

**Equity Research** 

4 June 2019

# #disruptivemobility

U.S. Internet

# Scorching The Earth One Ride At A Time; Initiating Uber OW, Lyft EW

**Initiating Coverage On UBER (OW) And LYFT (EW):** Ride-hailing's future promise is almost equally as impressive as the capital destructed since the inception of "Scorched Earth" strategies. After experiencing two of the worst-received IPOs in technology history, the backdrop for a contrarian like us to be constructive on the space is actually quite interesting right now. We think consensus is too bearish on rides unit economics, which are near breakeven today for Uber and slowly approaching that level for Lyft. At 4x revenue, with higher growth rates than most other large caps we cover, we would dip a toe into the water and take a position, but fully expect the names to continue to chop around a bit (and if the S+P were to continue to trade off, these two have little valsupport given the high cash burn). We prefer UBER shares to LYFT based on better unit efficiency but think both are good against-the-crowd longs here. This report is a 100 page deep-dive on from a bottom-up perspective on UBER and LYFT, and we are publishing a companion top-down piece alongside our Global Autos team: See 'Cutting the car ownership cord' from Brian Johnson and Kristina Church, 6/4/19).

**UBER** – **The Multi-Service Global Play:** UBER screens well on two of the three things we care about with our ratings: 1) sentiment seems washed out and negative, and 2) fundamentals are actually a tad better than we think the street is giving Uber credit for. At 4x rev, investors are paying a discount vs. two-sided marketplace peers and are stepping in near trough KPIs which should improve going forward. Uber's scale and multi-service approach should give it some advantage, and we find a few more call options (in our SOTPs) relative to LYFT. This investment idea comes with a fair amount of risk, but also pretty big reward as estimates head higher starting later this year, when we think the multiple firms up. Our \$50 price target is based on 4x revenue.

LYFT – Pure Play On North America Ride-Hailing: Taking a fresh look at LYFT without any of the baggage of being involved on its IPO, we actually want to be constructive here. On the surface the story sounds attractive, Lyft is: 1) a founder lead company growing faster and taking share from a larger competitor who is fighting wars on many continents, and who has had a revolving door at the C-Suite, 2) concentrated in NA, one of the best ride-hailing markets WW, and 3) massively improving its unit economics. However, Uber's unit efficiency advantage gives it the ability to respond aggressively if share continues to shift. Lyft even laid out its own bear-case in a recent appeal to NYC around the 58% driver utilization rate and minimum wage regulation - Uber simply wins because of its scale. For this reason, along with a valuation that is similar to Uber, and gross bookings growth likely at parity in a few quarters, we currently prefer UBER shares to LYFT. Our \$55 price target is based on 4x revenue.

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#### **INDUSTRY UPDATE**

U.S. Internet POSITIVE

Unchanged

For a full list of our ratings, price targets and earnings in this report, please see table on page 2

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#### Summary of our Ratings, Price Targets and Earnings Estimates in this Report

Company	Ra	ting	Price		Price Tai	get		EPS FY1	(E)	E	PS FY2	(E)
	Old	New	31-May-19	Old	New	%Chg	Old	New	%Chg	Old	New	%Chg
U.S. Internet	Pos	Pos										
Lyft, Inc. (LYFT)	N/A	EW	57.62	N/A	55.00	-	N/A	-9.36	-	N/A	-3.98	-
Uber Technologies Inc. (UBER)	N/A	ow	40.41	N/A	50.00	-	N/A	-5.01	-	N/A	-3.18	-

 $Source: Barclays \ Research. \ Share \ prices \ and \ target \ prices \ are \ shown \ in \ the \ primary \ listing \ currency \ and \ EPS \ estimates \ are \ shown \ in \ the \ reporting \ currency.$ 

FY1(E): Current fiscal year estimates by Barclays Research. FY2(E): Next fiscal year estimates by Barclays Research.

Stock Rating: OW: Overweight; EW: Equal Weight; UW: Underweight; RS: Rating Suspended

Industry View: Pos: Positive; Neu: Neutral; Neg: Negative

#### Valuation Methodology and Risks

# U.S. Internet

#### Lyft, Inc. (LYFT)

Valuation Methodology: \$55 PT based on 4x our FY20/21E revenue estimates.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Decelerating booking growth, high cash burn, and limited capital reserves may make it more challenging to fund incremental growth investments. Lyft's lower utilization and scale may also be a structural disadvantage. An upside risk is that Lyft's single-service, US market focus may enable it to take share and achieve above peer level ANR growth, potentially driving upside to estimates and the stock.

#### **Uber Technologies Inc. (UBER)**

Valuation Methodology: \$50 PT based on 4x our 2020E/2021E revenu estimates.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Limited valuation support suggests multiple could re-rate lower given high cash burn in event broader equity markets decline. Decelerating gross bookings growth, despite modest 2% market penetration, may suggest anticipated long runway of market penetration may not fully materialize. Take rate declines may not inflect as quickly as expected, pressuring margins and contributing to negative estimate revisions. Global scale may not be as meaningful for a localized business. Market share losses in some countries may persist.

Source: Barclays Research.

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# UBER TECHNOLOGIES, INC (UBER): THE MULTI-SERVICE GLOBAL PLAY, \$50 PRICE TARGET

Stock Rating
OVERWEIGHT

Industry View POSITIVE

Price Target USD 50.00

Price (31-May-2019) USD 40.41

Potential Upside/Downside +23.7%

Uber Technologies Inc.(UBER): Quarterly and Annual EPS (USD)

	2018 2019				2020	Change y/y			
FY Dec	Actual	Old	New	Cons	Old	New	Cons	2019	2020
Q1	N/A	N/A	-2.26A	-2.23A	N/A	-0.70E	-0.51E	N/A	69%
Q2	N/A	N/A	-2.90E	-1.25E	N/A	-0.87E	-0.49E	N/A	70%
Q3	N/A	N/A	-0.84E	-0.56E	N/A	-0.86E	-0.50E	N/A	-2%
Q4	N/A	N/A	-0.73E	-0.50E	N/A	-0.75E	-0.50E	N/A	-3%
Year	2.08A	N/A	-5.01E	-2.92E	N/A	-3.18E	-1.83E	N/A	37%
P/E	19.4		N/A			N/A			

Source: Barclays Research.

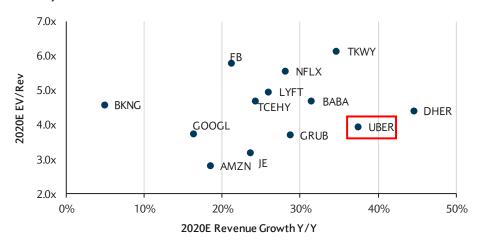
Consensus numbers are from Refinitiv received on 03-Jun-2019; 13:35 GMT

# **UBER: Six Reasons To Be Bullish**

# #1 You Are Buying UBER Shares On Trough KPIs & Discounted Valuation - It Gets Better In 4Q19

From a timing perspective, any investor in the bull camp can argue that you are buying shares of Uber a couple of quarter's after the KPI's imploded, and arguably at a steep discount to other marketplace businesses on EV/Rev. This is understandable given the noise around the LYFT and UBER IPOs and the lack of public market track record for the two companies.

FIGURE 1
Uber Is Cheap vs. Growth Profile, And You Get Eats (~\$12B) and Equity Stakes (~\$11B) Effectively For Free



Source: Barclays Research, Refinitiv

It feels like buying FB shares in the several months after the extremely weak 2Q18 print, you knew back then that trends would improve, you just didn't know exactly when to time the entry point and how long you'd have to wait to get paid as a bull (although the regulatory climate is evolving in real-time). The same could be said here for Uber. Rides take rate started to roll over in mid-3Q18, and ANR has cratered since 100+ growth in 2017. Following the IPO there was also some confusion around the ex-FX growth rates for their rides business because of the limited disclosure, and 1Q's 29% ex-FX should have put some

of that to bed (there is a massive difference in perception around Uber if rides GB's are growing close to 30% vs. close to 20%). And the take rates on both sides of the house are imploding (from 23 to 20% for Rides and 13% to now 8% for Eats), rides from subsidies in the US and BR markets, and Eats from the mix shift of India and building out restaurant selection (both being subsidized).

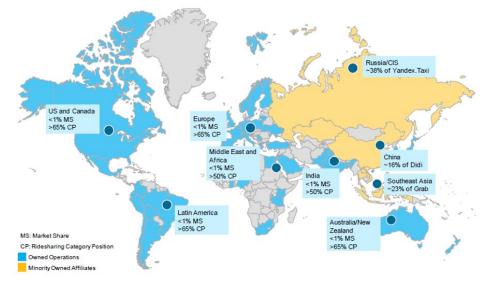
The good news is that by 3Q or 4Q19, we expect most of these trends are going to dramatically turn positive. Eats is improving a little earlier than this, with our checks pointing to market share gains in 2Q in the US based on higher conversion rates in app from the lower delivery fee display. Looking into 2020, Rides GB growth probably accelerates once the Careem deal is closed, and both Rides and Eats take rates should be flat to up Y/Y. So in a weird way, Uber may have just picked a bad time to go public and after a few quarters of improving investor confidence and better KPIs, the multiple might even re-rate higher, back towards the marketplace peer set. We don't think the next print is going to change the narrative, but we'd look to 2H19 as where that may start to play out. The company should lap the Rides take rate hit by 4Q19 when things will really accelerate - and we want to start a position ahead of that.

### #2 Scale Begets Scale

Uber's global business is second to none in ride-sharing and food delivery, in our view. We estimate the company will facilitate 6.0B trips in 2019, up 23% from 2018. While enormous already, the miles these trips represent less than 1% of the total miles that consumers took in aggregate in these countries. Uber operates ride-sharing in 57 countries and Eats in almost as many. Uber maintains 65% or greater ride-sharing market share in 4 regions, and 50%-65% in the remaining 2 regions where the service is legal, illustrated below in Figure 2.

There are a handful of countries where Uber lost the war with a primary competitor, either from the time or level of investment in those markets, or from regulatory challenges. In each of these cases, Uber wisely divested its business into the primary competitor for equity stakes rather than continue to wage war at the expense of profits in markets where the company was unlikely to win.

