# **METHODOLOGY**

June 2020

#### Prepared by

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

# Australian Used-Vehicle Prices Rebound Quickly in June

#### Introduction

The Australian used-vehicle market bounced back strongly in May following the largest twomonth drop in prices on record. The global COVID-19 recession took governments, businesses and families by storm. The auto industry was acutely impacted by the lockdowns imposed through plummeting demand for autos and transportation in general. The May comeback is a welcome sign that the economic reopening is taking hold.





# Australian Used-Vehicle Prices Rebound Quickly in June

BY MICHAEL BRISSON

he Australian used-vehicle market bounced back strongly in May following the largest two-month drop in prices on record. The global COVID-19 recession took governments, businesses and families by storm. The auto industry was acutely impacted by the lockdowns imposed through plummeting demand for autos and transportation in general. The May comeback is a welcome sign that the economic reopening is taking hold.

Used-vehicle prices, as tracked by the Datium Insights-Moody's Analytics Used Vehicle Price Index, increased by 10.6% from April to May (see Chart 1). This follows a price contraction of 14% over March and April. The collapse in prices wiped out the historic gains in used-auto prices that had occurred since 2016. The drop proved to be short-lived, as prices have firmed up rapidly.

Prices rebounded significantly for passenger cars as well as light trucks and utes. After controlling for vehicle kilometers, age, subsegments, etc., the price increase was slightly better for passenger cars than for trucks/ utes. Car prices increased by 11.2% and truck/ute prices increased by 10.6% from April to May. The larger rebound is mainly a function of the deeper fall for passenger car prices. Car prices fell almost 15% compared with a 12.4% decrease for trucks and utes from February through April. Low petrol prices likely kept demand comparatively higher for less fuel-efficient vehicles such as trucks, utes and SUVs. Additionally, trucks and utes are used in construction, which was deemed to be an essential business.

Having used-vehicle prices at the same level they were 12 months ago is a bit out of step with a national unemployment rate already higher than during the global financial crisis. However, a closer analysis shows the used-vehicle market has distinct advantages supporting price stability until economic acceleration can restart. Supply constraints, the substitution effect, low fuel costs, and a decline in public transportation have all helped prices bounce back from April lows.

Due to supply constraints, used-vehicle prices had pushed up almost 10% since 2018. The slowdown in new-vehicle sales that has occurred across Australia over the past 24 months has put considerably fewer vehicles into circulation than 2012 to 2018 (see Chart 2). This drop in supply will be further exacerbated as new-vehicle sales slump from decreased demand due to the CO-VID-19 recession hitting the Aussie economy.

An additional advantage held by the used-car market is the substitution effect. The substitution effect occurs between new and used vehicles during periods of economic

#### Chart 1: Prices Show Historic Bounce



Sources: Datium Insights, Moody's Analytics

#### Chart 2: Vehicle Supply Already Low

New light-vehicle sales, ths, SAAR





#### Chart 3: Transit Slow to Return

Australia routes searched, Jan 13, 2020=100, 7-day MA

### Chart 4: AutoCycle Vehicle-Specific Forecast



Residual value, % of MSRP, Apr adverse economic scenario

uncertainty. Under the assumption that new and used vehicles are perfect substitutes as a form of transportation, consumers will choose the less expensive good, used vehicles. When consumers are nervous about their livelihood, vehicles become a way to get around more than a symbol of social class.

Low fuel prices will also support usedvehicle prices. Fuel costs are expected to remain low as global energy demand remains depressed. Used vehicles are on average less fuel efficient than their newer cousins. Lower fuel costs push consumers towards less fuel-efficient vehicles because during these periods they are marginally less expensive to operate. All else being equal, demand for used vehicles will rise more in periods of low fuel prices than those with higher fuel prices.

One final advantage is demand for public transportation has plummeted and will take longer to rebound than driving. The trend shown in Chart 3 is caused by the fear of contracting the novel coronavirus, and social distancing guidelines. Some degree of social distancing either mandated or nonmandated will likely stay in place until successful therapies or a vaccine is developed. The world is racing towards these solutions, but any successful treatment is likely an event for 2021 rather than 2020. In the meantime, people who own or can afford to purchase a vehicle are likely to prefer to drive on their own rather than depend on public transportation. In Australia, public transportation usage had grown six times faster than private vehicle usage over recent years. This trend will stop.

