BLACK BOOK AND
FITCH RATINGS

# VEHICLE DEPRECIATION REPORT 2021

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***2020 WAS A ROLLERCOASTER RIDE FOR BOTH PRICES AND INVENTORY LEVELS THAT ENDED WITH STRONG RETAIL DEMAND. WHOLESALE PRICES DEPRECIATED ONLY 2% IN 2020, THE LOWEST ANNUAL DEPRECIATION RATE IN RECENT HISTORY. US AUTO ABS PERFORMANCE DEFIED CHALLENGING ECONOMY, RATINGS STABLE***

"Rollercoaster" was commonly used throughout 2020 to describe the automotive industry. The year started out strong; for example, the Compact Car segment showed early year gains with week-over-week price increases beginning in the third week of January, when seasonal increases do not typically occur until March. Strength in this segment is usually driven by preparation for the spring/tax season market, and elevated values continued throughout Q1 in what was shaping up to be a strong year for sales. However, this all changed when COVID-19 related restrictions and mandates forced everyone to limit their contact with others and, in some cases, even shelter-in-place. During this time, auctions were forced to close their doors or drastically alter their operations to comply with their respective state-level rules and regulations. Dealers also faced the same challenges. For many dealers and auctions, this meant going digital.

As states began to relax restrictions and the federal government released direct stimulus payments into the pockets of consumers, the demand increased in the market for both new and used units. Manufacturers put enticing incentives on their vehicles, such as 0% financing for 84-month loans and first payment deferrals to help spur new sales. This approach worked and sold much of dealers' inventory. Unfortunately, due to the manufacturing shutdowns at the onset of the pandemic, there was no inventory available to quickly replenish their lots after these successful sales. The stimulus money and added benefits, such as deferred payments on mortgages, student loans, etc., and the moratoriums on repossessions, sent buyers to their local used dealership to use the one-time stimulus payment as a down payment on a vehicle. This sudden uptick in demand also depleted used inventory levels, and dealers returned to auctions as a means of sourcing inventory. Additionally, dealers were looking at the wholesale channels for low mileage, clean condition units that could be offered as substitutes for the lack of new inventory, as well as replenishing their traditional used inventory stock. This period of low market supply and high demand led to soaring used pricing that lasted into the early fall before the demand and pricing began to stabilize and then began to decline to close out the year.

Looking ahead, many of the lingering effects of 2020 will carry over into the start of 2021 as the industry continues to face an inventory shortage in both new and used vehicles. New manufacturing made gains in production levels in Q3 and Q4, but not enough to stabilize before a microchip shortage began to cause another round of production disruptions that are expected to last into Q2, and possibly into Q3, of this year. Used inventory levels remain low due to reduced rental returns for the year as a result of the decreased rental and fleet purchasing in 2020 as well as continued delays in repossessions.

## *AUTO ASSET BACKED SECURITIES (ABS) WEATHERS ECONOMIC STORM AMID PANDEMIC*

**Strong Wholesale Values, Low Severity to Support Auto ABS in 2021**

Fitch expects the global economic recovery to strengthen and become more sure-footed in 2021 as the effect of vaccinations take hold and social distancing starts to unwind. However, Fitch expects labor market conditions, while improving, to remain challenging in 2021. Regardless of this risk, Fitch believes auto loan and lease ABS (auto ABS) asset performance will be supported by strong used vehicle values containing loss severity and resulting in positive asset recovery and residual value (RV) performance.

Our auto ABS Rating Outlooks are Stable for 2021, consistent with 2020 and reflecting expected stable asset performance, transaction structural protections, and Fitch's conservative establishment of transaction base case loss proxies. Deleveraging transactions and building credit enhancement (CE) will support rating upgrades in 2021. Loss frequency may pick up this year, but severity should be supportive on the back of strong wholesale vehicle prices, as indicated by Black Book.

After the severe economic contraction observed last year that began in March 2020 as the result of the pandemic, Fitch projects US GDP to expand by 6.2% in 2021. Fitch's forecast for new auto sales of 15.6 million units in 2021 is up 8% from the 14.5 million units sold in 2020 which was down 15% from 2019.

There have been no downgrades or Negative Rating Outlook revisions across Auto ABS since the onset of the pandemic, reflecting better than expected overall asset performance as a result of extensive fiscal stimulus, moratoriums and payment relief programs, coupled with a notable rebound in vehicle values that kept loan recoveries and RV realizations high. However, low GDP growth, elevated unemployment, and potentially higher repossessions could combine to temper asset performance in 2021.

The unemployment rate remains a driving factor for future auto loan ABS performance trends as it could strongly affect both consumer confidence and income levels, impacting borrowers' ability to service their debt. Further, stimulus phase-out does bring in some uncertainty.

Subprime auto ABS pool performance will be more susceptible to economic performance volatility. In summary, we believe that loss frequency may pick up across auto ABS this year and moderately move defaults higher but not near to a level where it impacts ratings and given the favorable dynamics around demand for and supply of used vehicles, which will temper any incremental increases in defaults.

### *AUTO DEPRECIATION SLOWS IN 2020*

According to Black Book, the annual depreciation rate on two-to-six-year-old vehicles fell by only -2% in 2020. This is in sharp contrast to the -16.8% annual depreciation in 2019. Most of the depreciation, 9.9% of the 16.8% in 2019, occurred in Q4 with the Luxury segments seeing some of the largest drops due to increased levels of new car incentives putting downward pressure on used values. The average depreciation the two years prior to 2019 was only -12.8%, but in those years, Q4 also experienced the largest level of depreciation for the year. Not much about 2020 was normal, but the depreciation trend did follow a similar trend in that most of the year's declines occurred in Q4, but not by a large enough amount to significantly offset the strength of Q3. In Q3, the used market boomed due to the federal stimulus benefits that put cash in the pockets of many consumers and due to constrained new inventory levels. Moratoriums on repossessions and delayed lease returns kept the available used supply low and further fueled the appreciation of used values.

