

COVID-19: A Watershed Moment for Shared Mobility

Persistent shifts in consumer behavior could expand the market for shared mobility

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Key takeaways

- Pandemic-related lockdowns and social distancing are having a severe impact on the mobility industry as consumers have stopped or significantly reduced travel.
- We believe the shared mobility industry could see a long-term market expansion as it picks up the slack from declines in public transportation ridership, especially among urban areas in Europe and Asia where car ownership is more expensive and less practical relative to North America.
- Micromobility could play an important role in helping cities incorporate social distancing practices for commuters, while also solving existing issues related to congestion and emissions.
- In this dynamic environment, we believe success indicators for shared mobility operators include exposure to delivery, public-private partnerships and the ability to scale down efficiently.
- We see opportunity for discerning strategic and financial investors to pick up deals at attractive valuations as incumbent automakers are forced to curtail investments and focus inward.

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Amid pandemic-driven setback, shared mobility seeks bridge to next phase of growth

Pandemic-related lockdowns and social distancing are having a severe impact on the mobility industry as consumers have stopped or significantly reduced travel. Based on management commentary from public providers, we estimate the global ridesharing industry may contract by approximately 80% in Q2 2020 from baseline levels. Despite this pullback, longer-term trends continue to support the growth of shared mobility as services such as ridesharing and micromobility are relatively underpenetrated in both mature and developing markets. Furthermore, the secular drivers of adoption—demand for fast, affordable and convenient forms of transportation—are likely to remain unchanged in a post-pandemic environment.

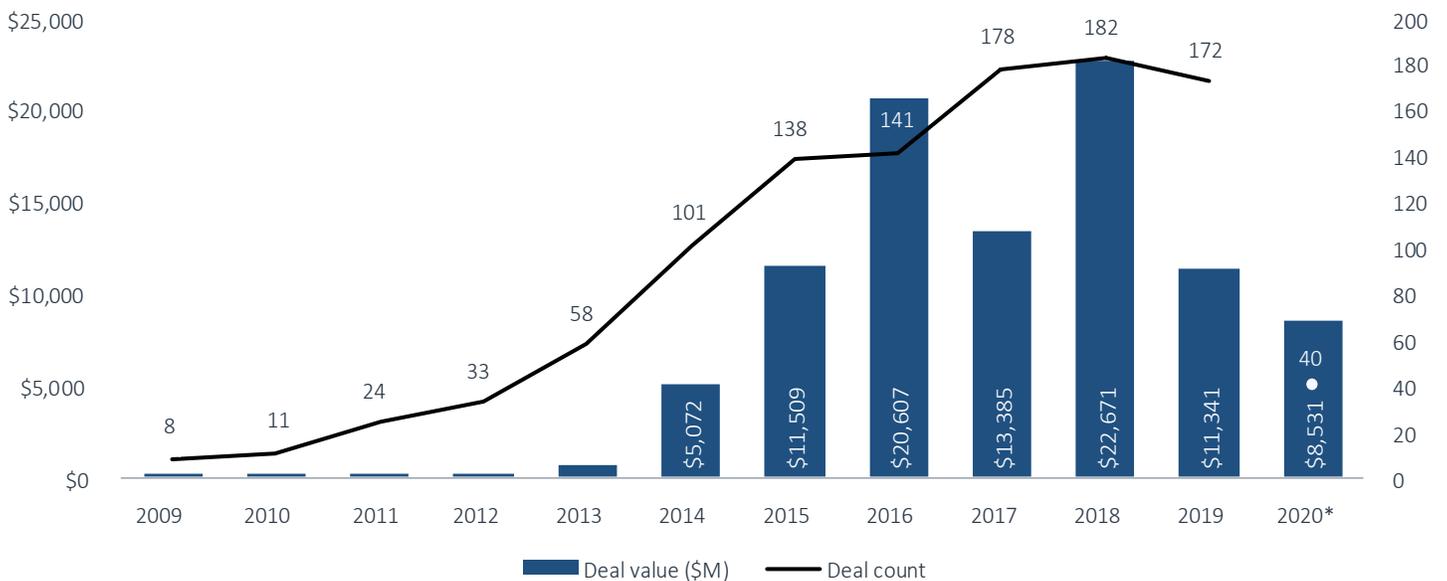
As providers navigate their way through the current environment, some opportunities have emerged that may help chart a path through the crisis for startups able to capitalize on these opportunities. For ridesharing companies, a pivot to delivery services can help offset the steep plunge in ridership. Providers also stand to benefit from partnership opportunities with cities to help transport essential service workers. Declining demand for public transportation could help drive demand for both ridesharing and micromobility. Lastly, the trend of closing streets to car traffic to enable social distancing for pedestrians could lead consumers and city planners to view micromobility in a more positive light.

