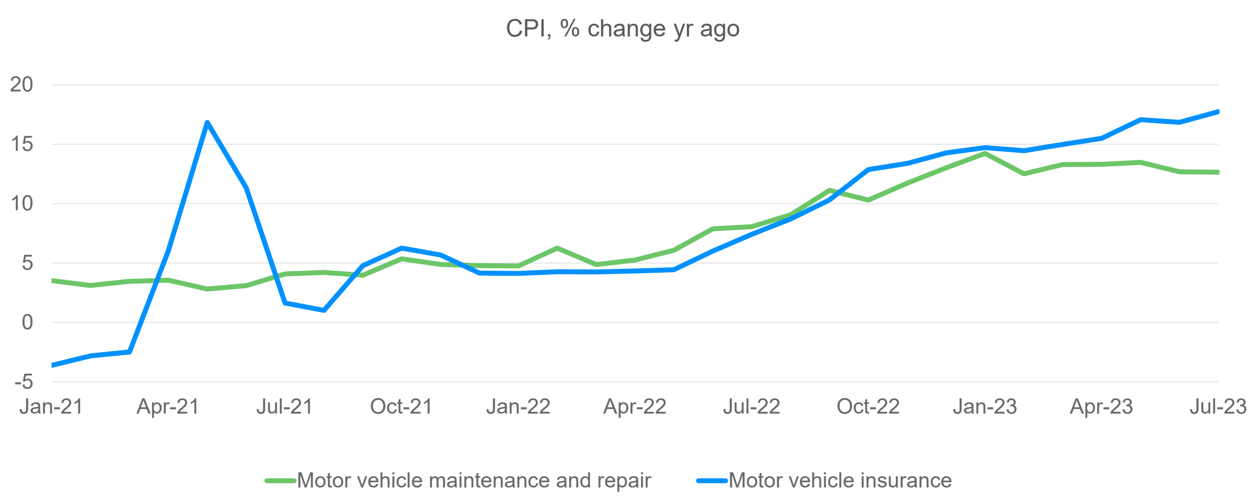


Sources: BLS, Moody's Analytics

Watch for disabled vehicles ahead

Used-car owners are feeling the pinch of soaring maintenance and insurance costs, which may cause some borrowers to reevaluate whether it is worth keeping the loan altogether. One of the consequences of the previous surges in vehicle prices is the increase in ownership costs, excluding fuel. Since the end of 2019, the CPI for motor vehicle maintenance and repair has increased more than 29%, and motor vehicle insurance experienced an increase of more than 25% (see Chart 4). As used vehicles are less reliable, used-vehicle borrowers should be more sensitive to these costs. By comparison, the overall CPI rose 17.7% at the same time.

Chart 4: Higher Maintenance and Insurance Drive Used-Car Borrowers to Default



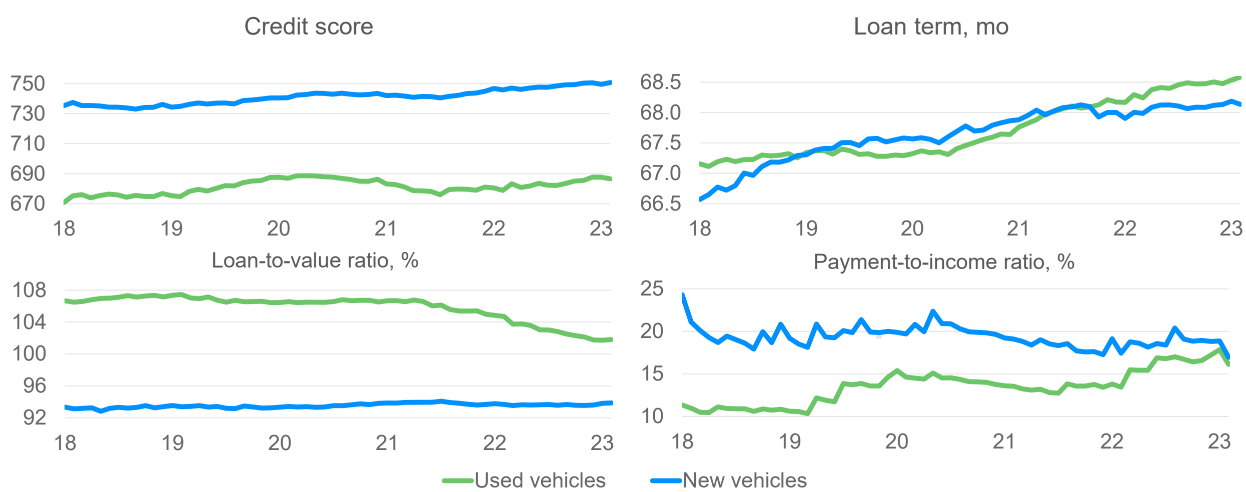
Sources: BLS, Moody's Analytics

Expensive auto parts and labor have contributed to the rise in repair costs for borrowers and insurers. Additionally, the increase in the value of vehicles since the pandemic began has not only reinforced higher repair costs but also led to higher replacement costs for cars and trucks. It is worth noting that there is an almost year-long delay between the peak in new-vehicle price inflation and the highest level of cost pressures observed in motor vehicle maintenance, repair and auto insurance. There is not much relief in sight for cost of ownership, either. Maintenance costs are labor-dependent and believed to have stronger price momentum than used-vehicle prices. Further, it is important to mention that the CPI for motor vehicle insurance is reaccelerating, possibly because of a significant increase in accidents and fatalities since the pandemic began.[2]

Limited credit visibility

Conventional wisdom suggests that lenders would adequately control the risks of high prices in efficient markets. Some risks are easily quantifiable. Indeed, we did see the average loan-to-value ratio decline by about 5% as lenders implemented stricter requirements. Some risks are harder to measure, such as the degree of desperation inherent in a buyer who decides to purchase a used vehicle during a period of extreme overvaluation and when the need to rely on a car to hold a job is vastly reduced in the wake of the pandemic. Whether or not lenders recognized the problems of adverse selection and overvaluation of vehicles, the degree of tightening of lending standards over the past couple of years now appears insufficient for used cars (see Chart 5).