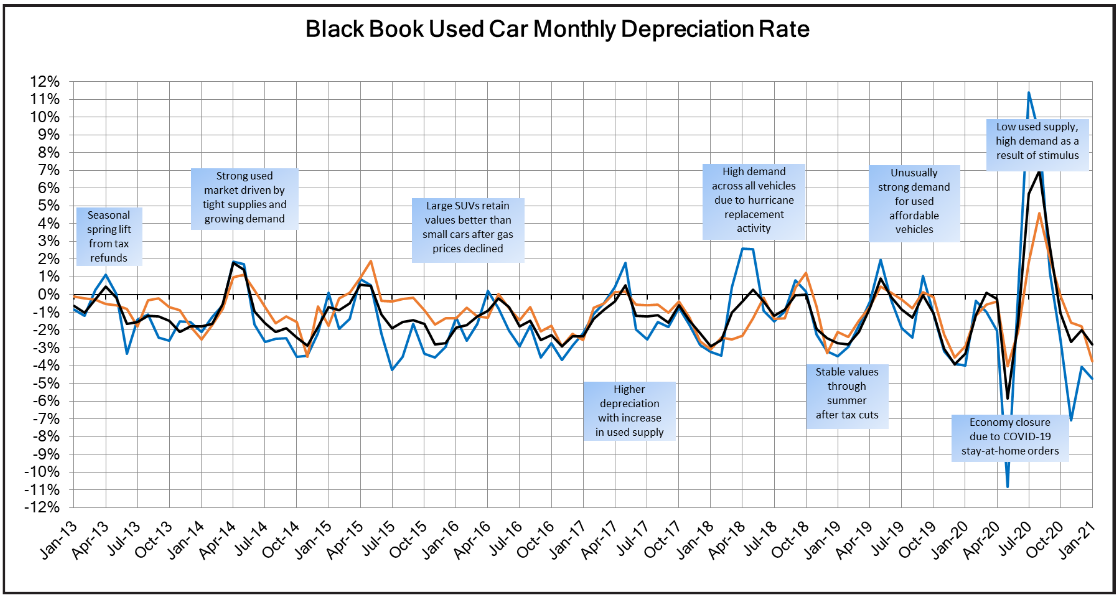
**Black Book Vehicle Depreciation**

| | Annual Depreciation** |
|---|---|
| 2011 | -8.30% |
| 2012 | -10.40% |
| 2013 | -13.30% |
| 2014 | -11.80% |
| 2015 | -13.20% |
| 2016 | -17.30% |
| 2017 | -13.20% |
| 2018 | -12.40% |
| 2019 | -16.80% |
| 2020 | -2.00% |
| 2021* | -5.00% |

* Forecast
** Depreciation of 2-6 year old vehicles

Black Book's annual vehicle depreciation projection for 2021 is a modest -5.0%. Reduced fleet purchases in 2020, continued delays in repossessions, additional rounds of direct federal stimulus payments, and low new inventory levels due to supply chain disruptions are expected to continue to increase the demand for used vehicles.

Fuel prices in 2020 started the year low, but due to many factors, including decreased demand




resulting from stay-at-home mandates that forced consumers to drastically reduce time on the road as they sheltered in place to reduce the spread of the virus, geopolitical squabbling between OPEC, Russia, and other oil producing states, and failure to adequately manage supply and refining capacity, gasoline prices tumbled to lows that have not been seen in nearly 20 years. Fuel prices did begin to increase toward the end of the year but remained at relatively low levels. The expectation is that fuel prices will return to pre-COVID levels in 2021.

The Black Book Used Car Monthly Depreciation Rate tracks the monthly change in Black Book's published Wholesale Average value on volume-weighted two-to-six-year-old vehicles, based on normal usage of a vehicle. Even with low fuel prices, the affordability and decreased supply of the Compact Car segment led to a rise in demand to start 2020. However, after a strong rebound over the summer months, the values of the Compact Car segment fell sharply in the fall amid low fuel prices and increased new inventory levels. Full-Size Trucks and SUVs remained strong as continuing inventory shortages put a premium on used units.