The pandemic will not only test the viability of these business models, but also the ability of management teams to weather the downturn. Efforts to right-size businesses to the new market will likely drive significant consolidation and deal making. Uber's deal with Lime to offload Jump, and its bid to acquire GrubHub, may only signal the early rounds of a longer-term industry shakeout. Along the way, we expect investors will remain active in the space given the likelihood that discounted valuations could persist for some time.

Capital-intensive models put to the test

In the months preceding the pandemic, we observed a general pullback among both strategic and financial investors from the shared mobility industry. In 2019, global VC investing in shared mobility declined by 50% relative to 2018, while median valuations saw a decline of 49% YoY. We viewed these declines as driven by increased investor skepticism toward money-losing, capital-intensive business models. The COVID-19 pandemic exacerbated this trend, magnifying investor concerns about the sustainability of an industry that had never experienced a downturn.

Global VC deal activity in shared mobility by deal count (#) and size (\$M)



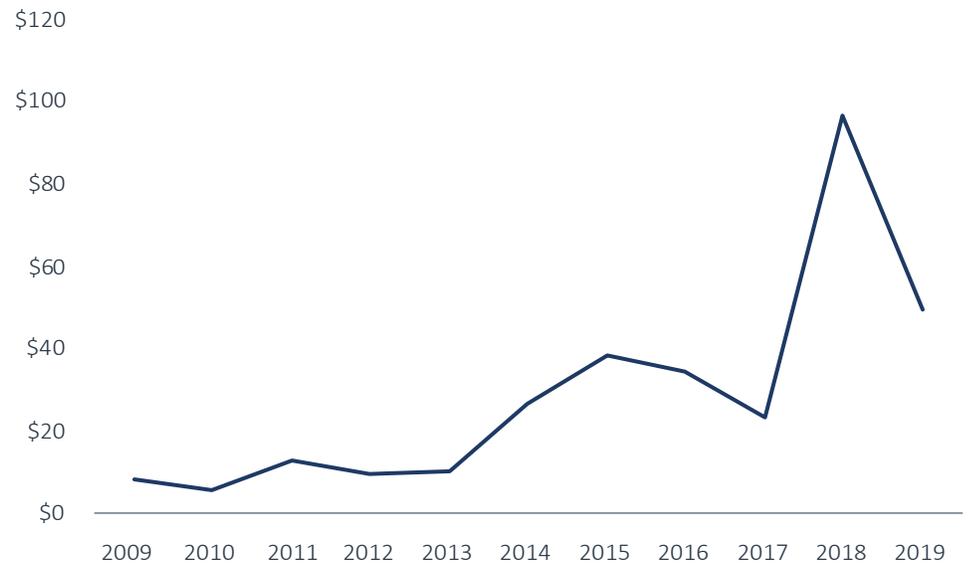
Source: PitchBook | Geography: Global
*As of March 31, 2020

Social distancing, working from home and sheltering in place have caused ridership to plummet for ridesharing, micromobility and carsharing startups. Uber and Lyft have each announced layoffs of 17%-20% of their workforces. Micromobility startups Bird and Lime have suspended operations and announced significant layoffs, with the latter receiving an emergency financing round at an 80% valuation haircut.

At the same time, key corporate incumbents in the transportation industry have come under pressure, which is weighing on their ability to invest in emerging technologies and startups. For example, GM has shut down its Maven carsharing service as well as its ARIV e-bike initiative. With automakers and transportation companies more likely to be in cash-preservation mode, we expect financial investors and large technologies with strategic interests in the future of transportation to pick up the slack in financing the future development of the ecosystem. Examples of this trend include Intel's recent acquisition of Moovit for \$900 million, and Silver Lake Capital's, T.Rowe Price's and Fidelity's participation in Waymo's recent \$3.0 billion raise.