Chart 5: Not Enough Tightening in Used-Vehicle Origination Credit Standards



Sources: SEC, Moody's Analytics

The only portfolio average credit metric among used-car loans that is noticeably tighter versus one year prior is LTV. An oft-cited justification for the poor credit performance is inflated credit scores. If lenders were not accurately assessing credit scores, we would see an increase in delinquencies in both new and used vehicles. Lenders did not even appreciably tighten standards on new vehicles, as average credit scores increased slightly and LTV ratios remained flat, and yet new-vehicle delinquencies have not jumped in the same way as with used vehicles. An additional explanation for rising auto delinquencies is that used-car

2 Statistics from NHTSA show a 7.3% and 10.1% increase in traffic fatalities in 2020 and 2021, respectively.

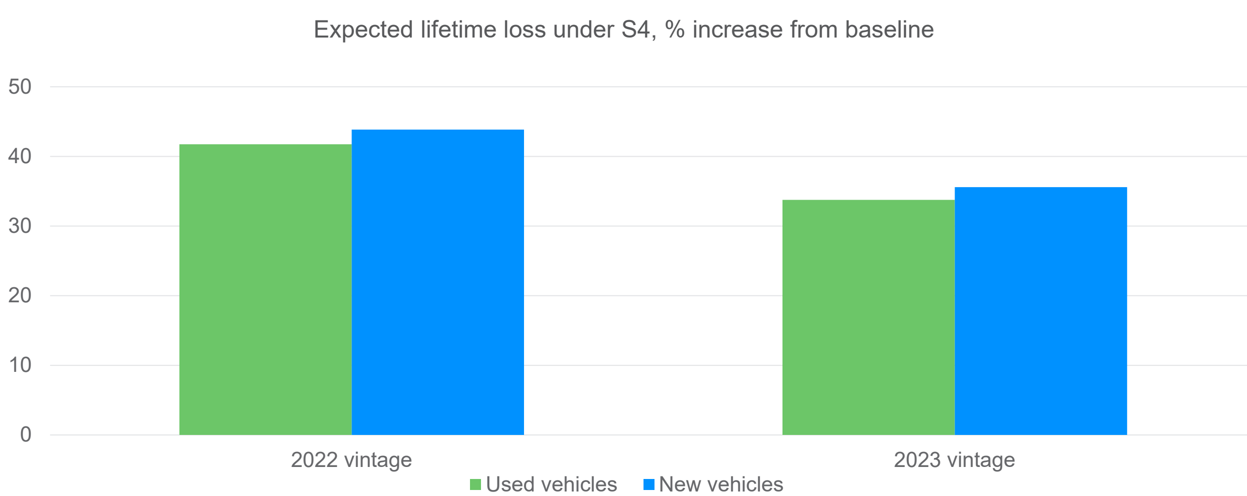
borrowers appear to have taken on loans they could not afford as payment-to-income increased at least 50% since 2019. As conditions have not yet normalized since the pandemic, lenders need to monitor other aspects of the credit box beyond credit scores, including collateral value and ability to pay, to obtain a more robust view of credit risk.

Caution: Rough road ahead

Auto lenders are right to be cautious. Industry expectations for declining used-car prices coupled with elevated risk in borrower profiles are a dangerous combination. Indeed, our quantitative models like that in our Portfolio Analyzer product point to significant expected losses on current portfolios, particularly on the older used vehicles. For each additional year of wear and tear on a used car, we expect projected loan losses to increase by 11%.

An uncomfortably high risk of economic contraction further contributes to the possibility of severe losses. A severe recession, like the one in our S4 scenario, would cripple already-struggling used-vehicle borrowers, increasing expected losses on 2023 originations by an additional 34% (see Chart 6). New-vehicle loans, still the bright light in a concerning consumer credit sector, would not escape a recession unscathed either. Loans for newer vehicles typically are to more established borrowers. They are relatively more sensitive to an economic downturn than less established borrowers who are more likely to experience job loss throughout the entire business cycle. As last year's borrowers have seen car values fall since they purchased their car, losses on 2022 loans are even more sensitive to a downturn. We could expect to see losses increase by more than 40% from baseline among this population.

Chart 6: Recession Would Lead to Greater Losses



Source: Moody's Analytics

According to the third-quarter Senior Loan Officer Survey on Bank Lending Practices, the net percentage of banks tightening standards on auto loans continues to increase. Although some aspects of the vehicle market, such as auto production, show signs of normalization, caution is warranted.

About the Authors

David Fieldhouse is a director in Predictive Analytics who oversees the development of retail and municipal loan performance models for financial lending institutions. His team produces econometric-based loss forecasting, benchmarking, and stress-testing models to meet our clients' unique strategic planning, risk management and accounting needs. He is a CECL subject matter expert with expertise in credit cards. He also produces white papers on consumer credit issues and speaks regularly at Moody's Analytics and industry events, webinars, and client engagements. David holds a PhD in economics from the University of Western Ontario, Canada.

Alex Hedgren is an assistant director and data scientist in Consumer Credit Predictive Analytics at Moody's Analytics. His responsibilities include developing and validating models of retail loan performance for financial institutions. He also provides regular analysis and commentary on consumer credit markets. Alex graduated cum laude with a BSc in economics and finance and a minor in statistics from the University of Maryland.

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