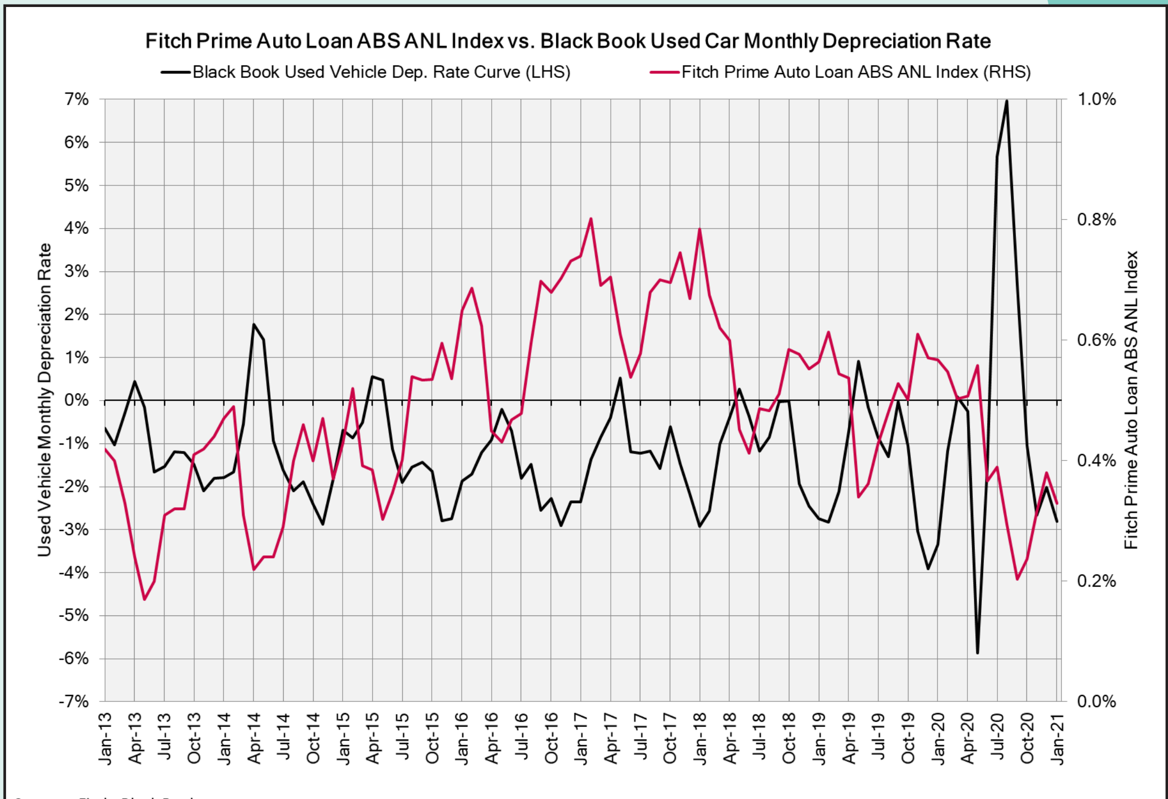
## *PRIME AUTO ABS ASSET PERFORMANCE OUTLOOK: STABLE | RATING OUTLOOK: STABLE*

Prime auto loan ABS demonstrated considerable resiliency in 2020, and both frequency and severity continue to contain loss levels. As of February 2021, Fitch's Prime Annualized Net Loss (ANL) index stood at 0.36%, down from 0.55% a year prior representing a 35% improvement year-over-year (yoy). From February 2020-February 2021, the ANL index averaged just 0.38% over the 12 months, down from 0.51% during the same period in 2019-early 2020. The historical index average was 0.82% going back to the spring of 2001, so 2020-February 2021 performance has been strong and well below the historical average despite the dislocation seen across the US economy and auto sector in 2020 into 2021.

Vehicle utility, including a reduction in the use of public transportation and priority of debt, along with support via payment relief programs and other government assistance is expected to continue to lead to stable-to-strong performance in 2021. Further, the continued importance as a safe, healthy mode of transportation will support demand for vehicles across the new and used market in 2021.

Across all outstanding auto loan ABS, payment extensions peaked in the late spring and early summer. Since then, active extensions decreased back to at or near pre-pandemic levels. Though Fitch has yet to see a meaningful increase in delinquencies as extensions expire, early stage delinquencies are expected to increase, which may then roll into late stage delinquencies if obligors continue to experience financial stress.

After the initial state moratorium on repossessions and temporary shutdown of used vehicle auctions which drove rapid declines in RVs, the re-opening of the economy and pent-up demand in conjunction with limited supply led to a rapid rebound since mid-summer 2020 and peaked in the late summer



Sources: Fitch, Black Book

> **"For 2021, Fitch's index expects to see scheduled returns of roughly $9.1 billion."**

and early fall. Fitch's prime recovery index remains elevated at 59.8.0% as of February 2021 compared to 54.9% a year earlier. Wholesale vehicle values have been buoyed by strong vehicle demand despite constrained consumer spending, along with low vehicle inventory across new and used models and muted supply given production and parts availability challenges, including the ongoing semiconductor microchip shortage plaguing auto manufacturers and expected to continue into Q3. Growth in repossessions may exert some downward pressure on used vehicle values in the near term off these very strong levels, but not enough to move the needle on ABS performance overall.

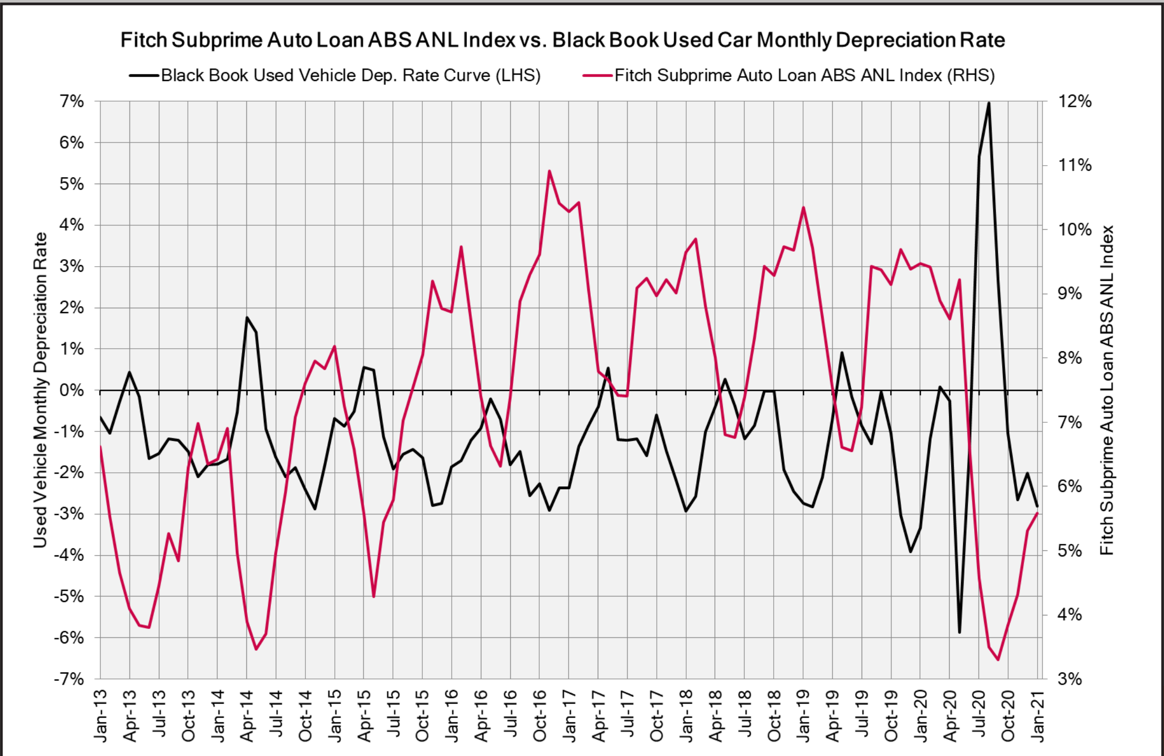
### *SUBPRIME AUTO LOAN ABS*

**Asset Performance Outlook: Weakening | Rating Outlook: Stable**

Fitch's outlook for subprime auto loan ABS is weakening driven by elevated unemployment and reduced borrower ability to service debt. Government assistance and temporary payment relief programs have served to support performance, but uncertainty on future support poses risks to performance going forward.

Subprime auto loan ABS is more vulnerable to performance volatility given weaker borrower profiles and acute competition.

The smaller, deeper subprime lenders' ABS transactions, which are all not rated by Fitch, could be impacted more significantly. Consolidation of these lenders could pick up in 2021, particularly if sales remain low and there is limited opportunity for growth combined with intense competition. The pandemic has yet again raised the importance of subprime auto lenders' operational abilities, including corporate credit profiles, access to funding and servicing abilities. As losses move higher in



Sources: Fitch, Black Book

2021, servicing capacity and effectiveness will be a key focus and will test systems and practices at these institutions.

