White paper

The risky side of the road

Mitigating risk by leveraging the AutoCheck Score®

Vehicles in Operation

How many vehicles are on the road in the Unites States? 100 million? 500 million? As of June 2020, there were 280.6M vehicles in operation. Of course, this includes the 14.9 million new vehicles registered in the previous 12 months. Also accounted for are the 12.4 million vehicles taken off the road and no longer in operation. In that same time, 42.3 million used vehicles stayed on the road but changed owners. These additions, subtractions and changes resulted in over 28% of total changes for vehicles in operation.

Q2 2020 Total*

280.6 MILLION

Vehicles on the road

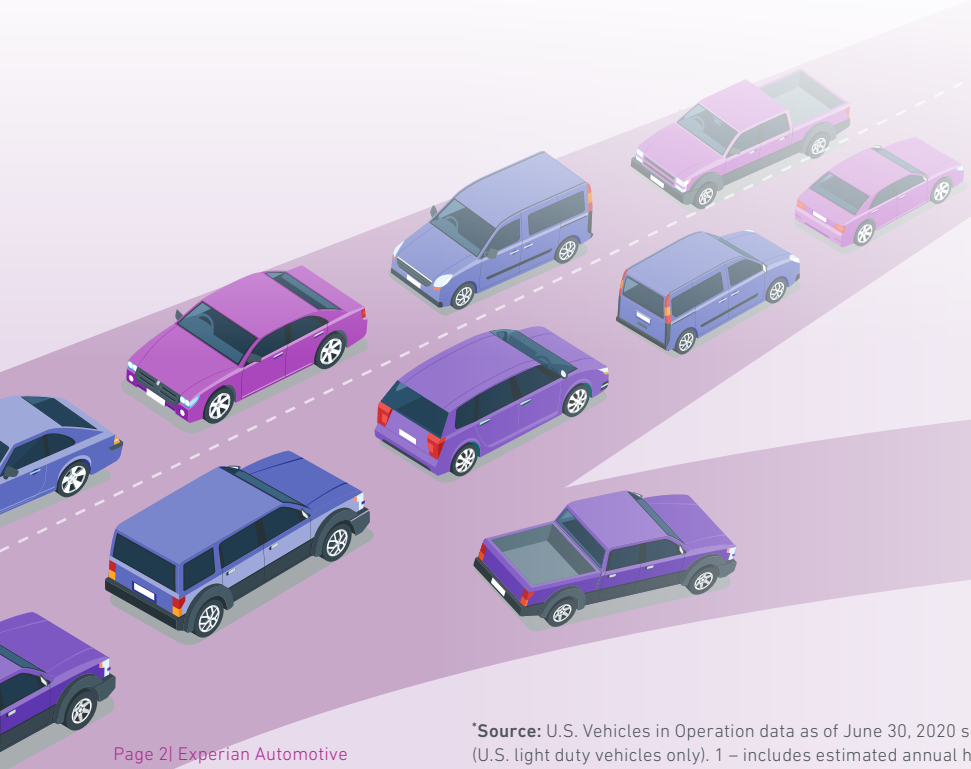
14.9
MILLION
NEW vehicles registered

12.4
MILLION
Vehicles went out of Operation

38.9
MILLION
USED vehicles changed owners

=

28.2%
Total VIO changes[1]



*Source: U.S. Vehicles in Operation data as of June 30, 2020 sourced from Experian Automotive, including U.S. and Puerto Rico (U.S. light duty vehicles only). 1 – includes estimated annual households that relocated with the same vehicle(s).

Accident frequency

Of the **280 million vehicles on the road**, how many of them do you think have been in an accident? Half? More than half?

Our research indicates that

4 out of 10

of the cars and light-duty trucks on the road have been in at least one accident...

...that is

more than **112 million**

Vehicles currently on the road that have been in an accident.[1]

That means that **40%** of the **280 million vehicles in operation**, over 112 million vehicles, have been in an accident. And, that's just a single accident event. The same research showed that more than 20% of the vehicles in operation have been in multiple accidents.