FIGURE 2
Over 50% Share OF Ride-Sharing Category In All GEOs Incl. >65% In US And Europe



Source: Barclays Research, Company Documents

A key question is how fast Uber's gross bookings can grow in light of the significant TAM and under penetration within each of these markets. We are currently modelling gross bookings growth in Rides to decelerate from 34% ex-FX in 2018 to 21% in 2019 and 18% in 2020.

The pace of deceleration over the past 4-5 quarters has been surprising to us and the investment community. We think the industry may be going through some growing pains, similar to what we experienced in earlier years in e-commerce and online travel, whereby certain supply or capacity constraints limit the pace of growth in the overall market, but that a healthy double-digit growth rate can recur for much longer than in other sectors given the low penetration. We've moved out of the hyper-growth stage where early adopters, like business users and city-dwelling millennials, start to full penetrate yet the later adopters (suburban or rural users) have yet to shift trips to ride-sharing.

Despite these slowing growth rates, Uber is still adding more dollar share Y/Y to its business than Lyft or other peers in the 57 countries that the company operates. This is a bit of an AWS-Azure dynamic at play, whereby the #1 player in the space is growing slower than the #2, but that dollar share continues to accrue to #1 because #2 is growing off such a lower base (from that standpoint we ask ourselves, is Lyft really taking share and catching up? Is Azure or GCP in cloud?).

FIGURE 3
Uber % Share of Y/Y Market Growth (US/CAN)

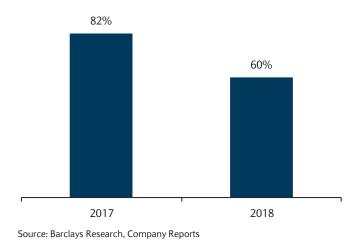
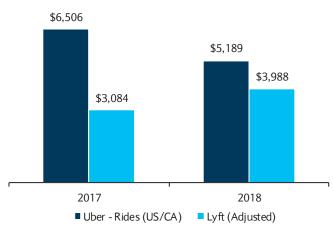


FIGURE 4
Absolute Dollar Bookings Growth Y/Y (US/CAN)

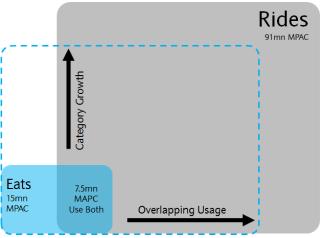


Source: Barclays Research, Company Reports; Note: Lyft Bookings adjusted higher by 15% to includes estimates for Taxes, Feels, and Tolls

### #3 Higher Engagement Through Multiple Services

One of the big appeals of Uber and other ride-sharing apps is that they see engagement with their MAPCs on a fairly frequent basis (67 trips per MAPC per year in 2018). Most companies in consumer internet have to try and win user loyalty with far fewer transactions per user per year. Uber is already fairly high frequency in its core rides business and is in the process of rapidly expanding the level of engagement with each MAPC across a number of everyday purchase considerations, including food and micromobility (bikes/scooters) and even public transportation that the company doesn't manage (i.e. – surfacing muni bus and subway options in app).

FIGURE 5
Uber's High Frequency Should Bring In Other Opportunities, Like We've Seen With Eats

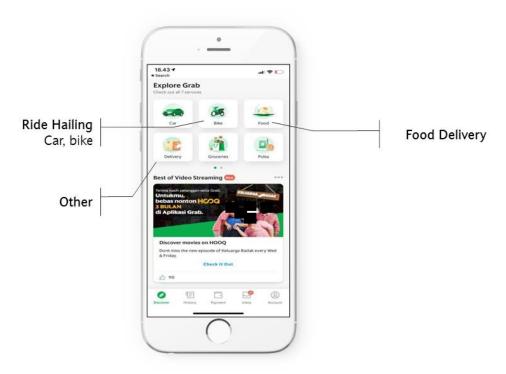


Source: Barclays Research, Company Reports

We've seen other companies in global ride-sharing take advantage of the high frequency nature of their core business to build out other new services, not just in transportation but across the board. Grab (private, not covered) has turned what was originally a single-purpose app into a multi-faceted super app with rides, food, local O2O transactions and payments all integrated.

Payments is particularly interesting as Grab has been able to leverage its position in transactions to move into a digital wallet strategy that lowers interchange fees, and also opens the door to new revenue generating opportunities (extending consumer's credit, etc.). We see the same opportunities ahead for Uber in Payment and increasingly in some areas of O2O.

FIGURE 6
Grab's Super App Is A Preview Of Uber's Future



Source: Barclays Research. Screenshot of Grab App taken on May 16, 2019. The owner of rights in the pictured website, including any images and trademarks, is not affiliated with Barclays.

#### #4 Uber Is More Efficient Than Competition Per Unit

One of Uber's biggest advantages vs. smaller rides and food peers is simply the sheer scale of the business and the company's ability to spread costs across billions of transactions across its 57 (limited in 6 more) countries of operation. If we look at the unit economics for Lyft or Didi or smaller food delivery peers, one can see this plain as day. Some of the costs of managing a TNC are variable (driver earnings, insurance, payments, customer acquisition, etc.) but a huge percentage are fixed (technology, ops and support, headcount, autonomous and other R&D, etc.) and can be leveraged.

Many argue that ride-sharing is a local ground-and-pound industry with little network effects or scale effects. We'd argue that this is actually true in the near term, just about any company could come into any one of Uber's ride-sharing markets and impact unit economics by pursuing their own scorched earth strategy, as has been the case in Brazil to some degree, causing Uber's market share and profitability to erode quickly. Uber probably doesn't mind a little of this activity as it keeps the other mega cap companies like Amazon (who are tip-toe-ing around with driver fleets) away from the ride-hailing space, and b) it keeps regulators off Uber's back as they want to see more than one player in a market.

FIGURE 7
Estimated Cost per Trip Comparison

	Uber	Lyft	% Delta
Actual/ Estimated Trips (Mn, 2018)	4,900	619	692%
Bookings	\$8.47	\$13.01	-35%
Driver Earnings	\$6.21	\$8.74	-29%
Driver Incentives	\$0.39	\$0.87	-55%
Revenue	\$1.88	\$3.40	-45%
Take-Rate	22%	26%	_
Cost of Revenues	\$0.80	\$2.00	-60%
Insurance portion of COR	\$0.51	\$1.00	
Gross Profit	\$1.07	\$1.39	-23%
Ops & Support	\$0.25	\$0.55	-55%
S&M	\$0.53	\$1.30	-59%
Peer Defined Contribution Profit	\$0.30	(\$0.45)	NM
as % Bookings	3.5%	-3.4%	
as % Revenue	16.0%	-13.2%	
R&D+G&A	\$0.52	\$1.20	-56%
Total Opex	\$1.30	\$3.04	-57%
Estimated Rides EBIT per Trip	(\$0.22)	(\$1.65)	NM
as % Bookings	-2.6%	-12.6%	_
as % Revenue	-11.9%	-48.4%	

Source: Barclays Research, Company Reports. Uber reflects Rides only.

It's fairly easy to pick up 5%-15% market share in a few cities, but matching Uber's service levels at scale is challenging for anyone, and would cost an enormous amount of capital to achieve. Hence this phenomenon has limits, and as soon as Didi (BR) or Lyft (US) or another competitors stops subsidizing, Uber goes back to having 2x-3x trips per day in their network compared to the smaller peer. Its unit economics will (in theory) then return to profitability, spreading costs over the volume advantage. Or if the market remains in a "scorched earth" stage, Uber will lose money on each trip, but far less on average than its smaller peers, as it has more market share and more rides to spread the costs out across.

One only has to look at the argument Lyft is making around NYC regulations around minimum wage for drivers and whether it tips the competitive advantage in favor of Uber. NYC is using the TNC's utilization rate (i.e. – the ratio of drivers with passengers to drivers sitting idle) as a measure of how each network can meet the new driver minimum wage of \$17.22. Lyft argued unsuccessfully that managing the volume of drivers on the road in a TNC while keeping a 58% utilization rate will increase Uber's competitive advantage because it has more liquidity in NYC than Lyft or others. (Under this new regulation any TNC can flood the city with additional drivers to lower prices and stimulate demand, but if the utilization rate is below 58% then the TNC pays the drivers the difference to get back to the minimum wage, not have the drivers suffer lower wages. And Uber/Lyft would quickly see their unit economics impacted if they had to pay drivers for idle time to meet minimum wage, especially Lyft the smaller of the two networks).

This is the bull case on Uber. The network with more liquidity can pay its drivers more while utilizing them more, and in doing so stimulate more demand and keep passenger prices lower than any smaller network. So if a smaller competitor wants to subsidize its way into a market, it can work in the short term and drive down unit economics for both networks, but there is very little chance of winning in the long term unless the larger network has some kind of external shock that erodes it value proposition for consumers (i.e. – another "delete Uber" situation).

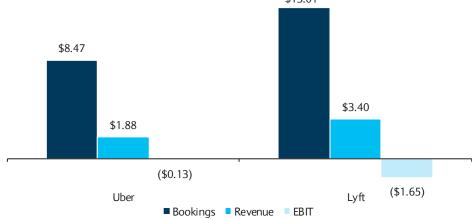
# #5 Some Markets Are Already Highly Profitable - And ATG/Other Mask the Core Rides Profit Pools

Uber's top five markets range from a core platform contribution margin (Uber-defined) of 54% at the high end to -10% at the low end. The range of profitability for core platform CM across the 500+ markets is likely much wider than the top five markets, with more concentrated towards to the lower end or below. In order for Uber to become a viable investment idea, we need to see the migration of the 700+ overall markets from the lower end toward the 54% high-end over time. The path to profitability involves reducing the magnitude of driver and rider incentives, and higher incremental margins as the ratio of first time acquired MAPCs to repeat MAPCs mixes towards the latter and S+M leverages. Driver utilization also improves with higher density in a market, reducing churn and driver-side incentives and subsidies.

This is easier said than done. Uber was once very profitable in Brazil, as mentioned previously, we'd estimate CM in the upper half of the top five range, until Didi's 99 came in with much heavier incentives and promotions in an attempt to gain market share. This "lighting money on fire" strategy works in the short run and dramatically reduces Uber's CM in the market, as it has to match driver and rider incentives tit-for-tat. As soon as the promotional period stops, Uber's CM likely migrates back to where it was before or higher. The challenge for analyzing Uber's market by market profitability is the company doesn't provide enough disclosure to create any confidence that the path of CM in any market is improving. Below we provide a glimpse of what a successful market defence looks like using NYC as a case study (where Uber has been able to maintain share and compete away Lyft, Via and several others back in the day).