Subprime delinquency rates were elevated amid the pandemic fallout but then trended downward due in part to extension plans offered by issuers along with government stimulus. Fitch has yet to observe a meaningful increase in delinquencies but expects moderate increases as contract extensions continue to expire. Fitch's Subprime 61+ day delinquency index was at 3.74% as of February 2021, down 33% from 5.62% a year earlier just prior to the pandemic. However, vulnerability to elevated unemployment resulting in increased delinquencies and defaults is expected to have a greater impact on subprime ABS transactions. Though specifically for the two subprime platforms rated by Fitch (General Motors Financial's AMCAR and Santander Consumer USA, Inc.'s SDART platforms), our Asset Performance Outlook is Weakening as losses revert higher but stay within our initial forecasts. Fitch's subprime recovery index also remains strong compared to a year prior at 46.5% as of February 2021 compared to 41.1% in February 2020.

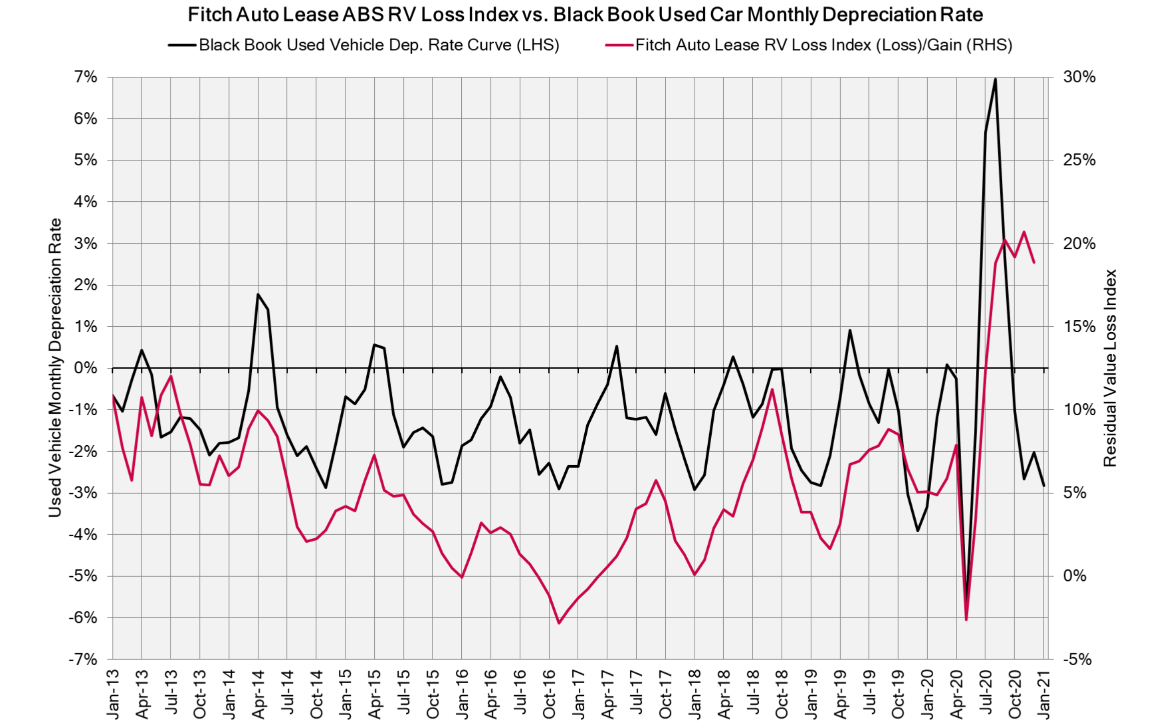
## *AUTO LEASE ABS*

**Asset Performance Outlook: Stable | Rating Outlook: Stable**

Auto Lease ABS has enjoyed the same favorable wholesale market conditions as the loan sector, resulting in strong RV performance in 2020 that is expected to continue through 2021. Fitch's RV ABS index reported a gain of 18.9% as of January 2021, up notably from 4.9% a year earlier. The index dipped to a loss of 2.61% in April 2020, but quickly rebound supported by reduced new vehicle supply. In August 2020, Fitch's RV ABS index reported a gain of 20.2%, its highest since mid-2011. Asset and ratings performance was strong through 2020, and the outlook for both remains stable for 2021.

Fitch's index saw $7.7 billion in returned residuals in 2020, down from $8.8 billion in 2019. For 2021, Fitch's index expects to see scheduled returns of roughly $9.1 billion. However, lease returns that were delayed at the onset of the pandemic appear to be largely worked through, and rental companies have significantly slowed defleeting and are unlikely to meaningfully contribute further to used supply. Further, strong consumer appetite has snapped up anything offered through the secondary market channels. Although repossessions may pick up slightly and lead to additional supply, Fitch expects this trend to be minimal and values to remain strong throughout the year.

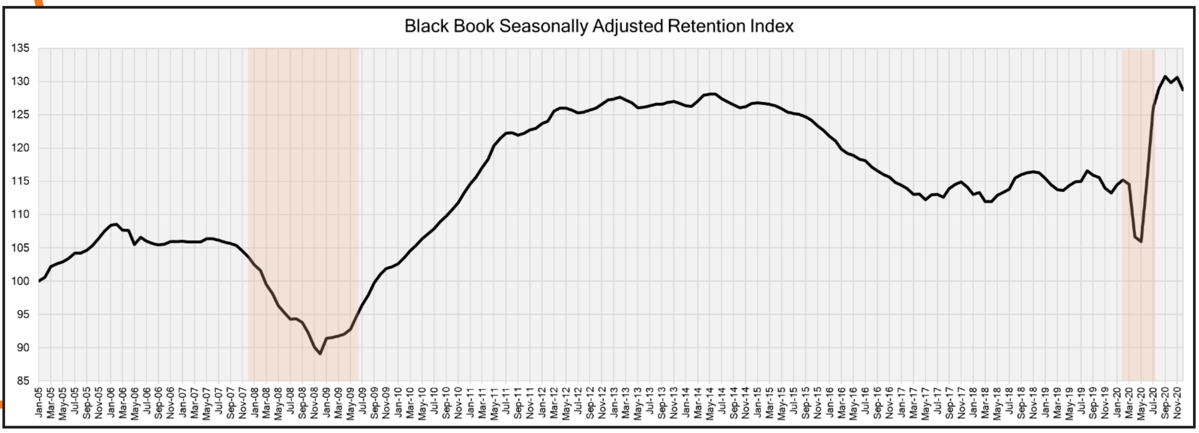
Fitch's expected stable rating outlook for Auto Lease ABS in 2021 is further supported by de-levering structures and ample CE levels, along with the conservative establishment of securitized residuals.