Relative to startups in other industries, shared mobility startups often have capital-intensive business models with high cash burn rates that stem from the need to own and manage vehicles or other transportation fleets. Until recently, high cash burn rates have not been a problem as investors have continued to finance rapidly growing startups despite low profitability. With growth now slowing and financing less available, these burn rates have become unsustainable. Software-focused platforms with relatively lighter capital-expenditure needs should be better positioned to weather this storm. These include European micromobility operators such as Tier and Voi, which use contracted delivery companies, as compared to American providers Bird and Lime, which rely on in-house operations teams. Similarly, ridesharing providers such as Uber and Lyft that are primarily engaged in developing software should be better positioned than carsharing services that own and maintain vehicle fleets.

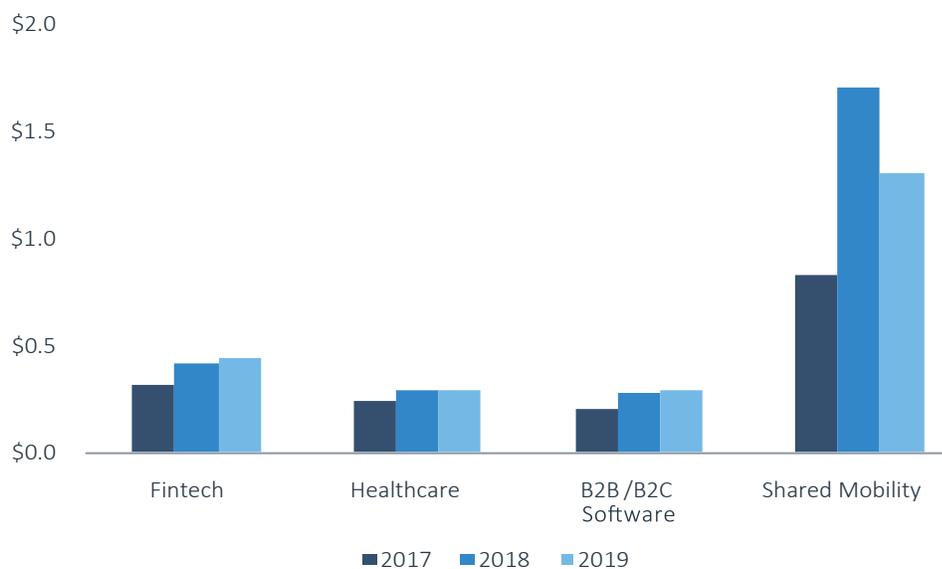
Median global VC pre-money valuation (\$M) in shared mobility



Source: PitchBook | Geography: Global

For strategic investors, the current environment represents an attractive opportunity to increase their foothold in the shared mobility space. Anecdotally, we are hearing of an uptick in interest in mobility among investors seeing the light at the end of the tunnel. Technology companies with strategic interests in transportation such as Alphabet, Amazon, Tencent and Intel as well as larger, well-capitalized automakers such as Toyota are likely to remain active buyers. Additionally, financial investors are well positioned to pick up deals at attractive valuations. A number of recent deals in the shared mobility space support the view that investors remain willing to take positions in large mobility startups.

