



## The Rise of Ridesharing

October 10, 2018

We believe that ridesharing is an opportunity in today's automotive industry that presents opportunities for active managers to uncover value for their investors.

The rising ubiquity of ridesharing in major metropolitan areas and its continuing expansion into lower-density towns and suburbs is forcing investors to think about how these trends will affect the size of the global vehicle fleet and the types of business models used to deliver transportation.

To examine the opportunities and threats for investors, we published a [white paper about innovation in the automotive industry](#). Based on that paper, we're also publishing a three-part blog series on the topic. In the first blog post, we discussed [advanced driver-assistance systems \(ADAS\)](#). In this post, we will focus on ridesharing.

### **Ridesharing's Impact on Fleet Size: Real but Largely Overblown**

When thinking about ridesharing's net impact of the total number vehicles required to serve the world's transportation needs over the short and long term, there are many cross-currents to consider:

#### **Total Miles Driven**

In terms of total miles driven, ridesharing could be a tailwind to the global fleet size. According to research by the University of California Davis Institute of Transportation Studies, ridesharing will likely contribute to an increase in the total number of miles driven in major cities.<sup>1</sup> The study found that if not for ridesharing being an option, 49% to 61% of ridesharing trips wouldn't have been made at all.

### **Substitution Effect (Short Term)**

There is a common assumption that the rise of ridesharing services is already serving as a significant headwind to vehicle sales. But according to the UC Davis study, 91% of ridesharing users said that they hadn't made any changes in their vehicle ownership.

Furthermore, the study found that rather than being a substitute for vehicle ownership, ridesharing today is mostly a substitute for public transportation. For now, ridesharing serves as a viable substitute for owning a car only in dense, urban areas where ridesharing is widely available and the cost of owning a car is high.

### **Substitution Effect (Long Term)**

Over the longer term, however, the substitution effect for owning a vehicle will become greater.

As ridesharing continues to lower the cost of mobility—a dynamic that will accelerate as electric powertrains gain more penetration and as fully autonomous vehicles become a reality—not owning a car, or not purchasing a second or third car, will make economic sense for a larger portion of the market, not just those who live in dense, urban areas.

Beyond these purely economic factors, generational attitude shifts will also cause the substitution effect to accelerate. Getting your driver's license on your 16th birthday used to be a rite of passage for young Americans. Today, many American teenagers are either delaying getting their driver's license or avoiding the trip to the Department of Motor Vehicles altogether.

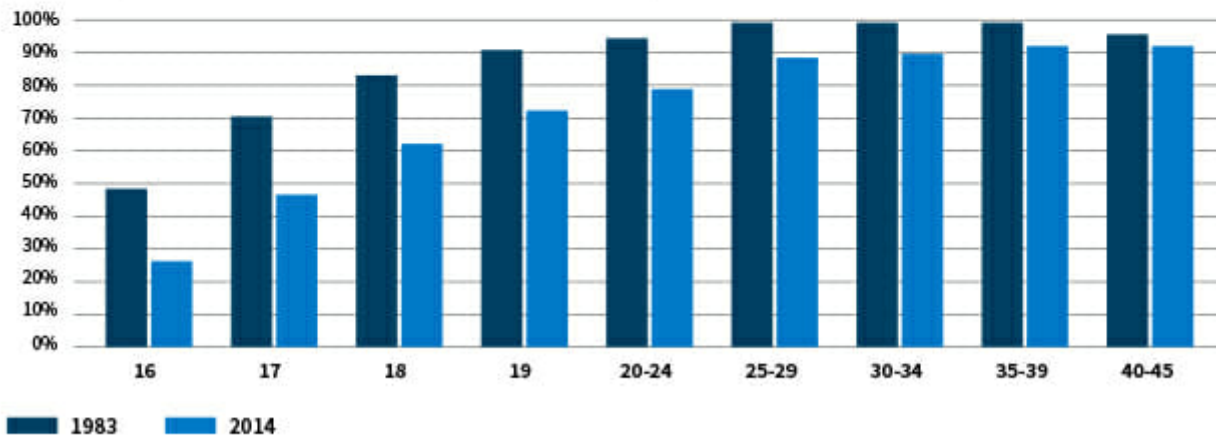
This dynamic, however, may weaken once more millennials start having children because family formation has always been one of the biggest drivers of purchasing a vehicle. But there are logistical challenges related to car seats, and parents most likely will be uncomfortable putting their children in vehicles driven by a stranger—or a faceless algorithm.