Unidentified risk

What impact does an accident have on a vehicle? Even if the vehicle has been completely repaired, the value of a vehicle is impacted based on the accident – this is known as diminished value. Mitchell Industry Trends Physical Damage Report states that the Q2 2019 average diminished value for a vehicle was $3,151. Sure, some accidents are going to result in a higher valuation loss and some will result in a lower valuation loss, but for the sake of argument, let's assume $3,000 is the average diminished value of a vehicle after an accident.

If there are more than 110 million vehicles in operation that have been in an accident and the average diminished value of an accident is $3,000, that is over $330 billion of potential risk on the road. What are you doing to make sure you are aware of a vehicle's risk and minimizing your exposure to it?

What is the potential unidentified risk of those vehicles?

The average diminished value of a vehicle in an accident is **$3,151.00**[2]

20+% of vehicles in operation have been in multiple accidents.

That is more than **$330 billion** in potential risk on the road.[2]

[1]**Source:** Experian analysis conducted in April 2016 regarding vehicles in operation found that more than 4 out of 10 cars and light duty trucks in operation have been in an accident.

[2]**Source:** MItchell Industry Trends Auto Physical Damage Report, Q2 2019, https://www.mpower.mitchell.com/auto-physical-damage-report/

The role of vehicle history

Intensive expert inspections are a useful method to evaluate the current condition of an individual vehicle. But they require significant time and physical vehicle access – an investment that does not easily scale in today's fast paced and increasingly far-flung automotive ecosystem. Further, the resulting insights may be nuanced and inconsistently documented, making them difficult to incorporate into the finance decisioning process.

Vehicle history reports, like AutoCheck, can efficiently help protect your business from unnecessary risk. Our AutoCheck data foundation includes insights from tens of thousands of unique accident data sources. These encompass data from every state DMV agency indicating branded title issues, such as Salvage or Flood brands. They include data from 95% of all U.S. Auction Houses, with most providing us with exclusive structural damage announcements. Also included are manufacturer open recall data – in fact, we have 99.82% manufacturer coverage of current vehicles in operation.

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The AutoCheck Score®

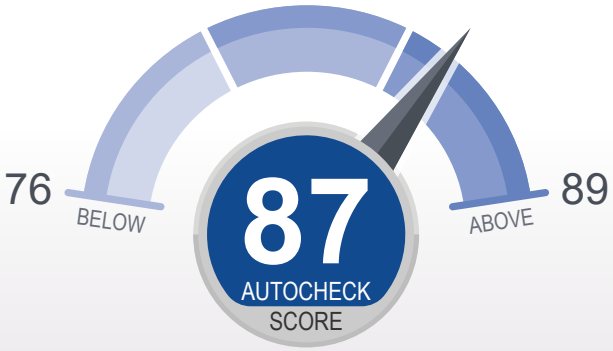
An AutoCheck vehicle history report can have a lot of information to analyze- a challenge when evaluating many vehicle transactions or monitoring an even bigger portfolio. What if there was a simple way to summarize the details?

That exactly what the AutoCheck Score is. Our data scientists have created a model, similar in concept to a credit score, which summarizes AutoCheck vehicle history data into an easy to understand 'score', along with an equivalent vehicle score range. The Score, based on a scale of 1 to 100, predicts the likelihood the vehicle will be on the road in 5 years. In addition, the Score range compares that vehicle to vehicles of similar class and age. We use an automotive inspired gauge to provide a visual and immediate insight into how a vehicle scores relative to others of similar age and class. This allows users to quickly see if the vehicle scores below the range, within it or above the range.

The AutoCheck Score is proprietary to Experian. In fact, the Score and the analytical model we use to calculate the Score and corresponding range is patented. It's our secret sauce, but we're happy to share some highlights of what goes into the model.

Overall, the AutoCheck Score is based on vehicle event history. For example, the age of the vehicle – the older the vehicle, the lower the score. Also, vehicle class is an important component. For instance, compact cars look nothing like pickup trucks and their breakdown history can be just as different. We also take mileage into account. In general, the more miles a vehicle has, the lower the score – once again, as compared to vehicle of similar age and class. The number of owners is another factor. We compare each vehicle's ownership history to the calculated average number of owners for similar vehicles. If the vehicle has more than the expected number of owners, it may cause the Score to decrease. And, last but not least, of course we take into account the vehicle use and event history – title brands, accidents and other events greatly impact the score.