Sources: Fitch, Black Book

## *BLACK BOOK USED VEHICLE RETENTION INDEX*

The Black Book Used Vehicle Retention Index is designed to provide a consistent, representative, and unbiased view of the pricing strength of the used vehicle market. The Index is calculated using Black Book's published Wholesale Average value on two-to-six-year-old vehicles, expressed as a percent of typically-equipped MSRP. It is weighted based on registration volume and adjusted for seasonality, vehicle age, mileage and condition. Black Book's Wholesale Average is a considered a benchmark value for used vehicles selling in wholesale auctions with vehicle quality in Average condition.

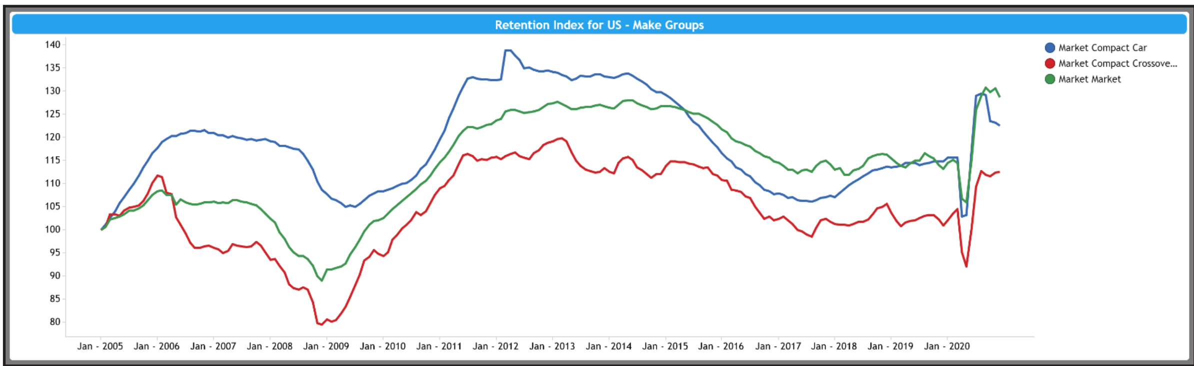



| Market | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2005 | 100.0 | 100.6 | 102.2 | 102.6 | 102.9 | 103.4 | 104.2 | 104.2 | 104.7 | 105.4 | 106.5 | 107.6 |
| 2006 | 108.4 | 108.6 | 107.7 | 107.6 | 105.6 | 106.6 | 106.0 | 105.7 | 105.5 | 105.6 | 106.0 | 106.0 |
| 2007 | 106.1 | 105.9 | 105.9 | 105.9 | 106.4 | 106.4 | 106.1 | 105.9 | 105.7 | 105.4 | 104.6 | 103.6 |
| 2008 | 102.5 | 101.6 | 99.5 | 98.1 | 96.3 | 95.2 | 94.3 | 94.4 | 93.8 | 92.3 | 90.1 | 89.1 |
| 2009 | 91.4 | 91.5 | 91.8 | 92.1 | 92.8 | 94.7 | 96.4 | 97.9 | 99.7 | 101.1 | 101.9 | 102.2 |
| 2010 | 102.7 | 103.6 | 104.6 | 105.3 | 106.4 | 107.1 | 107.9 | 108.9 | 109.8 | 110.7 | 111.8 | 113.3 |
| 2011 | 114.6 | 115.6 | 117.0 | 118.3 | 120.3 | 121.5 | 122.3 | 122.3 | 122.0 | 122.3 | 122.8 | 123.0 |
| 2012 | 123.7 | 124.1 | 125.6 | 126.0 | 126.0 | 125.7 | 125.3 | 125.4 | 125.7 | 126.0 | 126.6 | 127.3 |
| 2013 | 127.4 | 127.7 | 127.2 | 126.8 | 126.1 | 126.2 | 126.4 | 126.6 | 126.6 | 126.9 | 127.1 | 126.8 |
| 2014 | 126.4 | 126.3 | 127.1 | 128.0 | 128.1 | 128.1 | 127.5 | 127.0 | 126.5 | 126.1 | 126.2 | 126.7 |
| 2015 | 126.8 | 126.8 | 126.6 | 126.4 | 125.9 | 125.5 | 125.2 | 125.1 | 124.7 | 124.2 | 123.3 | 122.7 |
| 2016 | 121.8 | 121.1 | 119.9 | 119.2 | 118.9 | 118.3 | 118.1 | 117.2 | 116.6 | 116.0 | 115.7 | 114.8 |
| 2017 | 114.5 | 113.9 | 113.0 | 113.1 | 112.3 | 113.0 | 113.0 | 112.6 | 113.9 | 114.6 | 115.0 | 114.1 |
| 2018 | 113.1 | 113.3 | 112.0 | 112.0 | 112.9 | 113.3 | 113.9 | 115.5 | 116.0 | 116.3 | 116.5 | 116.3 |
| 2019 | 115.4 | 114.5 | 113.8 | 113.6 | 114.4 | 115.0 | 115.0 | 116.6 | 115.9 | 115.6 | 114.0 | 113.3 |
| 2020 | 114.5 | 115.2 | 114.6 | 106.7 | 106.0 | 115.1 | 126.0 | 129.0 | 130.8 | 129.9 | 130.6 | 128.8 |

The volume of used late model off-lease vehicles for sale has risen in auctions in recent years, which increases the average sale price of vehicles sold at auctions, as late model vehicles are more expensive than older ones. To adjust for this trend, the Black Book Retention Index adjusts for vehicle age and measures used value as a percentage of the original MSRP of the vehicle, thus providing consistency in measuring retention strength across time. In addition, the mix of vehicle segments in the Index is weighted based on registration volume at the time, reflecting a representative and unbiased view of the overall auto market.