Median monthly cash burn rate (\$M) of startups



Source: PitchBook | Geography: Global

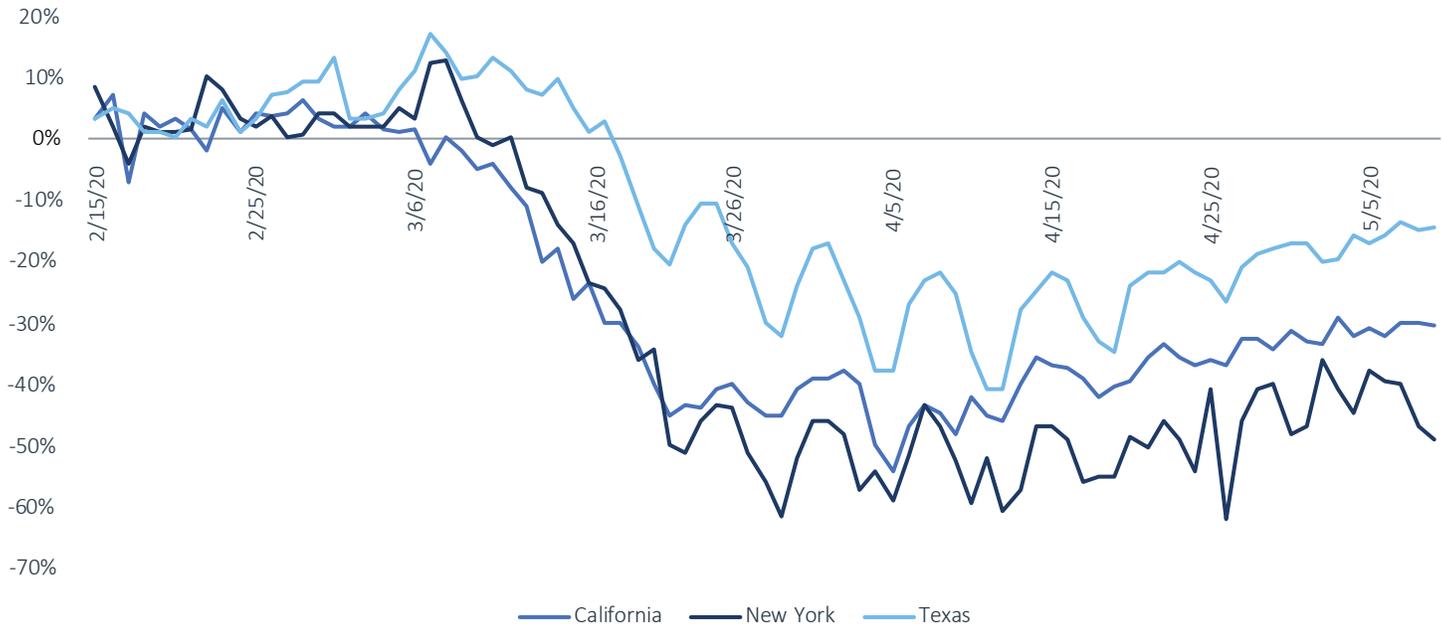
Recent select VC deals in shared mobility by deal size

Company	Deal	Close date	Main investors
Waymo	\$3.0B VC round	5/12/20	Silver Lake, CPP, Mubadala
Gojek	\$3.0B Series F	3/17/20	Alphabet, Tencent, JD.com
Didi Bike	\$1.0B VC round	4/20/20	Didi Chuxing, Legend Capital
Moovit	\$900M M&A	5/4/20	Intel / MobileEye
Grab	\$886M VC round	2/25/20	Kymco, Mitsubishi, MUFG, TIS
Via	\$200M Series E	3/30/20	Exor
Lime	\$170M VC round	5/7/20	Uber
Vanmoof	\$13.6M VC round	5/12/20	Sinbon Electronics, Balderton Capital

Source: PitchBook | Geography: Global

Mobility could benefit from decline in public transportation

Transit station % change from baseline



Source: Google COVID-19 Community Mobility Report

The baseline is the median value, for the corresponding day of the week, during the five-week period Jan 3-Feb 6. Each state's median percentage change is from the global baseline for all counties in each state.

Public transportation systems have seen significant declines in ridership across multiple geographies. As of early May, ridership of public transportation was down approximately 70% in the US, down 78% in Italy and down 78% in France relative to baseline levels.¹ According to Google data, time spent in transit stations is down significantly in major US states such as California, New York and Texas. These declines have been driven by an unprecedented level of city-wide lockdowns as well as closures of public transportation.² During the peak of the crisis in Wuhan, Chinese authorities completely shut down public transportation options, forcing essential workers to commute via alternative means. Meanwhile, in New York City, which has been particularly hard-hit by the pandemic, subway ridership declined 93% YoY and revenue is expected to decline by \$4.7 billion to \$5.9 billion in 2020, while costs are expected to rise by \$700 million because of the virus. As a result, New York City has shut down its MBTA service during night-time hours—a historic first for the service.³