The AutoCheck Score is a powerful tool that helps the automotive industry quickly asses a vehicle's history and salability to streamline decision making. Based on our patented algorithm that takes factors such as age, vehicle class, number of owners, vehicle use, events, and more into consideration, the score predicts the vehicle's propensity to be on the road in five years. It's more than just a number, though. When used within your decisioning process, it can help lenders and dealers make the right decisions to improve portfolio protection and lower risk.



Vehicle class
Compact cars look nothing like pickup trucks.
Their breakdown history can be just as different.

Age
In general, the older the car, the lower the Score.

Mileage
In general, the more miles a vehicle has, the lower the Score, compared to similar vehicles.

Number of owners
If a vehicle has had more than the expected number of owners, it may cause the Score to decrease.

Vehicle use and events
Title brands, accidents and other event history may also impact the score.

Case Study – Westlake Financial+

The team at Nowcom and Westlake have incorporated the AutoCheck Score into their deal workflow. AutoCheck data elements, including the Score and the entire vehicle history report, are available to dealers through both the CarZing online consumer shopping portal and the DealerCenter dealer management system. Furthermore, Westlake Financial uses AutoCheck data in their loan decisioning process.

Working with the DealerCenter and Westlake team, we recently evaluated three years and over seven million loan applications, including 200,000 repossessions and the subsequent auction sales, to analyze the impact of the AutoCheck score on their decisioning process and outcomes.