## Getting a Driver's License: No Longer a Rite of Passage for U.S. Teens

The percentage of Americans with a driver's license has decreased across all age groups younger than 45 since 1983, but the decline has been particularly steep among teenagers. This, along with the growing availability of ridesharing services, suggests that many millennials will eschew vehicle ownership and opt for asset-light personal balance sheets.

Percentage of Americans With a Driver's License by Age Group, 1983 vs. 2014



Source: William Blair, University of Michigan Transportation Research Institute, as of 2014.

### Utilization Rates

To understand ridesharing's ability to affect the total vehicle fleet size, it is essential to think about utilization rates.

It is unquestionably true that owning an expensive, depreciating asset that sits in a garage at least 90% of the time is grossly inefficient. If technology companies can solve this utilization problem for vehicles in a similar fashion to how they solved it for vacation lodging or data servers, it stands to reason that the total number of vehicles needed will decrease.

While this is directionally true, the impact of utilization improvements when it comes to vehicles will be limited by demand volatility—a.k.a., rush hour traffic. Given people's work schedules, a large portion of the total miles driven in a given city occurs at the same times. As a result, fleet sizes need to be large enough to accommodate peak demand.

When considering all of these cross-currents, we believe that in the near term ridesharing should have a negligible impact on the total vehicle fleet size. Over the long term, however, the impact could be substantial.

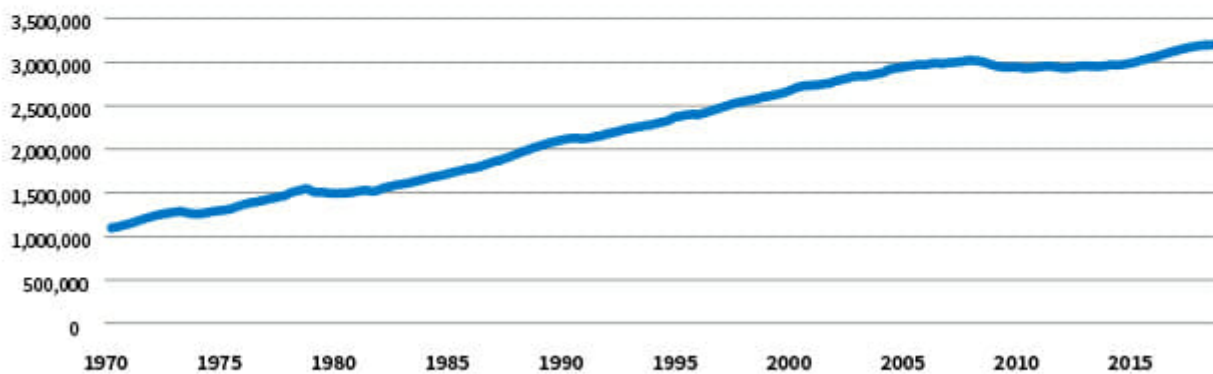
But we believe that the long-term impact will still be less than what many headlines currently suggest because of the natural limits to how much utilization rates can improve.



## Personal Miles Traveled in the United States

Although ridesharing will increasingly become a substitute for vehicle ownership, ridesharing's impact on total vehicle fleet size will be offset, to some degree, by an increase in the total numbers of miles driven. Total vehicle miles in the United States have increased steadily since 2014, even as ridesharing services become much more prevalent.

### Moving 12-Month Total Vehicle Miles Traveled, in Millions



Source: William Blair, Federal Reserve Bank of St. Louis, as of June 2018.

### Ridesharing Business Models Will Continue to Evolve

Competition, regulatory pressure, and the need to continually make massive investments in developing technology and entering new markets will lead to substantial operating losses for ridesharing platforms in the short and intermediate terms.

Over the long term, however, advancements in autonomous driving and electric powertrains will significantly improve the profitability of these companies.