We believe declines in public transportation ridership will be a permanent, not temporary, trend. As economies begin to open back up and commuters return to work, we expect they will seek to avoid public transportation if

1: "Mobility Trends Reports," Apple Maps, May 12, 2020

2: "Google COVID-19 Community Mobility Report," Google, May 21, 2020

3: "For the first time in its history, New York City deliberately shut down its entire subway system this morning," CNN, Andy Rose, May 6, 2020

possible. According to an IBM study, more than 20% of US consumers said they would stop using buses, subways and trains, and 28% said they would use them less often.⁴

We are seeing evidence of this trend occurring in markets that have returned to pre-crisis levels of commuting. For example, in Norway and Sweden (two countries that did not shut down their economies to the same extent other countries have), as of early May, movement via public transportation was 35%-45% under baseline levels, whereas driving returned to baseline levels.⁵

Permanent changes in commuting will have substantial ramifications on shared mobility. In the US, public transportation is estimated to generate approximately \$76 billion in revenue annually in the form of fares and government subsidies.⁶ Shifts in consumer behavior away from public transportation in favor of shared mobility could drive significant growth. For example, if 20% of mass transit revenue shifted to shared mobility, this would amount to approximately \$15 billion in incremental annual spending in the US. This could meaningfully expand the market for more nascent subsectors such as micromobility, which we estimate has a TAM of \$32 billion in the US and \$105 billion globally.

As public transportation systems face financial strain, we anticipate cities will increasingly partner with shared mobility services as a means to pick up the slack during shutdown and off-peak hours. For example, Uber has reportedly partnered with transit agencies in at least eight markets due to the current crisis. In markets such as Miami, Indianapolis and Des Moines, transit agencies are subsidizing Uber rides, enabling them to reduce insurance and fuel costs associated with running nearly empty buses, and ultimately saving money.⁷ In late March shared mobility provider Via announced partnerships with multiple cities including Berlin and Abu Dhabi to provide essential healthcare workers with transportation during off-peak hours.⁸ In early April, the city of Portland announced a partnership with Spin to waive per-vehicle municipal fees to keep e-scooters available for commuters.⁹ Shared mobility providers that secure partnerships with cities and transit agencies could be more favorably positioned coming out of the crisis.

4: "IBM Study: COVID-19 Is significantly altering U.S. consumer behavior and plans post-crisis," IBM, May 1, 2020

5: "Mobility Trends Reports," Apple Maps, May 12, 2020

6: Public Transportation Industry in the US, IBIS World, December 2019

7: "Some U.S. city transit agencies turn to Uber as ridership drops during coronavirus crisis," Reuters, Tina Bellon, May 6, 2020

8: "Covid-19: Via launches free ride-sharing service for medical workers in Abu Dhabi," Traffic, Tom Stone, April 15, 2020

9: "During COVID-19 public health emergency, PBOT focuses on essential services and protecting public health and safety," Portland Bureau of Transportation, Hannah Schafer, April 7, 2020

Social distancing helps reframe the debate over micromobility

Micromobility could play an important role in helping cities incorporate social distancing practices for commuters, while also solving existing issues related to congestion and emissions. For example, Oakland closed 75 miles of city streets to car traffic to help pedestrians maintain social distances, and both Mexico City and Berlin launched emergency bike lane networks. According to Micromobility Industries, more than 200 cities globally have partially or fully closed down certain streets since the crisis began in order to create wider footpaths and bike lanes. Major European cities have closed down streets and are setting up permanent car-free zones in their city centers. For example, significant portions of London are being made car-free to reduce congestion and emissions as the city comes out of lockdown.¹⁰

These initiatives could help shape how city planners determine whether to build bike lanes and other infrastructure amenable to micromobility services. Up until now, demand for bike lanes has generally been gauged by estimating how many commuters are willing to ride bikes and scooters on busy streets with heavy traffic. We view this as a flawed approach as it assumes streets will remain congested with cars. The pandemic gives city planners an opportunity to gauge how commuters might use micromobility services in an environment with fewer cars.