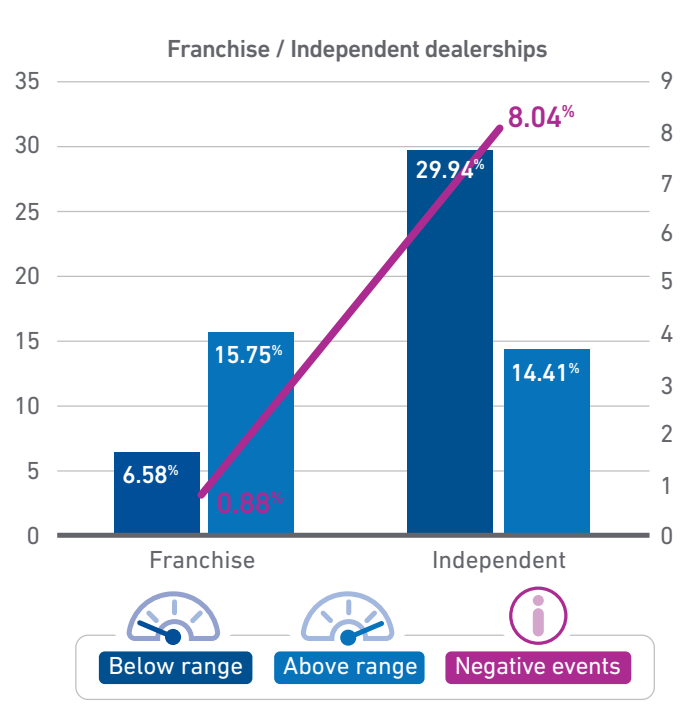
Franchise versus Independent

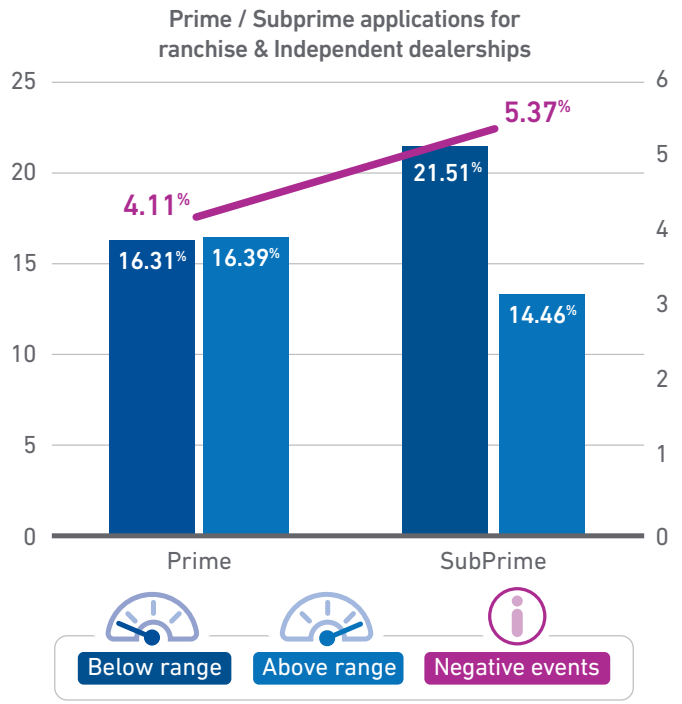
First, we analyzed the data to compare franchise and independent dealership loan applications. Independent dealers had a much higher rate of loan applications for vehicles that were below the AutoCheck vehicle score range – 29.94% vs 6.58% for franchise dealers. In addition, the vehicles on the independent dealer loan applications were much more likely to have experienced a negative vehicle history event – 8.04% vs. 0.88% for franchise dealers.

Prime versus SubPrime

Similar results were found we when compared Prime vs. SubPrime loan applications. Subprime applications have a higher rate of vehicles that were below the AutoCheck vehicle score range. For Subprime, it was 21.51% vs 16.31%. Negative vehicle history events were also higher, at 5.37% for Subprime vs. 4.11% for Prime.