At the aggregate level, if we back out: 1) ATG, 2) Other Bets estimated losses, and 3) assign 15% of the operating expenses to Eats – anyone can see that the core Rides business at Uber is already decently profitable. EBIT per ride is much higher than Lyft, backing out their Autonomous expenses as well.





Source: Barclays Research, Company Reports

# **#5 SOTPs Is Compelling Here**

Because Eats (and others) "eat away" at much of Uber Ride's profits at this point, we looked at stripping it out of the total EV of the company to see what the market is effectively paying for the world's leading ride-hailing business (and perhaps the only one turning a profit). As of the close on May 31st, Uber had an estimated EV of ~\$67bn. Excluding ~\$13bn for its

Minority Stakes in Didi (private; not covered), Grab (private, not covered), Yandex Taxi (private, not covered), and others, as well as ~\$13bn for the loss-making Eats business (based on a below-peer multiple of 0.5x 2020E Gross Food Sales), then the implied EV of the remaining Rides business (we assign zero value to Other Bets) is ~\$41bn. Investors are effectively paying a lower EV/Rev multiple based on 2021E for Uber (2.2x) than Lyft (2.9x).

FIGURE 9 FIGURE 10 Implied EV for Uber Rides Implied EV/Revenue For Uber Rides Is Lower Than Lyft \$40,838 \$13,378 \$12,870 \$67,086 \$40.838

Minority Stakes EV of Uber Eats EV Uber Rides

2.9x 2.2x EV/ Rev EV/ Rev \$15,529 \$14,593 \$5,282

Lyft

■ Implied EV Rides ■ 2021E Rides Revenue

Source: Barclays Research, Company Reports, Refinitiv

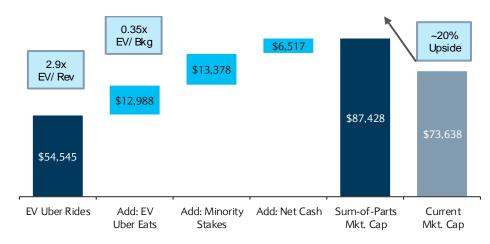
Current EV

Source: Barclays Research, Company Reports, Refinitiv

Applying peer multiples to Uber's Rides and Eats businesses results in a sum-of-the-parts valuation that is well above what the market is currently assigning to the stock – and that is without assigning any value to the investment in autonomous and other opportunities such as freight. We can debate whether the current EV/Sales for Lyft is correct, but applying the same 2.9x on 2021E Adj. Net Revenue implies and EV for Rides of ~\$55bn. The average EV/Gross Bookings of food delivery peers of 0.5x 2021E Eats Adj. Net Revenue adds another \$13bn of EV plus there is another ~\$13bn of minority investments and \$6.5bn of net cash on the balance sheet. All told, peer group multiples imply a market cap for Uber on a SOTP basis at close to \$87bn vs. the current market cap at ~\$74bn - or roughly \$48 per share.

Uber

FIGURE 11 Sum of Parts Valuation Methodology Implies ~20% Upside To Current Market Value



Source: Barclays Research, Refinitiv

On a consolidated basis, the current valuation implies an EV per User for Uber of \$737, below Lyft at \$956 and food delivery peer average (DHER, JE, GRUB, TKWY) at \$346.

Stripping out ~\$13bn for our estimate of the value for Uber Eats results in an EV per User of \$486, which is still a discount to Lyft, but gives us a more apples-to-apple comparison for the ride-hailing business stand-alone. At \$13bn for Uber Eats, however, the valuation does imply an EV per User than is nearly 2.5x larger than the average food delivery peer and nearly 4.5x larger than JE – which is the world's largest delivery network.

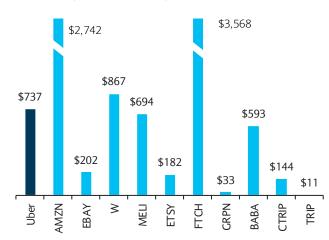
Applying Lyft's EV per User to Uber's ~85mn Rides-only MAPCs implies an EV of ~\$81bn more than the entire company is valued by the market currently. Using the average EV per User for food delivery peers adds to that another ~\$5.9bn (17mn Diners x \$346). In summary, the EV per User for comparable companies implies and EV for Uber of ~\$87bn (before assigning any value to "other bets") and with the cash and minority stakes implies a market cap of \$106bn or roughly \$58 per share.

FIGURE 12 Estimated EV/User For Comparable Ride-Hailing and Food Delivery Peers (as of 5/31/2019)



Source: Barclays Research, Company Reports, Refinitiv

### FIGURE 13 Estimated EV/User For Comparable e-Commerce And Online Travel Peers (as of 5/31/2019)



Source: Barclays Research, Company Reports, Refinitiv

#### #6 Autonomous Would Change the Story

Uber is investing \$600m in autonomous technology in 2019, an enormous sum. The company's strategy around AV involves bringing in robo-taxis slowly in each market once government approvals for driverless is adopted. Uber firmly believes that control of the rider (i.e. - the app) and the proprietary dispatch network, are the critical chokepoints that will allow the company to win in an autonomous or hybrid world. For companies like Waymo to catch up on the MAPCs side, the experience will have to match what Uber can offer in terms of price, quality and importantly liquidity and low ETAs. The Phoenix experiment for Waymo has been anything but confirming. ETAs are longer than Uber because of the limited vans in the network. Prices are higher because of the premium positioning (which was most surprising to us). And the basic human elements around what the rider can do to avoid traffic jams or basic changes to the itinerary are less seamless in autonomous. All of this likely means that the technology is still a few years away from prime-time and that human driver ride-sharing is going to proliferate for some time.

However, once the penetration of robot-taxis is in place, and the technology is working and fully accepted by society (likely 10+ years from now), the unit economics should dramatically improve in Uber's favor. Today 80% of GB goes to the driver in the form of earnings and incentives and in an autonomous world, the cost per mile would drop dramatically. We estimate fare-price (GB per mile) would come down 50%+ from current

\$2.59, and the operating expenses per mile would drop even more, closer to 90% in a fully autonomous state. Further, any reduction in GB per mile would likely expand the ridesharing TAM dramatically as it wouldn't make as much sense to drive anymore in a number of contexts. Expanding TAM and improving unit economics would likely allow Uber's valuation to expand dramatically, well above today's \$70bn.

Discussed below in more detail in this report, we look at the cost of driving through the lens of monthly consumer vehicle spend to compare car ownership costs to a monthly mobility budget for MaaS (mobility as a service). In other words, at what point might a consumer decide to "cut the cord" on car ownership in favour of other more flexible forms of mobility such as micromobility, ride-hail, car share or rental.

Even without robo-taxis, about 25mn vehicles in the US are vulnerable to replacement by ride-hailing, adding 23bn VMT to the near-term serviceable market for ride share as those households give up their vehicles, a significant increase over the ~10bn miles Uber and Lyft posted in 2018. By the late 2020s, when robo-taxis can address a portion – but not yet all – of urban and suburban trips, a total 42mn vehicles and 64bn VMT could be in play, or over 6x the volume of miles taken by Uber and Lyft combined in 2018 in the US. In the future "utopian" state, where robo-taxis are prolific (100% penetration) then the TAM for ridehailing would potentially be 20x+ or larger than today, including non-passenger trips like freight and logistics.

FIGURE 14
Vehicles And VMT in Play By Scenario

		Vehicles		VMT in Play		
Scenario	Time frame	Vehicles (mn)	% of VIO	VMT (bn)	% of VMT	
Baseline	Now - early 2020's	25	10%	23	1%	
Limited robo-taxi	Mid 2020's	32	13%	43	1%	
Moderate robo-taxi	Late 2020's	42	17%	64	2%	
Full robo-taxi	2030's	145	59%	1,691	59%	

Source: Barclays Research, NHTS, AAA

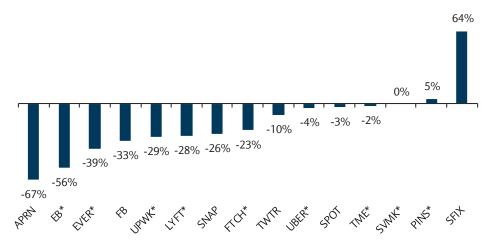
### **UBER: Five Risks to Monitor**

# #1 There Is Limited Val Support If Any of the Upcoming Prints Get Ugly - Given The Negative FCF

Mentioned above, several of the KPI's for Uber, particularly GB growth and take-rate, have eroded a bit since mid-2018. The company should see improving take rate in Eats sequentially but Rides is likely to remain muted until later in 2019. This may limit the upside on the upcoming prints to some degree. At the very least, Rides revenue is going to grow slower than GBs and slower than LYFT. Additionally, operating expenses are going to increase in 1H19 relative to 1H18. This IPO season has showed that there is limited valuation support for companies that are losing money and printing in-line or slightly better quarters.

Consumer internet IPOs have a long history of chopping around in the first 12 months, especially the biggest cap names like Facebook and Alibaba, we wouldn't be surprised to see Uber in this camp.

FIGURE 15
First 12 Months Performance Post IPO



Source: Barclays Research, Refinitiv. Note: \*Less than 12 months after IPO

### #2 Rides GB Growth (ex-FX) Is Decelerating

Our biggest fundamental concern around the Uber story today is the sharp deceleration in gross bookings growth rates despite the fact Uber has penetrated well-less than 2% of the estimated TAM. This trend makes little sense based on the history of new market adoption in consumer internet. There are likely a few explanations for this: 1) unlike other consumer internet services where any user can download some software and be up and running, Uber has to invest a lot in physical infrastructure (driver supply) in order to scale its business, and like Amazon building warehouse capacity, this simply takes time, 2) the space is in a weird stage whereby early adopters like business MAPCs and urban dwellers are closer to fully ramped and using the service with very high frequency, but the newer MAPCs or late adopters, are likely folks from the suburbs and other demographics that are far lower in frequency. We can see from Lyft's cohort disclosures that the average annual cohort sees frequency increase at about 10% y/y after the second year, which is probably the same for Uber. But newer cohorts of these later adopters may be following the same pattern, but frequency is much lower on an absolute basis.