The Index originated in January 2005, when Black Book first published a benchmark Index value of 100.0 for the market. During 2008, the Index dropped by 14%, while in 2016 it fell by just 6.4%. During 2011, the Index rose strongly from 113.3 to 123.0 by the end of the year as the economy picked up steam and used vehicle values rose higher. It remained relatively stable after 2011, rising slightly until May of 2014 when it hit a peak of 128.1.

The Index decreased -0.8% from 115.4 in January 2019 to 114.5 in January 2020. The large depreciations experienced at the end of Q4 2019 carried over into the start of 2020, but early spring buying led to an increase in February 2020 to almost the same level as January 2019. However, by the end of March 2020, impacts of COVID-19 on the market caused the Index to reverse direction as auction sales volume drastically declined along with corresponding wholesale values. The impact of the pandemic in the spring pushed the Index to a low of 106 in May before beginning a rebound with an increase of 8.6% between May and June to 115.1. As the economy re-opened and demand for used vehicles grew, the Index climbed throughout the summer months to the record of 130.8 points before stabilizing and finishing the year at 128.8 in December, up 13.7% compared to December 2019.



When broken down by vehicle segment, the Index reflects different patterns. The chart above shows the trends of two contrasting vehicle segments, Compact Cars and Compact Crossovers. Compact Cars have historically had better retention, especially during the 2008/2009 recession, due to their affordability. Alternatively, Compact Crossover/SUVs were more adversely impacted, but did quickly rebound. Starting in 2016, the spread between the car and crossovers was narrowing as consumer preferences were shifting toward the Crossover and SUV segments. However, OEMs have adjusted in recent years by pulling back on sedan production and increasing their crossover product offerings and production levels. This reduction in the supply of compact sedans led to a stabilization in retention and the Index began to rise compared the Compact Crossovers.

As for the impact of the pandemic, both segments fell at the onset, but rebounded rapidly and quickly exceeded pre-COVID levels. As values stabilized in Q4, the reactions began to diverge, with Compact Cars experiencing larger declines than the traditional seasonal expectation as compared to the Compact Crossover segment that had lower depreciation than is typically seen during Q4.

## *DEPRECIATION TRENDS IN 2020: FULL-SIZE TRUCKS AND LUXURY SEGMENTS OUTPERFORMED EXPECTATIONS*

After strong overall retention in 2017 and 2018, 2019 was estimated to have an overall depreciation rate of 15%, but actual depreciation came in marginally higher at -16.8%, with most of the yearly depreciation occurring in the fourth quarter. The original expectation for 2020 was to be very similar to 2019's performance, but the forecast was quickly revised as the pandemic initially sent values plummeting and then rapidly rebounding. Overall, 2020 finished down only -2% with Q4 being the only quarter of substantial depreciation at -7.2%, which was still less than 2019's Q4 depreciation of -9.9%.

As for individual segment performance, there were some outperformers in 2020. The Full-Size Truck segment had minimal depreciation in the first half of the year and the fourth quarter, but its performance during the third quarter was the standout at 14.4% appreciation. New inventory levels in this segment suffered greatly during the manufacturing shutdowns at the onset of the pandemic and were never able to achieve a supply level to match demand. This led to soaring used prices as buyers went in search of a quality used substitute. Available used inventory was also low as the market lacked repossessions due to moratoriums in 2020 and delayed lease returns. The overall result was a segment that finished the year up 8.7%.

Last year was full of surprises and another of those was the performance of the Luxury segments that typically see large levels of yearly depreciation. For example, the Prestige Luxury Car segment in 2019 ended the year with values down -25.9%, but in 2020 the result was only -8.1%. Premium Sporty Cars finished the year up 4.7%, compared to -16.1% in 2019. Luxury Car was down a minimal -3.2%, compared to -27.1% in the prior year.

| | | 2020 Depreciation Rates by Segment | | | | |
|---|---|---|---|---|---|---|
| | | 2020Q1 3M Chg | 2020Q2 3M Chg | 2020Q3 3M Chg | 2020Q4 3M Chg | 2020 Full Year 12M Chg |
| | **All Vehicles** | **-1.3%** | **-1.8%** | **8.6%** | **-7.2%** | **-2.0%** |
| CARS | Compact Car | -3.3% | 0.4% | 7.5% | -15.1% | -10.6% |
| | Full-Size Car | 0.2% | -0.9% | 8.5% | -9.5% | -1.9% |
| | Luxury Car | -2.3% | -0.4% | 6.8% | -6.1% | -3.2% |
| | Mid-Size Car | 0.2% | -2.3% | 6.0% | -11.7% | -7.4% |
| | Near Luxury Car | -1.9% | -0.9% | 12.9% | -8.7% | 0.5% |
| | Premium Sporty Car | -2.5% | -0.7% | 10.4% | -1.3% | 4.7% |
| | Prestige Luxury Car | -3.7% | -4.1% | 3.7% | -5.1% | -8.1% |
| | Sporty Car | -1.1% | 6.6% | 9.0% | -9.2% | 4.3% |
| | Sub-Compact Car | -1.9% | -2.4% | 3.5% | -10.7% | -11.6% |
| TRUCKS | Compact Crossover/SUV | 0.4% | -3.8% | 7.7% | -7.4% | -2.6% |
| | Compact Luxury CUV/SUV | -2.1% | -5.5% | 9.3% | -3.9% | -2.2% |
| | Compact Van | -4.4% | -3.7% | 10.5% | -6.0% | -3.1% |
| | Full-Size Crossover/SUV | -2.1% | -4.7% | 6.5% | -7.0% | -7.0% |
| | Full-Size Luxury CUV/SUV | -4.7% | -3.4% | 8.4% | -3.7% | -3.9% |
| | Full-Size Pickup | -1.2% | -0.2% | 14.4% | -3.7% | 8.7% |
| | Full-Size Van | -1.5% | -3.9% | 1.7% | 0.0% | -2.1% |
| | Mid-Size Crossover/SUV | -0.9% | -2.5% | 7.7% | -7.0% | -3.0% |
| | Mid-Size Luxury CUV/SUV | -3.3% | -4.3% | 6.4% | -3.1% | -4.3% |
| | Minivan | -1.1% | -4.9% | 2.8% | -10.2% | -11.7% |
| | Small Pickup | -1.0% | 3.6% | 11.3% | -7.0% | 7.0% |
| | Sub-Compact Crossover | 0.5% | -1.4% | 7.8% | -10.5% | -3.6% |
| | Sub-Compact Luxury CUV | -3.9% | 0.3% | 12.2% | -6.2% | 0.6% |

SOURCE: BLACK BOOK ANALYTICS

Note: Depreciation is measured using Black Book Wholesale Average value of used vehicle at the beginning of the year and tracking that value throughout the year for a vehicle with normal usage, it is volume weighted on 2-to-6-year-old vehicles.