Frequency of AutoCheck Score range and events

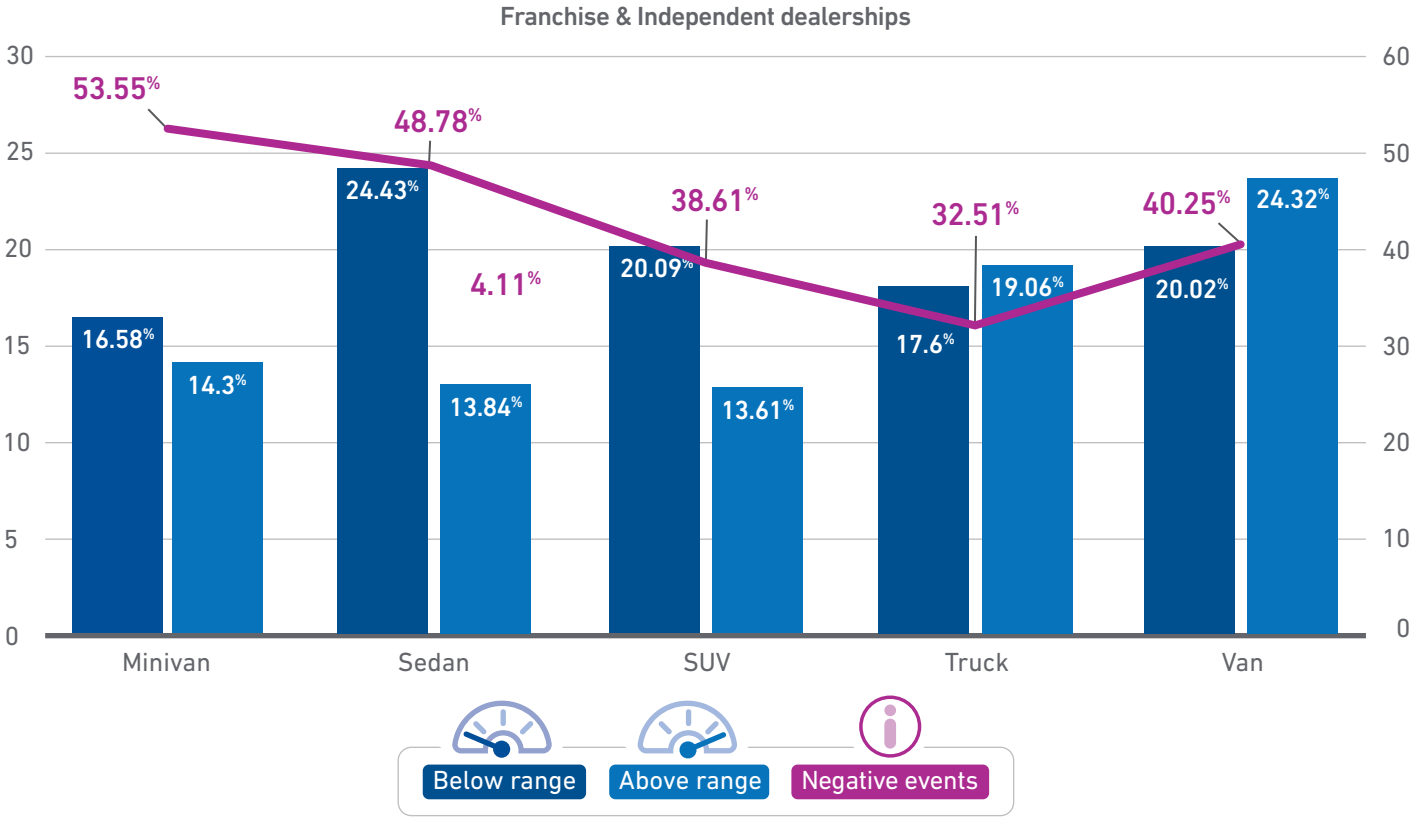




Vehicle class

We also analyzed the loan application data by vehicle class and found some interesting results. Minivans had the highest frequency of having a negative vehicle history event at almost 55%. Meanwhile, trucks had the lowest frequency of a negative vehicle history event at 32.51%. Furthermore, when we looked at the AutoCheck Score range detail for the loan applications, we found that Vans had the highest frequency of vehicle applications with an above range score at 24.32% ; SUVS had the lowest frequency of applications for above range vehicles at 13.61%.

Frequency of AutoCheck Score range and events by vehicle class



Vehicle Make

We also analyzed the data by vehicle make and found that the top five vehicle makes that did not have a negative vehicle event were Volkswagen, Dodge, Nissan, Hyundai, and Chrysler. The top five vehicle makes that had above average AutoCheck Scores were Lexus, Subaru, Jeep, Honda, and Toyota.