FIGURE 16
Uber Rides Gross Bookings Growth Decelerated Sharply Starting in 2018

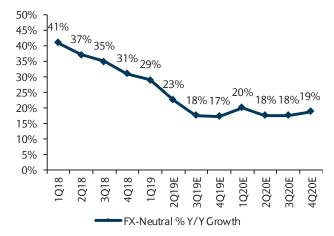
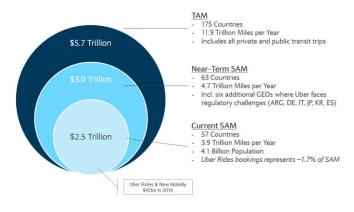


FIGURE 17
Uber Penetrated Less Than 2% Of The \$2.5Tn Current SAM



Source: Barclays Research, Company Reports

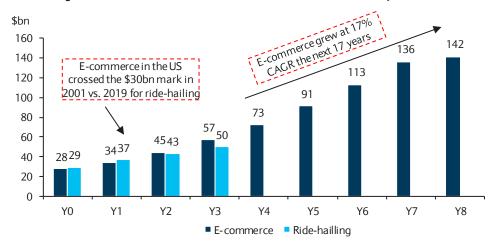
Source: Barclays Research, Company Reports

It could also be that the TAM isn't 12Tn miles per year, or the replacement of car ownership isn't playing out as described. In which case this would mean the real addressable market is more like Taxi and a few other transportation options, and not nearly as large as Uber claims. We doubt this to be the case, however if it were then we'd expect a ceiling on the EV/revenue that investors are willing to assign to ride-hailing stocks.

We are modelling GB growth of 18% ex-FX in 2020 which we think will prove somewhat conservative (likely ends up in the mid-to-high 20's). Even more concerning is that we don't think we've reached a same-store-sales for GB; Uber is still opening more rides markets. Stated differently, the SSS growth rate for Rides is likely closer to 15%-20%, potentially lower.

As mentioned above, in other sectors like software and mobile advertising, where incremental costs to serve another user are largely zero and distribution is near-infinite (across 4B+ smartphones), scaling up is much easier than in a two-sided marketplace model that requires lots of heavy lifting to on-board new supply. Ride-sharing reminds us of e-commerce in that way, an enormous TAM that takes a long time to build up the capacity to penetrate many areas of physical retail. E-commerce hasn't been in hyper growth mode since the late 1990's or early 2000's. It's been a steady 20-30% grower for the past 15+ years because of some of its capacity constraints. The same may end up being true for ride-sharing. The market may grow at a steady 20%-30% CAGR for a number of years, and not experience any more hyper growth.

FIGURE 18
Ride-hailing Growth Rates Should Reflect Those Of E-commerce In Early 2000



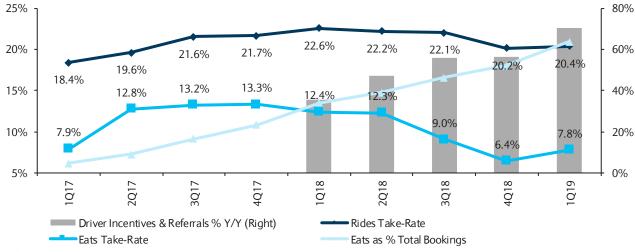
 $Source: Barclays \,Research, \,US \,Census, \,Company \,Reports. \,Note \,Ride-hailing \,figures \,include \,total \,Lyft \,and \,US/Canada \,Uber \,ride-hailing \,bookings.$ 

E-commerce in the US crossed \$30B in 2001 and it grew at a healthy 28% CAGR for the next 3 years. US Ridesharing reached \$30B annualized run rate sometime in 2018, and is growing at 22% in 2019, hence we may be in store for stable  $\sim$ 20% growth for the next few years if it mirrors e-commerce adoption.

### #3 Take Rates Are Imploding From The Scorched Earth Backdrop

Uber's rides take rate was down 160bps y/y in 4Q18 and should continue to decline until the company laps the heavy promotion period that started mid-3Q18. Lyft has also increased its driver and rider incentives per trip meaningfully in 2018 vs. 2017 (\$384m to \$540m in absolute dollars, while incentives per trip came down from \$1.02 to \$0.87), hence both companies are subsidizing more than in the past. Didi is doing the same in Brazil (although we can't quantify precisely). So Uber is fighting local turf wars in a number of regions at the same time, which is driving the take rate down.

FIGURE 19
Rapid Rise In Driver Incentives & Referrals Coincides With Decline In Core Take-Rate



Source: Barclays Research, Company Reports

On the Eats side, it's equally as problematic, with take rates compressing 690bps in 4Q18 due to mix shift from lower take-rate bookings in India, restaurant selection build-out, competition and mix shift towards GB from QSRs who have lower take rates. The Eats take rate should start to improve sequentially from 2Q19 onwards as Uber modified its fee structure in mid-March to meet the industry standard delivery fee, service fee and small order fee. We've heard from channel checks that the company is also re-upping agreements with some of its larger QSR partners with terms that are more favorable than the initial deals entered into in 2018. The Eats business should also experience some mix shift back towards smaller non QSR restaurants over time as the selection on the platform is expanded. India becomes less of a drag as the company comps through the hyper growth stages. These changes in mix and terms should allow Uber to increase its take rate closer to 15% (gross revenue/GFS) long term, for delivery.

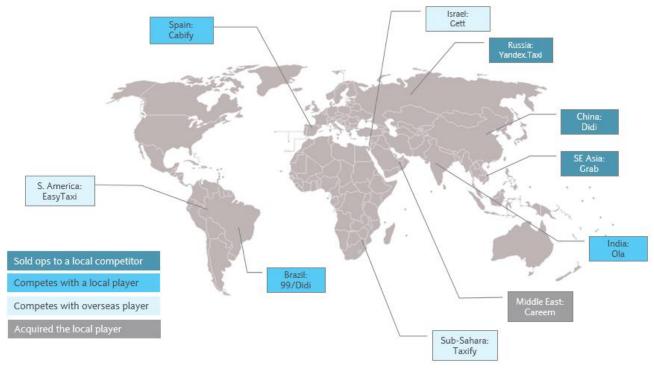
### #4 The Global Scale May Not Matter in Local Markets

There are few network externalities that ridesharing companies like Uber and Lyft benefit from. Drivers work locally. Outside of business travellers, most of the MAPCs book locally as well. Each city market for Uber is like an individual P+L with its own dedicated operations team, customer acquisition playbook for both MAPCs and drivers, and incentives.

The only infrastructure that is shared across markets is: R+D for the overall platform and applications, G+A and other corporate functions, the autonomous investments, and some larger corporate deals for MAPCs, eaters and restaurants. Outside of these small items, Uber is in a local ground-and-pound across 700+ disparate markets all at the same time. The profit pools in some markets can be re-invested into other markets that are under intense

competition or still in early formation phase, which is a luxury that smaller competitors don't enjoy.

FIGURE 20 Global Ridesharing Marketplace

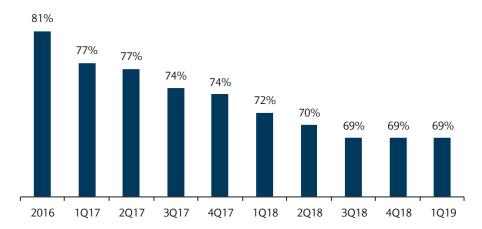


Source: Barclays Research, Company Reports

# **#5 Uber Is Losing Market Share in Some Countries**

Uber has lost share in the US to Lyft over the past two years since the "delete Uber" campaign started and Lyft ramped up incentives in certain markets. We estimate US/CAN ridesharing market gross bookings share has gone from >80% in 2016 to  $\sim66\%$  in 1Q19.

FIGURE 21
Uber Share of US/CA Ride Hailing Gross Bookings



Source: Barclays Research, Company Reports

Lyft spent total S+M of \$803m in 2018 which came out to \$0.39 per mile, and an additional driver and rider incentives of \$540m or \$0.26 per mile. This compares to Uber's total S+M of \$2.6B or \$0.16 per mile, and driver incentives of just under \$2B or \$0.12 per mile. Hence even with  $1/3^{rd}$  the trips or miles in the US, Lyft is spending a lot more to maintain its network than Uber on average. While this is discouraging for Uber, the company is probably ok with some share going to Lyft if it keeps other competitors at bay and regulators out of the picture. Lyft is more or less dictating pricing for the category and Uber will match accordingly. Hence with Lyft's increased focus on getting closer to profitability and reducing insurance and payment costs, we don't think there will be meaningful market share shifts from current levels.

We think the same story is playing out in Brazil with Didi recently acquiring 99. Uber is ceding some market share but likely holds the line at a certain point. This keeps other competition away, and keeps the Brazilian regulators off Uber's back. We'd guess the incentives and unit economics for 99 running its ride-hailing network look a lot worse than Lyft's on a per mile basis.

# Valuation & SOTP Methodology

We are initiating coverage of UBER with an Overweight rating and \$50 PT based on 4x our combined 2020E and 2021E revenue estimates, and adding back in the \$11B of equity stakes in minority companies (Didi, Grab and Yandex Taxi).