The hedonically derived Datium Insights-Moody's Analytics Used Vehicle Price Index gives an excellent sense of the general direction of the market. However, valuing your own vehicle portfolio rather than the market requires knowing the forecast of a particular vehicle under multiple economic scenarios. Utilizing the make, model, model year, location of sale, kilometers, and numerous other available options, the Australian AutoCycle pricing solution projects price impacts on individual vehicle values under multiple economic paths. An example in Chart 4 shows that the popular 2018 Mazda CX-5 compares poorly with a 2018 Toyota Camry, with the same kilometer assumptions, sold in Victoria, and at a fixed price. The Moody's Analytics April baseline scenario forecasts the price drop for the medium SUV from the current economic turmoil will be more than 20% larger than the relatively stable prices of the classic passenger vehicle.

Despite the underlying drivers stabilizing the market, significant used-vehicle price growth beyond the initial rebound will be difficult. The global economy will continue to tread water until a vaccine or proven treatments for COVID-19 are developed. More locally, the Australian economy will be hurt by travel restrictions and lost consumer demand. The strengths of the used-vehicle market will allow prices to avoid significant setbacks. However, the continued economic stress will restrict price growth over the near to medium term despite the strong start to reopening.

#### About the Author

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 Specialized Modeling group in West Chester PA. Mike works developing new empirically driven auto-related products and services. Prior to joining the Specialized Modeling group, Mike built CECL, CCAR, and stress-testing models of consumer loan performance as a member of the Business Analytics team. Additionally, Mike has worked in the Moody's Analytics Research group, where he developed models for state and local government revenue forecasts. Mike holds a PhD in applied economics from Northeastern University.

# About Moody's Analytics

Moody's Analytics provides financial intelligence and analytical tools supporting our clients' growth, efficiency and risk management objectives. The combination of our unparalleled expertise in risk, expansive information resources, and innovative application of technology helps today's business leaders confidently navigate an evolving marketplace. We are recognized for our industry-leading solutions, comprising research, data, software and professional services, assembled to deliver a seamless customer experience. Thousands of organizations worldwide have made us their trusted partner because of our uncompromising commitment to quality, client service, and integrity.

Concise and timely economic research by Moody's Analytics supports firms and policymakers in strategic planning, product and sales forecasting, credit risk and sensitivity management, and investment research. Our economic research publications provide in-depth analysis of the global economy, including the U.S. and all of its state and metropolitan areas, all European countries and their subnational areas, Asia, and the Americas. We track and forecast economic growth and cover specialized topics such as labor markets, housing, consumer spending and credit, output and income, mortgage activity, demographics, central bank behavior, and prices. We also provide real-time monitoring of macroeconomic indicators and analysis on timely topics such as monetary policy and sovereign risk. Our clients include multinational corporations, governments at all levels, central banks, financial regulators, retailers, mutual funds, financial institutions, utilities, residential and commercial real estate firms, insurance companies, and professional investors.

Moody's Analytics added the economic forecasting firm Economy.com to its portfolio in 2005. This unit is based in West Chester PA, a suburb of Philadelphia, with offices in London, Prague and Sydney. More information is available at <u>www.economy.com</u>.

Moody's Analytics is a subsidiary of Moody's Corporation (NYSE: MCO). Further information is available at www.moodysanalytics.com.

DISCLAIMER: Moody's Analytics, a unit of Moody's Corporation, provides economic analysis, credit risk data and insight, as well as risk management solutions. Research authored by Moody's Analytics does not reflect the opinions of Moody's investors Service, the credit rating agency. To avoid confusion, please use the full company name "Moody's Analytics", when citing views from Moody's Analytics.

## About Moody's Corporation

Moody's Analytics is a subsidiary of Moody's Corporation (NYSE: MCO). MCO reported revenue of \$4.4 billion in 2018, employs approximately 13,100 people worldwide and maintains a presence in 42 countries. Further information about Moody's Analytics is available at www.moodysanalytics.com. © 2020 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPIN-IONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMIT-MENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRAC-TUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT SO NOT AND DO NOT PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUB-LISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH IN-FORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIB-UTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR. PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys. com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the Issuer, not on the equity securities of the Issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. Jaws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.