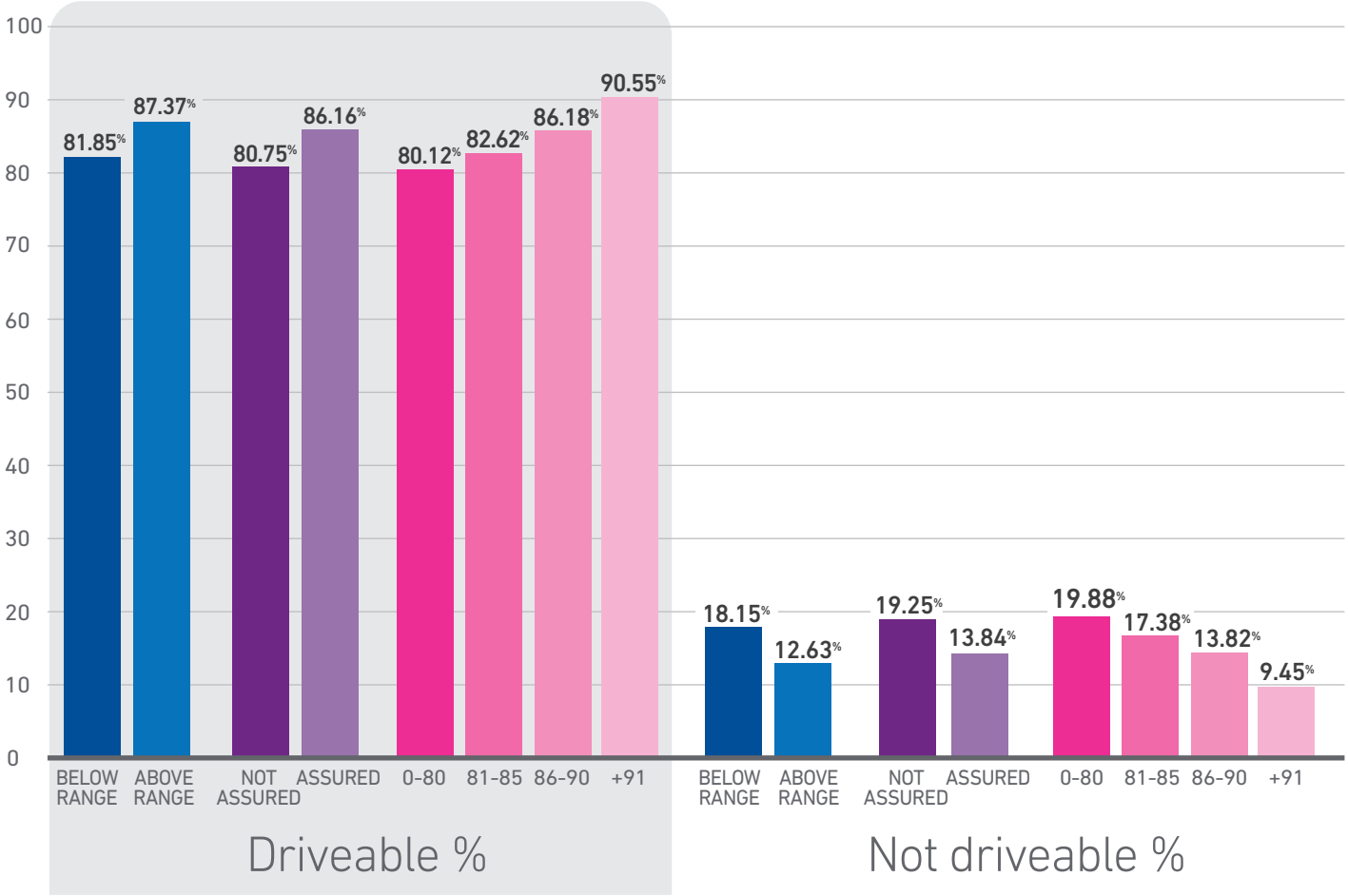
Driveability after repossession

What about viewing the data from a portfolio management standpoint? What if the loan defaults? Does the AutoCheck Score have an impact in that space? Once again, it does.

After repossession, the percentage of vehicles that are drivable was higher for AutoCheck assured vehicles vs. not assured – 86.16% of AutoCheck assured vehicles were driveable, versus 80.75% of non-assured vehicles. Also, the percentage of repossessed vehicles that were drivable was higher for vehicles with an above AutoCheck Score range vs. a below range score, at 87.37% and 81.85% respectively. In fact, the higher the overall AutoCheck Sore, the higher the percentage of drivability for repossessed vehicles.