FIGURE 22					
How We Arrive At Our \$50 Price Targe	et				
Uber Valuation Worksheet (\$ in millions, except per share amounts)					
Current Price	\$40.41				
Diluted Shares Outstanding (m)	1,822.3				
Current Market Cap (\$m)	73,637.9				
Less: Cash and Cash Equivalents	8,209.0				
Less: IPO Proceeds	8,375.4				
Plus: Debt	6,869.0				
Enterprise Value	72,297.9				
EV to Revenue		2019E	2020E	2021E	2022E
Adj. Revenue (\$m)		\$12,788	\$17,336	\$23,255	\$28,470
Current EV/Revenue Multiple		5.7x	4.2x	3.1x	2.5x
Target Multiple		4.0x	4.0x	4.0x	4.0x
Enterprise Value		51,150	69,345	93,021	113,881
Plus: YE Cash (incl Restricted Cash		13,315	9,393	7,218	7,046
Less: YE Debt		5,284	5,474	5,619	5,758
Less: Minority Interest		0	0	0	0
Equity Market Capitalization		59,182	73,264	94,620	115,169
FY End Projected Sharecount (m)		1840.0	1877.1	1914.9	1953.5
Implied Stock Price on Forward Revenue		\$33	\$40	\$50	\$59
Assets	Own %	Val Dt.	Val \$B	Own \$	
Didi	15.4%	Jun-18	\$56.0	\$8.6	
Yandex.Taxi	38.0%	Jul-17	\$3.7	\$1.4	
Grab	23.2%	Mar-19	\$14.0	\$3.2	
Total Asset Valuation (\$B)				\$13.3	_
Disc ount @ 15% (\$B)				\$11.3	=
Target Total UBER Market Cap (\$B)		70.5	84.6	105.9	126.5
FY End Projected Sharecount (m)		1840.0	1877.1	1914.9	1953.5
Implied Consolidated Stock Price		\$38	\$45	\$55	\$65

\$50

Source: Barclays Research

# LYFT, INC (LYFT): PURE PLAY ON NORTH AMERICA RIDE-HAILING, \$55 PRICE TARGET

**LYFT** 

Stock Rating EQUAL WEIGHT

Industry View POSITIVE

Price Target USD 55.00

Price (31-May-2019) USD 57.62

Potential Upside/Downside -4.5%

Lyft, Inc.(LYFT): Quarterly and Annual EPS (USD)

	2018 20		2019		2020		Chan	Change y/y	
FY Dec	Actual	Old	New	Cons	Old	New	Cons	2019	2020
Q1	N/A	N/A	-48.53A	-48.53A	N/A	-1.14E	-0.89E	N/A	98%
Q2	N/A	N/A	-1.18E	-1.35E	N/A	-1.01E	-0.97E	N/A	14%
Q3	N/A	N/A	-1.33E	-1.49E	N/A	-0.97E	-1.02E	N/A	27%
Q4	N/A	N/A	-1.39E	-1.47E	N/A	-0.86E	-0.97E	N/A	38%
Year	N/A	N/A	-9.36E	-9.35E	N/A	-3.98E	-4.56E	N/A	57%
P/E	N/A		N/A			N/A			

Source: Barclays Research.

Consensus numbers are from Refinitiv received on 03-Jun-2019; 13:35 GMT

# LYFT: Five Reasons to Be Bullish

Owning shares of LYFT at 4x 2021 revenue is simply a call on whether ride-hailing is a good business first and foremost, and whether the company can continue to gain market share and improve its unit economics. One could argue that if Uber's stock works from here, then LYFT is an even more attractive equity as it implies that Uber's unit economics are improving, and hence LYFT's would be too and the company has more leverage coming from a much lower starting point in terms of EBIT losses per ride.

#### #1 US Attractive Ride-hailing Market, LYFT Is Taking Share

Consumers in the US spend a lot of monthly income on transportation. AAA data suggests monthly expenditure for a mid-size sedan that is driven 15k miles annually in an urban environment is just under \$1000 per month for mileage, depreciation and parking. The same car for a suburban consumer runs around \$740 per month. On a per mile basis, car ownership runs around \$0.50 on average, or \$0.64 if we include parking, in the US (See "Cutting the car ownership cord" from Brian Johnson and Kristina Church, 6/4/19).

For daily commuters, ride-hailing is cheaper on a cost per mile basis for any trip during the first 4 miles. After that distance, car ownership is actually cheaper than ride-sharing. If we factor in other annoyances and hassles like time during commute, time to find parking, etc., - the productivity consumers can get out of ride sharing plus the lower cost during commute, argues that companies like Lyft and Uber should continue to take share of trips.

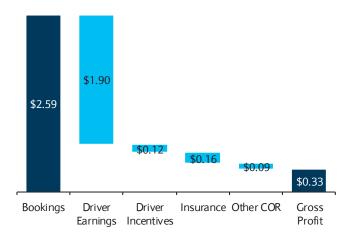
Each city has different trade-offs and idiosyncrasies for car ownership vs. ride-share (weather, urban sprawl, traffic, public transport options, etc.) so it's hard to generalize across all markets, but the US ride-hailing market is generally a pretty good value proposition for consumers.

After paying out driver earnings and incentives, the biggest cost of managing a TNC is insurance, which can be much higher in the US compared to other markets. However, insurance cost per mile is more than made up for by the higher gross bookings per mile in the US compared to WW, illustrated below in Figure 23. Stated differently, LYFT's GP per mile is higher than Uber's rides-only GP per mile because of LYFT only operating in the US.

FIGURE 23 Lyft Gross Profit per Mile \$2.68 \$3.99 \$0.27 \$0.31 \$0.31 \$0.43 Bookings Insurance Other COR Driver Driver Gross Earnings Incentives Profit

FIGURE 24





Source: Barclays Research, Company Reports

Source: Barclays Research, Company Reports

Investing in LYFT over UBER is a pure play on participating in a market with healthy unit economics at scale, as illustrated above, especially as some of the driver and rider incentives cool off. And LYFT has been gaining share since the "delete Uber" campaign in early 2017. Part of this is likely because of Uber's problems back then, but interestingly, even with the new management in place at Uber and with more resources to deploy, Lyft has been able to continue to chip away at market share.

FIGURE 25
Lyft Share of US/CAN Ride-Hailing Gross Bookings



Source: Barclays Research, Company Reports

#### #2 Assumption That Market Share Determines Profitability Is Not True

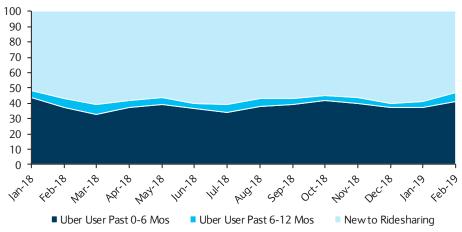
The one unique thing about ride-hailing that makes it more like a transportation business than a traditional asset light two-sided-marketplace model is its local nature, and lack of network effects. Once LYFT catches up with Uber on ETAs in any particular market (i.e. - they have adequate liquidity and can match service levels) the services are hard to distinguish between. This likely is reflected in the steep losses at Lyft from inception to 2017, at which point, service levels started to reach parity in most major US markets. Uber's scale in other parts of the world or in other categories of services mean little when the ETA

and the price per ride is the same in either app for a given local query. Much the same way that shoppers don't care which online travel agent they book a flight or hotel with, they just want the best deal for a particular trip.

The point where Lyft can match Uber on service levels in a given city, they have already subsidized the driver side of the market enough to be viable, and on a go-forward basis, the unit economics are broadly the same. Lyft should be in a position to predict demand and shape its driver supply as effectively as Uber, despite having less market share. We think most major markets in the US are approaching this level of parity on service levels and unit economics, despite the higher market share for Uber.

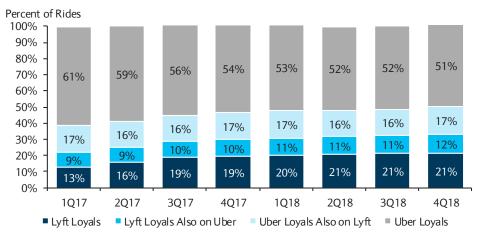
Additionally, as Uber fights multiple wars across rides and food delivery globally, LYFT is well positioned. To the degree that Uber has to defend its category position in 56 other countries, the unit economics in US ride-hailing are likely to be stable and improving at Lyft.

FIGURE 26
User Acquisition Mix: 50-60% of Lyft New Riders Coming From Uber



Source: Barclays Research, Yipit

FIGURE 27
Rides Market Share By Active Rider Type



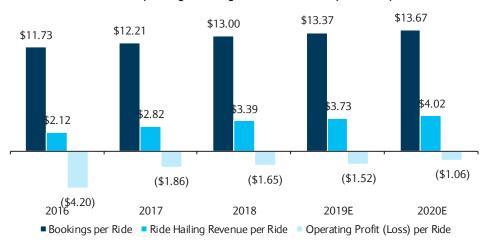
Source: Barclays Research, Yipit

If we look at market share data, it shows that Lyft has been gaining share among new ridehailing users and is even seeing an increasing share of switchers or multiple-app-ers from Uber over the past eight quarters, illustrated above.

#### #3 Unit Economics Are Improving

Looking at LYFT's financials over the past three years, it's undeniable that the unit economics have dramatically improved. Lyft's take rate in 2016 and 2017 is dramatically lower than Uber's on a like-for-like-accounting basis, despite Uber having tons of low-take-rate international markets. 2016 was probably a very challenging time for LYFT as it was trying to get service levels and ETAs to where Uber was at the time in top US markets and burning cash flow. Then everything started to change for the better in 2017 when "Delete Uber" took place and LYFT's service levels caught up.

FIGURE 28
LYFT's Unit Economics Improving: Bookings, Revenue, and Adj. EBITDA per Ride



Source: Barclays Research, Company Reports

Since that time, LYFT has experienced dramatic improvement in take rate and EBIT per ride. In 2018 and 2019, the EBIT per ride has dipped as the company made greater investments in AV, Bikes/Scooters and the car leasing program, but stripping those out, the EBIT per ride for the core franchise is probably much more stable than the aggregate. The company is still less profitable than Uber's rides business, but based on our calculations, isn't that far off.

The biggest differences that exist today between the two platforms is that LYFT's heavy US mix has higher insurance cost per mile.

#### #4 Founder Lead and Single Focus

There is a long history in technology that founder-lead companies tend to preserve the pace of innovation and culture for a lot longer than companies where professional management has been brought in. The jury is still out on ride-hailing, as you rarely see management swaps at the largest player in the space, it typically happens to the smaller and more resource constrained businesses.

Illustrated below, Lyft has actually out-innovated Uber in a number of critical product areas over the past few years, which is a very good signal and a big differentiator.