In certain markets, bikesharing ridership appears to be bouncing back significantly as commuters return to work. In China, bikesharing providers Hellobike, Meituan and Didi Chuxing have reported significant surges in ridership. During the midst of the crisis, many essential medical and delivery workers depended on bikesharing services to commute as public transportation was shut down and driving cars was disallowed. This behavior appears to be persisting as commuters return to work. In March, shared bike rides in Beijing reached 63% of levels from a year earlier, while rides on publicly funded bikes matched prior year usage.¹¹ Some providers have reported increases in use above prior levels. In early April, Meituan Bikes cited record volume well above pre-crisis levels, while Hellobike saw 30% MoM growth.¹² Didi Bike, the bikesharing subsidiary of the global ridesharing startup Didi Chuxing, cited shared cycling volume up 90% from crisis levels with 70% of total volume consisting of rides from residential to industrial areas.¹³ (Didi Chuxing subsequently led a \$1 billion investment round into Didi Bike in late April.)

We are also seeing indications of significant growth in biking in the US. According to N.P.D. data, bicycle and related equipment sales nearly doubled in March relative to last year, with e-bike sales rising 85%.¹⁴

10: "Large areas of London to be made car-free as lockdown eased," The Guardian, Matthew Taylor, May 15, 2020

11: "Rides on shared bikes returning to normal amid the epidemic in Beijing," China Daily, Du Juan and Zhao Ruixue, April 1, 2020

12: "Wuhan restarts: Shared bike use surges after lockdown lifted," China Daily, Zhao Shiyue, April 11, 2020

13: "Wuhan restarts: Shared bike use surges after lockdown lifted," China Daily, Zhao Shiyue, April 11, 2020

14: "Thinking of buying a bike? Get ready for a very long wait," The New York Times, Christina Goldbaum, May 18, 2020.

Some e-bike vendors are reporting triple digit sales increases. This surge in demand has led to a shortage of bikes in the US. As shared micromobility operators resume operations, this shortage should translate to increased demand for these shared services.

We are incrementally more optimistic that micromobility could grow in European and Asian markets. In our view, whereas US consumers could be more likely to opt for individual car ownership or ridesharing, consumers in Europe and Asia are more likely to see micromobility as a viable replacement for mass transit. In the UK, e-scooter trials originally set for 2021 in limited areas have been fast-tracked to this summer nationwide.

The delivery opportunity

The demand for food and grocery delivery presents another opportunity for ridesharing providers able to leverage operations for this purpose. Delivery can help offset declines in core ridesharing revenue and potentially help drive an additional long-term growth channel. Companies that have invested in building out these capabilities—no easy feat in terms of building out in-app delivery functionality, partnering with food and grocery vendors and attracting users—should be better positioned going forward.

Uber's Eats business has seen a significant acceleration in demand with 89% YoY gross bookings growth in April. In Q1 2020, increased growth in this business helped the company partially offset declines in its core ridesharing business. In its Q1 2020 earnings call, Uber's management team expressed its intent to increase investment into grocery delivery both through the Uber Eats business as well as through the company's acquisition of Cornershop, a Latin American grocery delivery app. Uber has since reportedly approached food delivery rival GrubHub with a takeover offer, marking a potential wave of consolidation among online food delivery apps in North America.

In March 2020, Didi Chuxing launched a food delivery service in over 20 cities, with a renewed focus on groceries and convenience items. In early April, Didi also entered the \$133 billion Japanese restaurant market by offering heavily discounted food delivery services.¹⁵ The company had previously forayed into the competitive food delivery industry in 2018, but faced difficulties in generating a profit and driving synergies with its core ridesharing business. Didi ultimately scaled back its food delivery ambitions in 2019 amidst pressure from investors to streamline costs. However, we have heard anecdotally that this pressure has eased in the current environment, and the company is focused on returning to growth, hence its re-entry into the fast-growing, albeit low-margin, food delivery space.

¹⁵: Japan's Golden Week starts with food fight among delivery rivals," Asian Review, Wataru Suzuki, April 29, 2020