As long as human drivers are required, generating operating profits will be extremely challenging—if not impossible—for ridesharing platforms. But once widespread L5 is achieved, the equation shifts dramatically. In the meantime, ridesharing companies will be battling each other fiercely and subsidizing fares to gain market share.

It is important to appreciate the symbiotic relationship between ridesharing and electric vehicles. Ridesharing favors the use of electric vehicles, as opposed to ones with internal combustion engines.

Electric vehicles have lower fuel and maintenance costs, and the fleet model that will likely be used by ridesharing companies solves most of the range issues that currently limit the widespread adoption of electric vehicles among consumers.

Questions remain about how ridesharing companies' business models will evolve as these advancements occur.

We believe that the model will likely involve some combination of an asset-light platform provider and an asset-intensive but steady-return fleet manager.

It is also possible that these two core services will remain completely separate, with the platform providers

outsourcing all of the fleet management to avoid adding vehicles to their balance sheets. It is also possible that the OEMs, thanks to their ability to offer lower operating costs, could force some degree of backward integration among the platform providers.

<sup>1</sup> Clewlow, R. and Mishra, G., University of California Davis Institute of Transportation Studies, “Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States,” as of October 2017.

<sup>2</sup> Sivak, M. and Schoettle B., University of Michigan Transportation Research Institute, “Recent Decreases in the Proportion of Persons with a Driver’s License Across All Age Groups,” as of January 2016.

**Next up:** Electronic Vehicles Threaten the Auto Incumbents



[Download Whitepaper](#)

### **Auto Industry Blog Series**

- Part 1: [Autonomous Driving Around the Corner?](#)
- Part 3: [Electric Vehicles Threaten Auto Incumbents](#)

*Taylor Cope, CFA, is a research analyst on William Blair’s Global Equity team.*

**Disclosure:**

This content is for informational and educational purposes only and not intended as investment advice or a recommendation to buy or sell any security. Investment advice and recommendations can be provided only after careful consideration of an investor's objectives, guidelines, and restrictions.

Information and opinions expressed are those of the authors and may not reflect the opinions of other investment teams within William Blair Investment Management, LLC, or affiliates. Factual information has been taken from sources we believe to be reliable, but its accuracy, completeness or interpretation cannot be guaranteed. Information is current as of the date appearing in this material only and subject to change without notice. Statements concerning financial market trends are based on current market conditions, which will fluctuate. This material may include estimates, outlooks, projections, and other forward-looking statements. Due to a variety of factors, actual events may differ significantly from those presented.

Investing involves risks, including the possible loss of principal. Equity securities may decline in value due to both real and perceived general market, economic, and industry conditions. The securities of smaller companies may be more volatile and less liquid than securities of larger companies. Investing in foreign denominated and/or domiciled securities may involve heightened risk due to currency fluctuations, and economic and political risks. These risks may be enhanced in emerging markets. Different investment styles may shift in and out of favor depending on market conditions. Individual securities may not perform as expected or a strategy used by the Adviser may fail to produce its intended result.

Investing in the bond market is subject to certain risks including market, interest rate, issuer, credit, and inflation risk. Rising interest rates generally cause bond prices to fall. High-yield, lower-rated, securities involve greater risk than higher-rated securities. Sovereign debt securities are subject to the risk that an entity may delay or refuse to pay interest or principal on its sovereign debt because of cash flow problems, insufficient foreign reserves, or political or other considerations. Derivatives may involve certain risks such as counterparty, liquidity, interest rate, market, credit, management, and the risk that a position could not be closed when most advantageous. Currency transactions are affected by fluctuations in exchange rates; currency exchange rates may fluctuate significantly over short periods of time. Diversification does not ensure against loss.

There can be no assurance that investment objectives will be met. Any investment or strategy mentioned herein may not be appropriate for every investor. References to specific companies are for illustrative purposes only and should not be construed as investment advice or a recommendation to buy or sell any security. Past performance is not indicative of future returns.

Copyright © 2020 William Blair & Company, L.L.C. "William Blair" is a registered trademark of William Blair & Company, L.L.C. No part of this material may be reproduced in any form, or referred to in any other publication, without express written consent.