FIGURE 29 Lyft Track Record of Innovation

	Announcement Date		
Product Innovation	Lyft	Uber	
UberPool & Lyft Line	6-Aug-14	5-Aug-14	
Driver Instant Pay	4-Dec-15	17-Mar-16	
Schedule Rides in Advance	23-May-16	9-Jun-16	
Gift Cards	9-Aug-16	26-Sep-16	
Google Maps	8-Sep-16	12-Jan-17	
Multiple Stops	1-Nov-16	26-Oct-17	
Upfront Pricing	29-Nov-16	14-Nov-17	
Rewards Program	12-Nov-18	14-Nov-18	
Ride Pass	16-Nov-18	30-Nov-18	
Shared Saver & Express Pool	20-Feb-19	21-Feb-18	

Source: Barclays Research, Company Documents;

It's impossible not to think of the current industry narrative as the same thing that happened in online travel at its early stage. Expedia had professional management after being acquired and spun out of IAC, and was a multiple-strategy full-service OTA. Booking.com was a small and founder lead company making progress in Western Europe. Unlike Expedia, Booking.com was singularly focused on hotel accommodations and the agency model at the time. The company snuck up on Expedia and took over the region in terms of market share by remaining singularly focused and founder lead.

The current ride-hailing backdrop is almost exactly the same. Uber has replaced its founder with professional management and is a multi-service offering spread globally. Lyft is smaller and only in North America, and singularly focused on ride-hailing (with an acute focus on supply development).

We think there is ample room for two players in every market, and in some cities like New York, more service providers (VIA, etc.). The market share shifts going forward are likely to be determined not by sheer willingness to scorch the earth with marketing spend and incentives, but likely based on product development and differentiated services.

Today the services are largely indistinguishable based on service levels and product offerings, but this may not always be the case and we will be watching closely as things evolve.

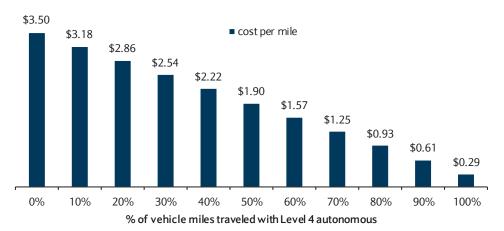
#### #5 Autonomous a Moon-shot Opportunity; Working with Waymo

LYFT has a dual-track strategy in autonomous. On one side, the company is building its full-stack autonomous technologies. On the other side, Lyft is working with a number of partners like Waymo, Aptiv, GM, Ford, Magna, for example. We think the chokepoint in the robotaxi value chain is likely going to be the company that controls the direct relationship with the user (i.e. – the mobile application that the user books a trip), along with the TNC routing and dispatch system. The hybrid strategy will be on display for the first time ever in Phoenix with 10 Waymo vans being hailed by the Lyft app and dispatch.

The real opportunity for Lyft as it transitions its TNC from human drivers to AV is the 90% potential decline in cost per mile, illustrated below.

FIGURE 30

Cost Per Mile Of Rideshare Under Different Levels of Level 4 Autonomous; As Autonomous Accounts For A Greater Portion Of Rideshare Miles, Cost Per Mile Comes Down



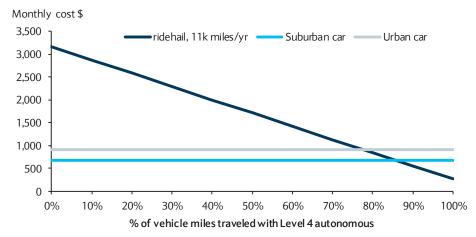
Source: Barclays Research estimates, AAA

Note – 0% indicates all rideshare miles are human driven

This will likely take decades to play out, but we estimate every 10% of the Lyft fleet that is autonomous will lower the company's cost of fulfilment by around the same amount (8%-10%). As the cost per mile comes down, ride-hailing pricing will follow, which should dramatically expand the volume of trips. Somewhere along this cost curve (right now we estimate in the neighborhood of 75% AV penetration of total miles on a TNC network) is where we think the tipping point happens where users decide to take ride-hailing over car ownership, likely in the late 2020's.

FIGURE 31

Monthly personal transport cost under different scenarios of Level 4 autonomous miles traveled vs. suburban and urban vehicle ownership costs. At ~75% urban vehicle ownership and ridesharing are at parity



Source: AAA, Barclays Research estimates

Note – 0% indicates all rideshare miles are human driven

### LYFT: Five Risks to Monitor

### #1 LYFT Is Sub Scale compared to Uber

The biggest risk for LYFT in our view is simply that it is subscale relative to Uber and as a result is less efficient. The company has come a long way towards catching up with Uber over the past two years. ETAs and overall service levels are similar in most major US markets, especially those on the west coast that Lyft has strong share, and we'd guess the number of drivers in the US (only) is closer to parity than before. However, with only 30% market share, the daily frequency is about  $1/3^{rd}$  of Uber's and that puts LYFT at a disadvantage.

FIGURE 32
Business Comparison of Lyft vs. Uber (2018)

•	` ,		
in Millions (except per Unit metrics)	Uber	Lyft	% Delta
Number of Markets	750	300	150%
Customers	91	19	389%
Trips	5,200	619	740%
Trips per day	14.2	1.7	
Trips per customer	57	33	
Bookings	\$49,799	\$8,054	518%
Y/ Y	44%	76%	
Bookings per trip	\$9.58	\$13.01	
Bookings per customer	\$547	\$ <b>4</b> 33	
Drivers	3.5	1.9	84%
Trips per driver	1,486	326	
Bookings per driver	\$14,228	\$4,239	

Source: Barclays Research, Company Documents

Uber is able to invest more and spread its costs over 2.3x as many trips in the US and 8x the volume globally. Uber is investing \$600m in ATG in 2019, which is greater than LYFT's

entire R+D budget, as an example of the scale disadvantage. Over time, more engineers, more products, higher engagement, greater ability to subsidize, may ultimately tip the scale back towards Uber.

Above we made the argument that ride-hailing is a local ground-and-pound game, and once service levels are at parity, there isn't much of a competitive advantage between the #1 and #2 players in any market. This isn't true for most other two-sided marketplaces, where an 80%-20% market share dynamic ends up playing out, but we will be monitoring it. The penetration in ride-hailing is low and we think there is potential for both companies to continue to take share from other means of transportation, much like we see in other sectors like online travel. Hence if Uber proves to be a successful equity story, there is an argument to be made that Lyft at \$17B market cap, may even have more upside potential.

# #2 Growth Rate Decelerating Sharply, May Be Close To Uber's Rides GB Growth By 4Q19

Uber's communication on the IPO roadshow suggests that the company is done conceding market share to Lyft, somewhere in the 2H18 time period. If this proves to be accurate, the growth rates for US GB or trips or any metric should start to converge once we anniversary this phenomenon. Based on our current thinking, that could become clear to the investment community around 4Q19.

FIGURE 33

Lyft's US Gross Bookings Growth Should Converge With Uber's WW Rides Business By 1020



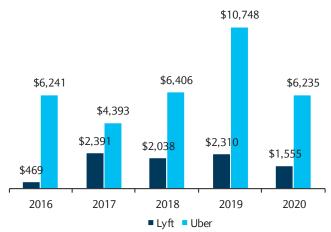
Source: Barclays Research, Company Reports

At which point assuming the valuations are similar (EV/Rev), LYFT bulls may be asking themselves why they own a smaller player, growing the same clip, without the upside call options from food delivery, international or other moonshots. Lyft argues that those other initiatives at Uber are going to reallocate resources away from the core ride-hailing product focus and lead to problems, but that may not be the case.

### #3 Far Less Capital To Deploy and Burning EBIT and FCF

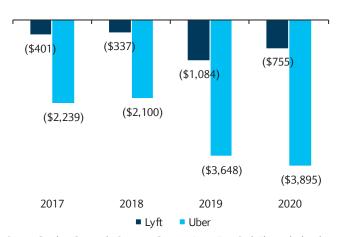
The reality for Lyft is if this space comes down to who can raise and deploy the most capital, the \$3B in post IPO net cash (ex-insurance reserve) pales in comparison to Uber's \$7B net cash and \$13B in gross cash. Lyft can deploy the capital for US and Canada ridehailing expansion, while Uber is likely to allocate 20%+ to food delivery and other areas, and is fighting wars on ride-hailing in the US, Brazil, India and several other markets.

FIGURE 34
Ending Cash Balance Ex-Insurance Reserve (in \$ Mn)



Source: Barclays Research, Company Reports

FIGURE 35
Annual Free Cash Flow (in \$ Mn)

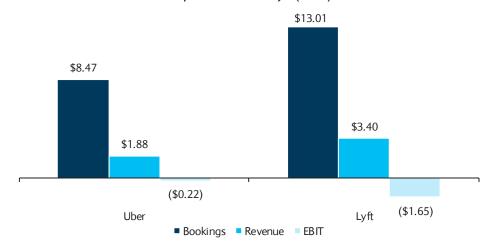


Source: Barclays Research, Company Reports. Note: Free Cash Flow calculated as operating cash flow minus capex.

EBIT per trip or per mile is a good barometer of unit economics, and Uber is more profitable today on this basis. This puts Lyft at a structural disadvantage as both companies scale up. Uber's superior cost structure means that as the subsidy war continues, it will lose less money than Lyft per trip. And if the subsidy war ends, it will make more money per trip. Further Uber has 2x the volume of trips in most markets, so will see better incremental margins over time.

This can be challenging to see for investors because of the difference in the way that the two companies record incentives discussed below in the accounting section. But EBIT per ride is a good level-set on how profitable or lack thereof each of these companies are, and Uber's rides business has far better economics on that basis.

FIGURE 36
Estimated Unit Economics Per Trip Uber Rides vs. Lyft (2018)



Source: Barclays Research, Company Reports

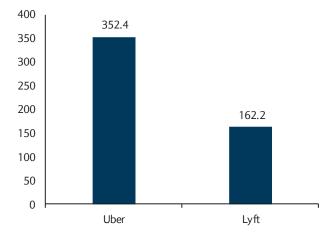
With all that said, we believe LYFT has done an amazing job of closing the gap on unit economics over the past three years.

#### #4 Lower Utilization Rates May Mean Local Structural Disadvantage

NYC has passed new regulations that TNC's have to maintain a minimum wage for drivers after wear-and-tear, and has capped the number of drivers each network can have in certain zones in the city to reduce congestion. The new regulations are governed by a 58% driver utilization rate, which means that the minimum wage has to be hit while the TNC manages driver on/off time above 58%. Anytime the utilization rate drops below 58%, Uber or Lyft has to pay subsidies to get those drivers back up to the minimum wage. We think over time more cities may adopt this kind of regulation to combat congestion and preserve driver minimum wages.