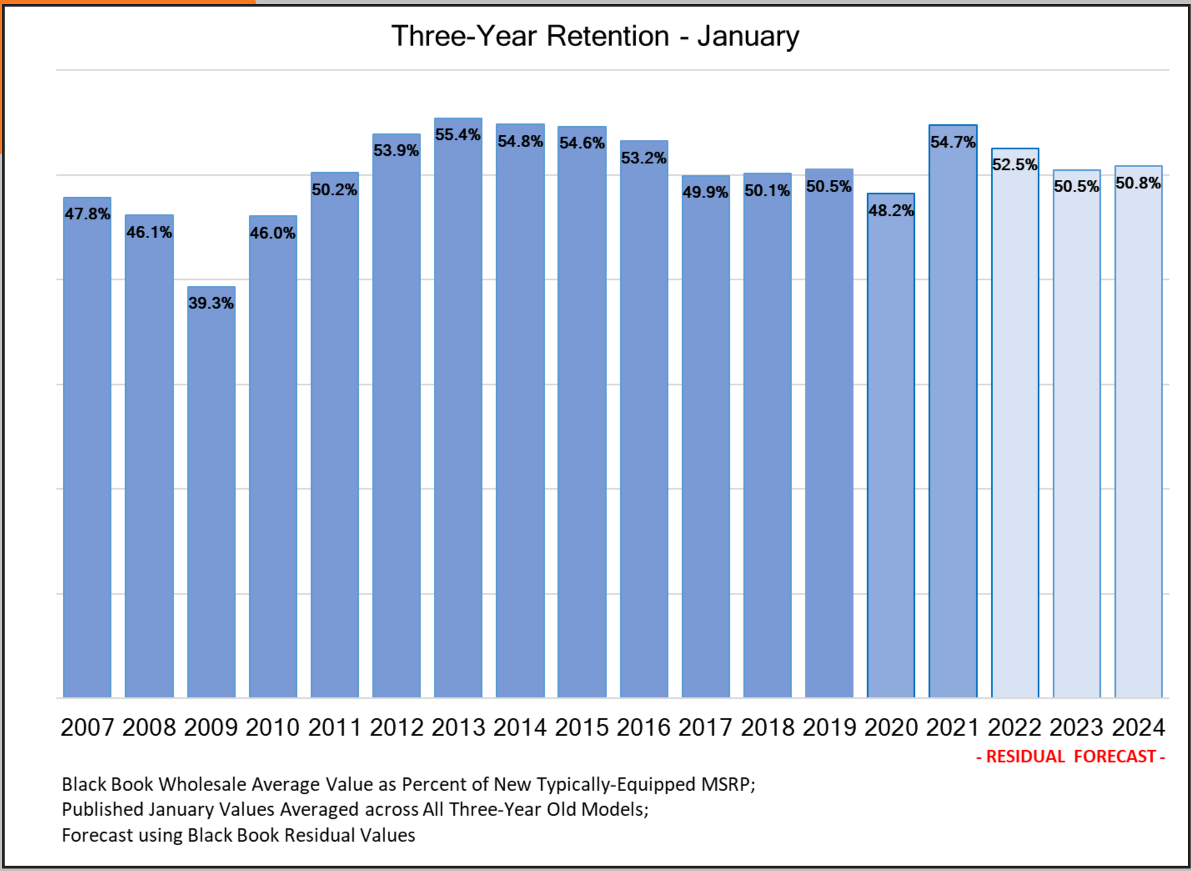
# Black Book projects residual forecasts to return to pre-COVID-19 levels in 3 years

Most segments saw smaller than normal annual valuation adjustments, but the magnitude of difference from the prior year was most apparent in higher-end segments. This speaks to the type of recessionary period that was experienced in 2020. Higher income earners rebounded much more quickly. Therefore, the limited new and used inventory fueled the pricing strength. However, lower income earners, those buying in the cheaper segments such as Compact and Sub-Compact Cars, continued to feel the effects of the pandemic and had reduced purchasing power. For example, the Compact Car and Sub-Compact Car segments were the only Car segments to experience double digit depreciations in 2020.

At the onset of the pandemic, manufacturers looked to incentives to stimulate new car sales and one of the popular ones was 0% interest for 84 months. Given the potential variance and volatility across segments, it has become more important for lenders to have a widely diversified portfolio. Portfolios concentrated in particular vehicle segments could experience higher volatility, with the potential for increased losses. With longer terms and higher transaction prices, measuring portfolio equity on a regular basis has become increasingly important.

