

ANALYSIS
APRIL 2021

Prepared by

Loc Quach
Loc.Quach@moodys.com
Economist

Michael Brisson
Michael.Brisson@moodys.com
Senior Economist

Contact Us

Email
help@economy.com

U.S./Canada
+1.866.275.3266

EMEA
+44.20.7772.5454 (London)
+420.224.222.929 (Prague)

Asia/Pacific
+852.3551.3077

All Others
+1.610.235.5299

Web
www.economy.com
www.moodysanalytics.com

The Used-Vehicle Market Is Revved Up

INTRODUCTION

Demand for used vehicles was red-hot in the first quarter. After ticking down modestly in the final few months of last year, U.S. wholesale used-vehicle prices shot up 11% from December to March. Two main factors contributed to used-vehicle prices surging upward. Over the last quarter, the federal government sent two rounds of stimulus payments to U.S. households and job creation accelerated significantly. Government stimulus and strong job creation expanded households' budgets for consumption. With demand for services still down because of the pandemic, many spent their higher incomes on durable goods such as a vehicle, raising used-vehicle prices.

The Used-Vehicle Market Is Revved Up

BY LOC QUACH AND MICHAEL BRISSON

Demand for used vehicles was red-hot in the first quarter. After ticking down modestly in the final few months of last year, U.S. wholesale used-vehicle prices shot up 11% from December to March (see Chart 1). Two main factors contributed to used-vehicle prices surging upward. Over the last quarter, the federal government sent two rounds of stimulus payments to U.S. households and job creation accelerated significantly. Government stimulus and strong job creation expanded households' budgets for consumption. With demand for services still down because of the pandemic, many spent their higher incomes on durable goods such as a vehicle, raising used-vehicle prices.

Rising household incomes buoy consumer demand for goods, a concept known as the income effect. Over the last quarter, there was plenty of support for used-vehicle prices via the income effect. In December, President Trump signed the Consolidated Appropriations Act, 2021, and in March, President Biden signed the American Rescue Plan. These pieces of legislation sent stimulus payments totaling up to \$2,000 to each person, much of which arrived last quarter. Adding to the stimulus payments, the labor market has been strong. Over the first three months of the year, payrolls expanded by 1.6 million, including 916,000 net new positions in March alone. In contrast, 638,000 jobs

were created in the final three months of 2020. With so much support for consumer demand via the income effect, used-vehicle demand spiked. In the first quarter, 2.2 million wholesale used-vehicle transactions were recorded by the National Automobile Dealers Association in its Auction Net database (see Chart 2). This is a 33% increase from the fourth quarter of 2020 and an all-time high going back to 2008.

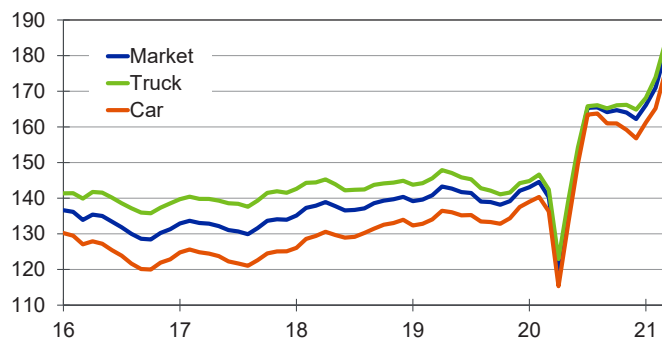
New-vehicle sales rose in tandem with those of used vehicles. In the final quarter of 2020, a seasonally adjusted annualized rate of 16.1 million new light vehicles were sold. In the recent quarter, that number rose to 16.7 million units. Government stimulus

and strong job growth have made new vehicles more affordable. The Cox Automotive/Moody's Analytics Vehicle Affordability Index denotes the number of weeks of the median U.S. household income needed to purchase an average-price new vehicle. The index declined from 35 weeks in the last quarter of 2020 to 32.2 last quarter (see Chart 3), which is the second lowest reading in the eight years of data available. Furthermore, the 2.8-week drop was the largest single-quarter drop. With new vehicles more in reach for U.S. households, many signed on the dotted line and drove a new vehicle off the lot.