As further evidence of a meaningful and perhaps structural disadvantage, we analyzed Lyft and Uber's quarterly trips per driver (as of 4Q18) as well as dispatched trips per vehicle in New York City over time. As of the end of 2018, Uber's estimated trips per driver (for Rides only) was more than twice that of Lyft (352 trips per driver for Uber vs. 162 for Lyft). Admittedly, this doesn't itself prove better utilization on a stand-alone basis, as fewer, but potentially longer trips could result in higher utilization than numerous short trips (due in part to down time waiting for new riders). That said, there is likely a strong positive relationship between the number of trips per driver and utilization. In a similar vein, our analysis of trips per unique vehicle in NYC over the last four years suggests that Uber vehicles consistently have a much higher monthly number of trips per vehicle than Lyft. While it's not clear based solely on this data as to why there is a higher trip per vehicle metric for Uber in NYC, we speculate that some drivers use both platforms, regularly switching between the two based on the availability of riders. If drivers are able to find acceptable fares on Uber, they may use Lyft less frequently. Under the aforementioned NYC minimum wage/utilization regulatory framework, Lyft may end up facing a structural disadvantage because of this.

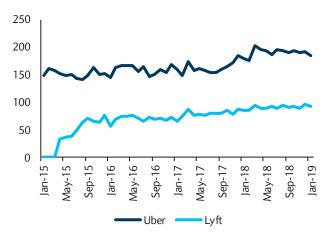
FIGURE 37
Estimated Quarterly Trips per Driver (Rides Only)



Source: Barclays Research, Company Documents. Assuming  $\sim$ 3.9m and  $\sim$ 1.1m drivers for Uber/Lyft respectively, as of 4Q18

FIGURE 38

NYC Dispatched Trips per Unique Vehicle



Source: Barclays Research. NYC Taxi & Limousine Commission.

Lyft is appealing the ruling on the basis that using utilization rate to manage the number of drivers will structurally advantage Uber because it has 2x the volume of trips to fulfil than Lyft at any given time in NYC.

This whole situation sums up the bear case on Lyft rather well, with the same pool of drivers, and the same pricing structure, the TNC with more volume in any market has a

structural advantage, and the second tier players will have to adapt their service to compete, or run the risk of have significantly lower unit economics.

#### **#5 Likely No Valuation Support**

Similar to Uber, and as we witnessed after LYFT's 1Q19 earnings release, there is virtually no valuation support for ride-hailing companies when sentiment turns south. LYFT delivered on every metric as promised and even raised FY19 revenue guidance and commented that it is very focused on reducing costs on a go-forward basis, yet shares traded down 11% the next day and over 20% that week. We've seen this phenomenon for many loss making and FCF negative companies in the space (same for PINS following its 1Q19, and same for SNAP for two full years following its IPO debut). When sentiment turns south, there is likely to be little valuation support for LYFT (or UBER for that matter).

One only has to look at the draw-downs experienced in 4Q18 to see this. Names like SNAP and SPOT were cut in half from the mid 2018 highs through year end. Hence of the overall market gets twitchy (which is well above our pay grade to determine) than LYFT shares could come under significant pressure.

Stated another way, when a company has negative FCF there is less conviction around what the appropriate EV/Revenue multiple should be during times of market stress. And that could play out for LYFT in the future depending on the tape.

The flipside is that if the risk appetite for stocks irrespective of operating losses, and LYFT can establish a path toward break-even by 2021 or 2022, then shares could re-rate higher at some point.

# Valuation Methodology

We are initiating coverage of LYFT with an Equal Weight rating and \$55 PT based on 4x our combined 2020E and 2021E revenue estimates of \$4.1B and \$5.1B respectively.

#### FIGURE 39

How We Arrive At Our \$55 Price Target

#### Lyft -- Valuation Worksheet

(\$ in billions, except per share amounts)

Current Price	\$57.62
Diluted Shares Outstanding (M)	343
Current Market Cap (\$M)	\$19,792
Less: Cash and Cash Equivalents	\$2,989
Plus: Debt	0.0
Enterprise Value (\$M)	\$16,804

EV to Revenue	2019E	2020E	2021E
Revenue (\$m)	\$3,294	\$4,152	\$5,137
Current EV/ Revenue Multiple	5.1x	4.0x	3.3x
Target Multiple	4.0x	4.0x	4.0x
Enterprise Value	\$13,177	\$16,608	\$20,549
Plus: YE Cash	\$2,324	\$1,569	\$1,425
Less: YE Debt	\$0	\$0	\$0
Less: Minority Interest	0	0	0
Equity Market Capitalization	15,501	18,177	21,974
FY End Projected Sharecount (m)	342.0	357.8	367.2
Implied Stock Price on Forward Revenue	\$45	\$51	\$60

Target Price	\$55

Source: Barclays Research

# RIDE-HAILING INDUSTRY

# Making Sense of Uber & Lyft Intricate Accounting Differences

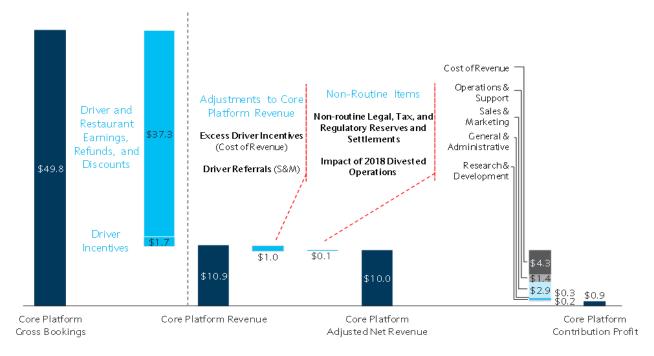
Before we dive into the overview of the ride-hailing and food delivery space, we think it is absolutely critical for investors to understand the difference in the way Uber and Lyft report key metrics, as this can lead to all kinds of mis-understandings around what is (or is not) going on in the space and with key KPIs. A good example of this is Uber and Lyft both recorded a 16% take rate in their rides business in 2016, but the economic take rates were likely different. These key figures (and others) are distorted by differences in accounting and business mix. Our key takeaways: 1) Lyft's definition of gross bookings appears understated relative to Uber. 2) Lyft's definition of bookings and revenue likely contributes to a higher reported take rate; and 3) Lyft's definition of Contribution is a better proxy for adj. gross profit whereas Uber's Contribution definition is a much better proxy for adj. EBIT.

# The Three Primary Metrics Are Gross Bookings, Adj. Net Revenue and Contribution Profit

Lyft's financial reporting is fairly straightforward once you understand the difference between how the company records gross bookings and incentives (vs. Uber).

Uber's financials are much more complex. The company reports several non-GAAP metrics whose definition require some adjusting to tie to comparable metrics for Lyft. The figure below shows the bridge from Gross Bookings to Adj. Net Revenue and Contribution Profit for Uber's Core Platform. The Core includes Rides, Uber Eats, and New Mobility (Bikes & Scooters) and excludes all other investments in autonomous and other bets such as Freight.

FIGURE 40
Uber's Accounting Is A Challenge To Say The Least: Bridge From Gross Bookings To Contribution Profit In 2018 (\$B)



Source: Barclays Research, Company Reports

Gross Bookings for Uber is pretty straight-forward. It represents the total amount end-users actually pay for ride-hailing, meal-deliveries, and bike & scooter rentals. Unlike Lyft, Uber does not deduct from gross bookings Taxes & Fees, Tolls for things like roads and bridges, or any user discounts. Uber's gross bookings definition does not include any tips passed

through directly to drivers for rides (or meal deliveries), but neither does Lyft's. For example, we estimate the gross bookings of a \$24 ride fare with a \$4 tip to the driver, \$2 in taxes/fees (like airport taxes) and a \$1 toll, would be \$20 for Uber and \$16 for Lyft, illustrated below. That's a 20% difference in gross bookings for the same exact trip.

Gross Bookings Definition Comparison Uber vs. Lyft

	Uber (Rides)		Lyft	
Total Fare		\$24.00		\$24.00
Includes Tips	No	\$4.00	No	\$4.00
Includes Taxes & Fees	Yes	\$2.00	No	\$1.75
Includes Tolls	Yes	\$1.00	No	\$1.00
Includes Market-wide Discounts (@5%)	No	NA	No	\$1.25
Bookings Recognized		\$20		\$16

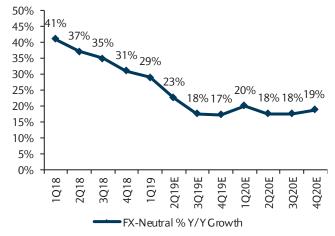
Source: Barclays Research, Company Reports

Lyft rides gross bookings growth of 61% Y/Y in 1Q19 was  $\sim$ 2x Uber's FX-Neutral rides bookings growth. Lyft also records market-wide user discounts as a reduction to gross bookings, making the two businesses harder to compare. For example, a 30% market wide discount to the fare above would reduce a normally \$20 fare to  $\sim$ \$10 in gross bookings (\$6 for the discount and \$3 for the tax) or about 50% below the same exact trip for Uber.

The exact impact is difficult to quantify, but changes in fare mix (i.e. business travel to/from airports) could have a positive impact on Uber's gross bookings as well as fares that have tolls. Lyft excludes these amounts from bookings. Overall,

Lyft's definition of gross bookings appears understated relative to Uber.

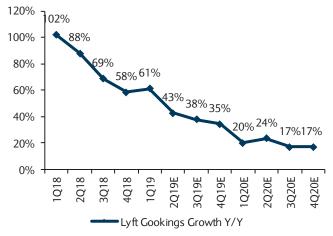
FIGURE 42
Uber Actual And Expected Gross Bookings (Rides Only)



Source: Barclays Research, Company Reports

FIGURE 43

Lyft Actual And Expected Gross Bookings



Source: Barclays Research, Company Reports

**Revenue and Adj. Net Revenue** (ANR) is the primary top-line metric Uber will steer investors toward, but this metric is understated compared to Lyft's revenue metric because Uber's ANR is also net of referral bonuses paid to drivers, as well as excess driver incentives.

Revenue for Lyft, on the other hand, is simply gross bookings net of driver earnings and driver incentives (two contra revenue items). Lyft also has its car leasing program in revenue (\$54.5m in 2018).