Drivability after repossession

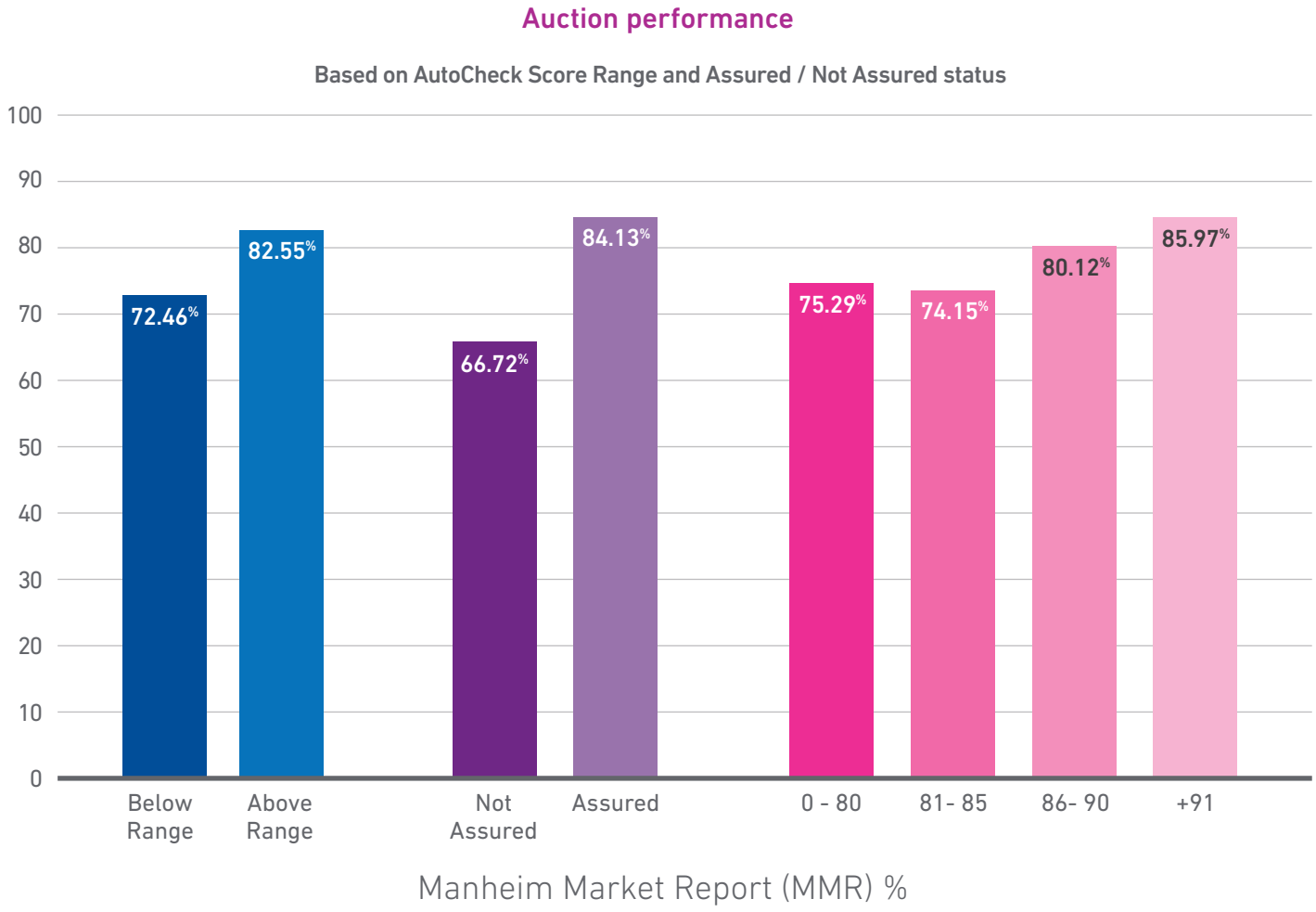
Based on AutoCheck Score Range and Assured / Not Assured status



Auction performance

And, what about the performance at auction for those repossessed vehicles? Of course, the higher a vehicle's value at auction, the more dollars a lender can recover for their portfolio.

Using the *Manheim Market Report™ (MMR)* as a wholesale price indicator, auction performance was higher for vehicles with an AutoCheck Score above the vehicle range, at 82.55%, than those with a Score below the range, at 72.46%. Auction performance was also higher for AutoCheck assured vehicles at 84.13% than non-assured vehicles at 66.72%. Overall, the higher the overall AutoCheck Score, the better the auction performance.



Conclusion

The AutoCheck Score reflects the quality and reliability of the vehicle, the likelihood the vehicle will be on the road in five years. Based on this analysis, there is a correlation of an AutoCheck Score to risk. Whether you are dealer evaluating a vehicle for purchase or trade, or a lender making a loan decision, you can use the AutoCheck Score to better understand a vehicle's risk to your portfolio.