Despite the recent upward momentum in used-vehicle prices, the Moody's

Chart 1: Vehicle Prices Surge Again

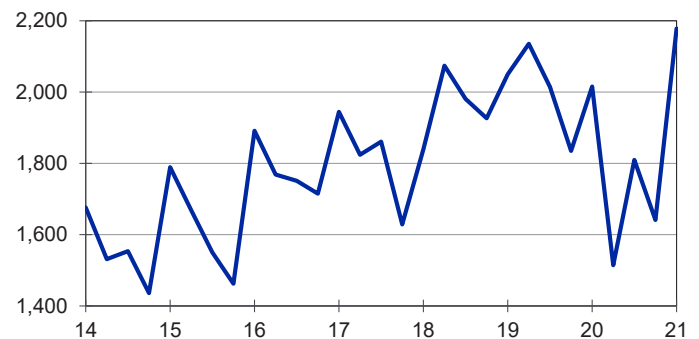
Moody's Analytics sale price indexes, Jan 2010=100, SA



Sources: NADA, Moody's Analytics

Chart 2: Record Used-Vehicle Sales

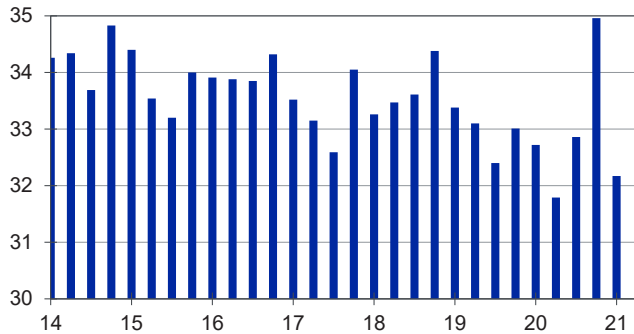
Wholesale used-vehicle sales, ths



Sources: NADA, Moody's Analytics

Chart 3: New-Vehicle Affordability Rises

Auto affordability, wks of household income, NSA



Sources: Cox Automotive Inc., Moody's Analytics

Analytics outlook is for prices to give up a little ground the rest of this year before moving sideways over the next several years (see Chart 4). Used-vehicle prices are up 28.8% on a year-over-year basis in March. A large part of this growth is the result of the billions of dollars of direct government stimulus payments and preference for goods versus services because of the nature of the pandemic. With three stimulus payments already signed into law, direct payments to consumers are unlikely to be in any additional rounds of stimulus. Without additional direct deposits of cash to checking accounts, it would be difficult for the used-vehicle market to maintain the current sky-high valuations. Additionally, as the pandemic winds down thanks to increased vaccination rates, people will switch back to services, sapping demand for vehicles. As a result, vehicle prices will nudge downward over the next nine months. Longer term, a strong jobs rebound will benefit vehicle demand and keep a floor under used-vehicle prices.

Dwindling new-vehicle supply could lead consumers to purchase used vehicles instead of new ones, creating an upside risk. The unexpectedly rapid rebound in vehicle demand has led new-vehicle inventories to dwindle. The auto inventory-to-sales ratio for domestic vehicles is close to a 10-year low (see Chart 5). Compounding the issue, supply chain problems have curbed vehicle production. Semiconductors are a vital component of the