### *RESIDUAL FORECASTS PROJECTED TO RETURN TO PRE-COVID-19 LEVELS IN 3 YEARS*

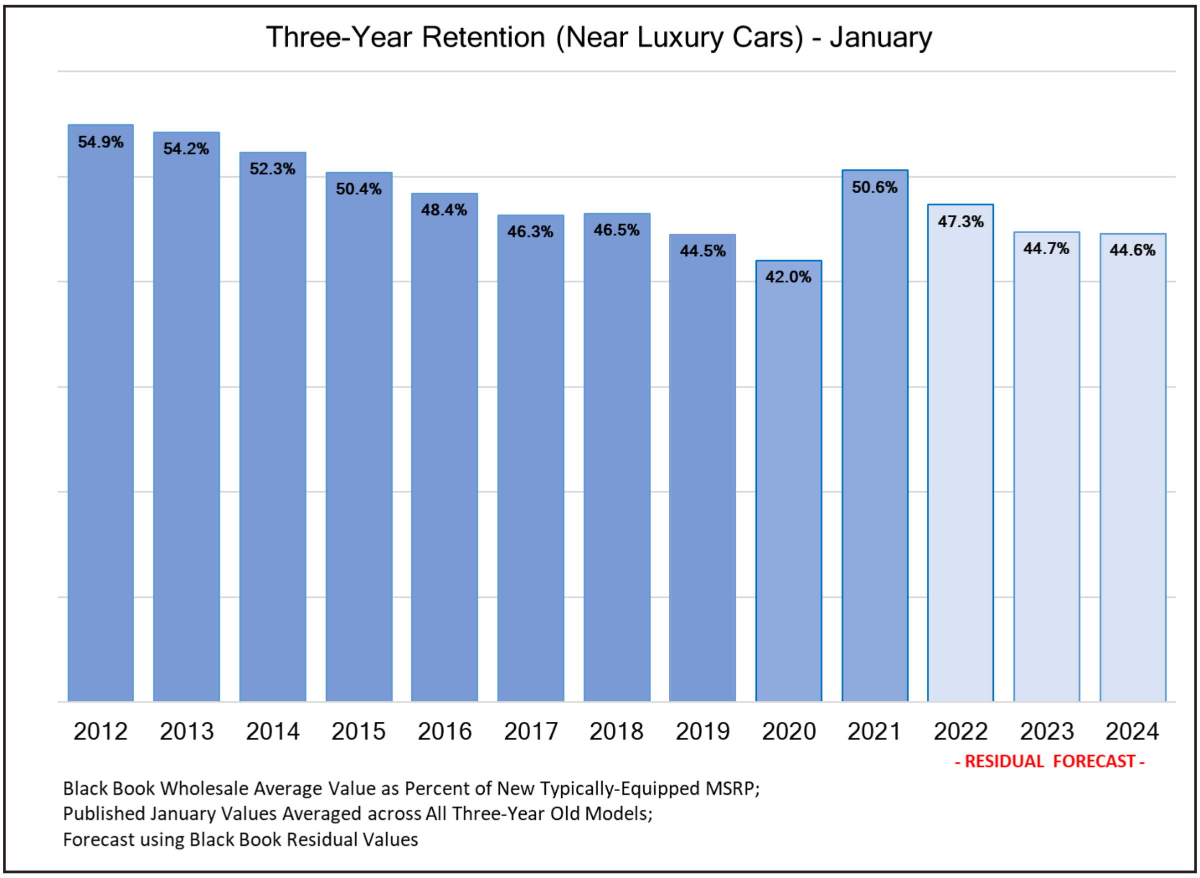
Black Book residual value forecasts show that the future values of 2021 model year vehicles in January 2024 are expected to be 3.9 percentage points lower on average than current retention trends reflect. However, this is compared to today's elevated market that is seeing unusual strength as a result of the pandemic-induced used vehicle supply shortage resulting from delays in repossessions, reduced rental volume purchasing in 2020, and delayed lease returns. When compared to a "normal" year (2019), the three-year projection is expected to




be up roughly 2.6 points. This increase is attributed to the lower levels of used vehicles that will be coming back into the market due to the decrease in new vehicle sales in 2020.

Luxury segments traditionally experience large yearly depreciations as a result of their high typically-equipped MSRPs and see lower forecasted percentages compared to the overall market. For example, the highly leased Near Luxury Car segment (e.g., BMW 3-Series, Mercedes-Benz C-Class, Infiniti Q50) is projected to retain 43.5% of its original typically-equipped MSRP in three years, compared to 50.3% for the overall market.

As for a look at the current market, the January 2021 average retention for the Near Luxury Car segment was 50.6%, compared to 54.7% for the overall market. The gap between this segment and the overall market is much smaller in the current environment than we have historically experienced due to the strength that segment experienced in 2020. The Near Luxury Car segment had appreciation of 0.5% in 2020, compared to a loss of −21.1% in 2019. This is a segment that has a high lease penetration rate, so the elevated valuations in 2020 left many consumers in an equity position in their lease. This meant many off-lease units were kept by the consumer, and of the ones that were returned at the end of the term, many were purchased by the




grounding dealer due to the contractual purchase price being much lower than the actual market value at the time.

With the increased number of units being kept out of the market by the lessees and the dealers, the used supply in the open market was reduced and further fueled the retention strength. However, in three years, the expectation is that the market will return to a pre-COVID-19 valuation level and the off-lease supply entering the used market will increase. The projection is that retention values will be similar to 2019 (44.5%), but elevated compared to January 2020 (42%), when retention levels in this segment were lower than historically seen due to an increase in supply that flooded the market at the end of 2019 together with high incentives on the new model year vehicles.


3
1/min x 1000
6
2
7
1
8
0
340
160

## *THE BLACK BOOK-FITCH VEHICLE DEPRECIATION REPORT AND BLACK BOOK USED VEHICLE DATA*

This report is another in a series of joint ventures between Black Book and Fitch. Black Book tracks used vehicle market depreciation rates providing an understanding of how vehicle prices impact automotive lenders and lessors, auto ABS transactions, consumers and other auto market constituents. Black Book collects and analyzes extensive wholesale data from auctions around the country. Black Book publishes residual value forecasts and current daily updated used market values. The report is issued on an annual basis.

### DATA AVAILABLE TO USERS

Certain data contained in this report and more detailed data is available to all users, including the charts and tables. Please contact Black Book or Fitch at the telephone numbers listed below.

### BLACK BOOK USED VEHICLE RETENTION INDEX

The Index is updated on a monthly basis and can be accessed with both data and chart through the link on Black Book's website: http://www.blackbook.com/black-book-index/

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## *Black Book*

Black Book® is best known in the automotive industry for providing timely, independent and precise vehicle pricing information, and is available to industry-qualified users through online subscription products, mobile applications and licensing agreements. Since 1955, Black Book has continuously evolved to ensure that it achieves its goal of delivering mission-critical information to its customers, along with the insight necessary to successfully buy, sell, and lend. Black Book data is published daily by National Auto Research, a Hearst company, and maintains offices in Georgia as well as the Canadian Black Book in Toronto. For more information, please visit BlackBook.com or call 800.554.1026.

## *Fitch Group and Fitch Ratings*

Fitch Group is a global leader in financial information services with operations in more than 30 countries. Fitch Group is comprised of: Fitch Ratings, a global leader in credit ratings and research; Fitch Solutions, a leading provider of credit market data, analytical tools and risk services; and Fitch Learning, a preeminent training and professional development firm. With dual headquarters in London and New York, Fitch Group is owned by Hearst.

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