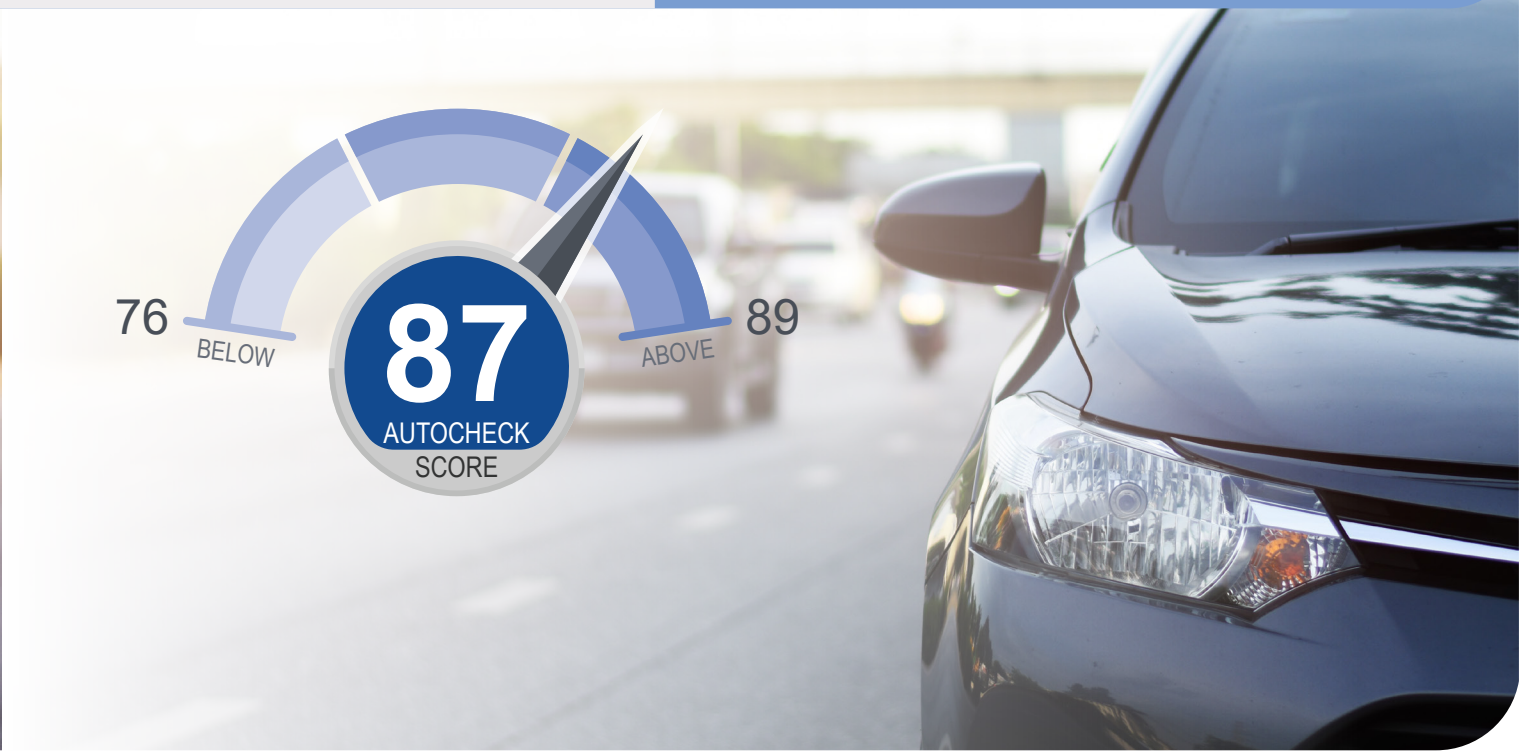
It's not to say you wouldn't take in the trade, write the loan, or underwrite the insurance – but what is your risk tolerance? Maybe if the vehicle is below the Score range, you'd shorten the months of the loan term. Afterall, you're choosing to not finance the vehicle, not the consumer.

Use an AutoCheck vehicle history report and the patented AutoCheck Score to mitigate your exposure to the risk on the road.

Use the Score in **decisioning**

Inventory Appropriation | Loan Application Review
Insurance Underwritting

IMPROVED Risk assessment	=	**BETTER** Portfolio protection
HIGHER Scores	=	**LOWER** Risk



Experian Automotive
955 American Lane
Schaumburg, IL 60173
T: 1 888 675 5596
www.experianautomotive.com

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