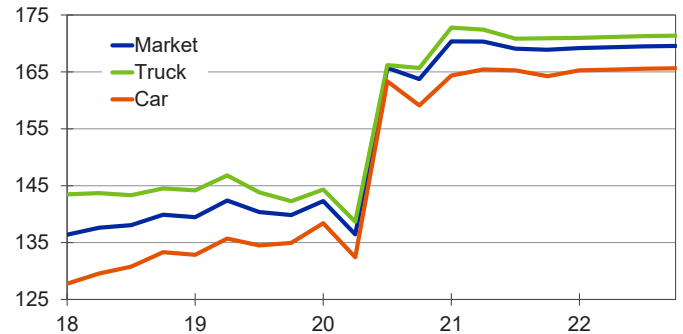
modern vehicle, and a faster than expected rebound in vehicle demand caught semiconductor chip producers by surprise. As a result, they have not been able to meet auto manufacturers' demand. Adding to the shortage, unexpected events have curtailed chip production. A storm in Texas led automotive chip manufacturer NXP

Semiconductors to scale back production and a fire at a Renesas plant damaged equipment and reduced manufacturing capacity. Renesas produces nearly one in three microcontroller chips used in cars. The shortage of chips led GM and Ford to idle their U.S. factories. If auto manufacturers are not able to secure more chips soon, new-vehicle supply could fall sharply. In such a scenario, those who cannot wait for a new vehicle would purchase used vehicles instead, lifting used-vehicle prices.

Though used-vehicle prices have swung upward recently, a possible large increase in taxes could cause valuations to decline. Biden proposes to raise corporate and capital gains taxes to pay for much of the American Jobs Plan. A significant increase in taxes could dent income and wealth and ding used-vehicle demand. Biden propos-

Chart 4: Vehicle Price Forecast

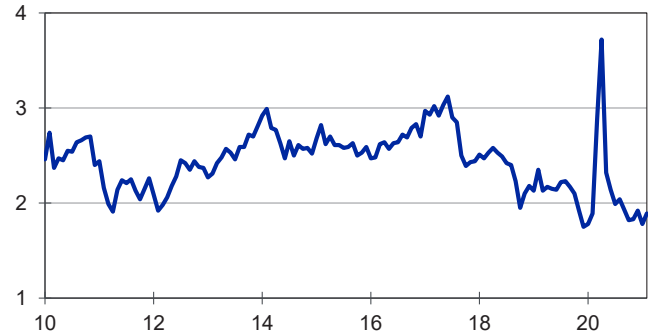
Moody's Analytics sale price indexes, Jan 2010=100, SA



Sources: NADA, Moody's Analytics

Chart 5: New-Vehicle Supply Is Tight

Domestic new-vehicle inventory-to-sales ratio, %, SA



Sources: BEA, Moody's Analytics

es to raise corporate taxes by \$1.8 trillion from 2022 to 2031. Raising corporate taxes might overly increase business costs, make U.S. corporations less competitive globally, and thus hurt investment, productivity and job creation. Such a scenario would lower vehicle demand via the income effect. Additionally, the plan calls for increasing the capital gains tax from 20% to 39.6% for those earning more than \$1 million. Equity prices might decline ahead of the effective date of the tax increase as people realize their capital gains before the higher rate is implemented. This would hurt consumer demand via the wealth effect, where declining wealth reduces demand. If corporate and capital gains taxes increase significantly, used-vehicle prices could drop faster than expected in the forecast.

About the Author

[Loc Quach](#) is an economist with the Research group at Moody's Analytics. Loc forecasts used-vehicle prices and contributes to automotive economics research. Loc previously covered the economies of Sweden, Israel, Hawaii, South Dakota, and more than a dozen U.S. metropolitan economies. He holds an MS in quantitative economics from California Lutheran University and a BA in economics from California State University, Long Beach.

[Michael Brisson](#) is a senior economist and associate director at Moody's Analytics. He is the lead auto economist working as a member of the Economic Research group in West Chester PA. Mike works at developing new, empirically driven auto-related products and services. Prior to leading the Moody's Analytics auto research team, Mike built loan and vintage-level CECL, CCAR, and stress-testing models of consumer loan performance as a member of the Business Analytics group at Moody's Analytics. Additionally, Mike has spent time developing econometric models used by U.S. states and local governments for tax/revenue projections. Mike holds a PhD in applied economics from Northeastern University.

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