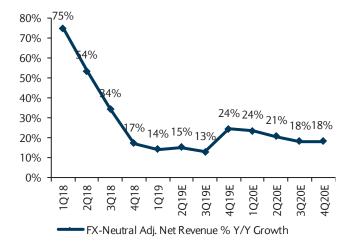
FIGURE 44

Adj. Revenue Definition Comparison Uber vs. Lyft

	Uber (Rides)		Lyft
Adj. Revenue = Platform Fees as % Bookings			
Less Driver Earnings & Incentives	Yes	\$12.60	Yes \$11.82
Less Driver Referrals	Yes	\$1.00	No NA
Less Excess Driver Incentives	Yes	\$0.75	No NA
Less Market-wide Discounts (@5%)	Yes	\$1.25	No NA
Adj. Revenue Recognized		\$4.40	<i>\$4.18</i>
Take-Pate		22%	26%

Source: Barclays Research, Company Reports

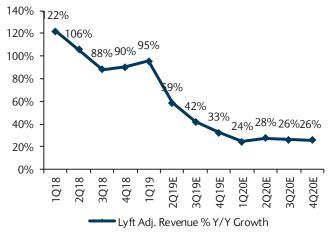
FIGURE 45
Uber Estimated Rides Adj. Net Revenue



Source: Barclays Research, Company Reports

#### IGURE 46

#### Lyft Estimated Rides Adj. Revenue



Source: Barclays Research, Company Reports

Take Rate (revenue as a percent of gross bookings) is a function of a company's ability to continually raise its base service and effectively manage driver earnings and incentives. Additional deductions to revenue, such as the way Uber accounts for driver referrals, puts downward pressure on take-rate. Similarly, any exclusions to gross bookings, such as the way Lyft accounts for tolls, airport fees, and market-wide discounts puts upward pressure on take-rate. Overall, Lyft has a broader definition of revenue than Uber (fewer revenue deductions means a larger numerator in the equation) and has a more conservative definition of gross bookings (more exclusions from gross bookings means a lower denominator) and which likely contributes to the higher reported revenue take-rate.

FIGURE 47

#### Lyft's Definition Of Bookings And Revenue Contributes To A Higher Reported Take Rate

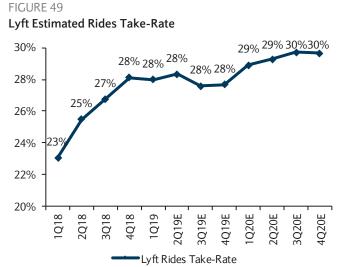


Source: Barclays Research, Company Reports

Take Rate was lower for Uber's ride-hailing business vs. Lyft's in 2018 ( $\sim$ 22% vs  $\sim$ 26%) and we think half of the delta could be due to the accounting differences we just outlined, including the car leasing program. The remainder is likely a result of Lyft's focus on the

North American ride-hailing market vs. Uber's global expansion where the overall base service fee that it charges to drivers is higher. Raw take rates range from 12%-24% globally, and Uber is a mix of international and domestic, while Lyft's business is in one of the highest take-rate markets (US/Can).





Source: Barclays Research, Company Reports

Source: Barclays Research, Company Reports

Uber's definition of Contribution Profit/Loss is more conservative than Lyft's as it includes all variable costs, as well as the portion of Opex (incl. SBC) it allocates towards the rides business. Lyft on the other hand, includes some variable costs in its definition of Contribution such as Insurance and Other Cost of Revenue, but excludes other seemingly variable costs including Ops & Support. As a result, Lyft's definition of Contribution is a better proxy for adj. gross profit whereas Uber's Contribution definition is a much better proxy for adj. EBIT.

FIGURE 50

Contribution and Contribution Margin Definition Comparison Uber vs. Lyft **Uber (Rides)** Contribution = Adj. Revenue \$1.22 \$1.25 ...Less Insurance Yes Yes ...Less Other Cost of Revenue Yes \$0.67 Yes \$1.25 ...Less Ops & Support Yes \$0.59 No \$0.72 \$1.92 Contribution on \$24 Fare (Lyft Definition) \$1.68 Contribution Margin 44% 40% ...Less Targeted Promotions Yes \$0.50 Yes Yes ...Less S&M Yes \$1.24 No No ...Less R&D and G&A Yes \$1.23 No No Contribution on \$24 Fare (Uber Definition) \$0.40 Contribution Margin 9%

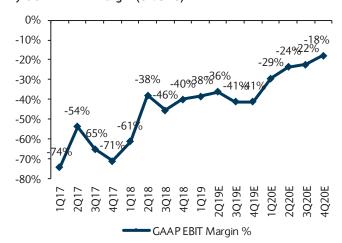
Source: Barclays Research, Company Reports

The various contra-bookings and contra-revenue items, different accounting for rider incentives, and different definitions of profitability for Lyft and Uber create an unnecessary challenge when trying to compare the two companies and some may ultimately find a fully loaded EBIT is the most straight-forward metric to compare the two ride-hailing businesses.

Source: Barclays Research, Company Reports

#### FIGURE 52

#### Lyft GAAP EBIT Margin (ex. SBC)



Source: Barclays Research, Company Reports

FIGURE 53

GAAP EBIT Margin %

## Illustration of Accounting Differences Between Uber and Lyft

	Uber	(Rides)		.yft
Total Fare		\$24.00		\$24.00
Includes Tips	No	\$4.00	No	\$4.00
Includes Taxes & Fees	Yes	\$2.00	No	\$1.75
Includes Tolls	Yes	\$1.00	No	\$1.00
Includes Market-wide Discounts (@5%)	No	NA	No	\$1.25
Bookings Recognized		\$20		\$16
	Uber	(Rides)	L	.yft
Adj. Revenue = Platform Fees as % Bookings				
Less Driver Earnings & Incentives	Yes	\$12.60	Yes	\$11.82
Less Driver Referrals	Yes	\$1.00	No	NA
Less Excess Driver Incentives	Yes	\$0.75	No	NA
Less Market-wide Discounts (@5%)	Yes	\$1.25	No	NA
Adj. Revenue Recognized		\$4.40		\$4.18
Take-Pate		22%		26%
	Uber	(Rides)	L	.yft
Contribution = Adj. Revenue				
Less Insurance	Yes	\$1.22	Yes	\$1.25
Less Other Cost of Revenue	Yes	\$0.67	Yes	\$1.25
Less Ops & Support	Yes	\$0.59	No	\$0.72
Contribution on \$24 Fare (Lyft Definition)		\$1.92		\$1.68
Contribution Margin		44%		40%
Less Targeted Promotions	Yes	\$0.50	Yes	Yes
Less S&M	Yes	\$1.24	No	No
Less R&D and G&A	Yes	\$1.23	No	No
Contribution on \$24 Fare (Uber Definition)		\$0.40		
Contribution Margin		9%		

Source: Barclays Research, Company Reports

## **Uber Has Tremendous Scale Compared to Lyft**

Uber generates more contribution profit per ride globally than Lyft does in the US alone – and that is despite a lower average fare than Lyft owing to its mix of rides outside the US where the average fare is below mature markets in the US and EU. The reason Uber has a more profitable rides business ultimately comes down to scale.

FIGURE 54
Uber Has Tremendous Scale Benefits Compared to Lyft

in Millions (except per Unit metrics)	Uber	Lyft	% Delta
Number of Markets	750	300	150%
Customers	91	19	389%
Trips	5,200	619	740%
Trips per day	14.2	1.7	
Trips per customer	57	33	
Bookings	\$49,799	\$8,054	518%
Y/Y	44%	76%	
Bookings per trip	\$9.58	\$13.01	
Bookings per customer	\$547	<b>\$433</b>	
Drivers	3.5	1.9	84%
Trips per driver	1,486	326	

Source: Barclays Research, Company Reports; Note: Metrics includes Rides and Eats for Uber

To compare the fully-loaded profit contribution (EBIT) of the two ride-hailing businesses, we went ahead and allocated the significant R&D and G&A costs that Uber excludes from Rides contribution profit. In addition, we looked at the profit per mile to eliminate the huge scale differences between the two. Using a traditional definition of profit and our own estimated allocation of COGS and Opex, we estimate EBIT per Mile for Uber rides is negative \$0.07 compared to negative \$0.50 for Lyft.

FIGURE 55
Estimated Cost Per Mile Comparison Uber vs. Lyft

	_		
	Uber	Lyft	Comments
Actual/ Estimated Vehicle Miles (Mn, 2018)	16,000	2,021	Uber disclosed at analyst day Vehicle miles vs. 26bn passenger miles; Est. for Lyft based on Uber ~3 miles per Tripand 600mn Trips
Bookings	\$2.59	\$3.99	Rides-Only disclosure for Uber in S-1; Lyft S-1 includes Scooters/ Bikes, excludes Tips, Tolls, and Taxes
Driver Earnings	\$1.90	\$2.68	
Driver Incentives	\$0.12	\$0.27	Lyft S-1 disclosed reduction to revenue in 2018 of \$540mn (Driver Incentives)
Revenue	\$0.57	\$1.04	
Take-Rate	22%	26%	
Cost of Revenues	\$0.25	\$0.61	Uber S-1 disclosed total Incentives presented as COR in 2018 of \$837mn (Excess Incentives); Allocation to Rides is estimated
Insurance portion of COR	\$0.16	\$0.31	
Gross Profit	\$0.33	\$0.43	
Ops & Support	\$0.08	\$0.17	
S&M	\$0.16	\$0.40	Lyft S-1 disclosed \$297mn for incentives in S&M in 2018; Uber S-1 disclosed \$136mn, Referral Allocation to Rides is estimated
Peer Defined Contribution Profit	\$0.09	(\$0.14)	
as % Bookings	3.5%	-3.4%	
as % Revenue	16.0%	-13.2%	
R&D+G&A	\$0.16	\$0.37	Assume 100% of R&D plus G&A allocated to Rides for Lyft; Assume ~85% of R&D plus G&A allocated to Rides for Uber
Total Opex	\$0.40	\$0.93	Assume 100% of Opex allocated to Rides for Lyft; Assume ~85% of Opex allocated to Rides for Uber
Estimated Rides EBIT per Mile	(\$0.07)	(\$0.50)	
as % Bookings	-2.6%	-12.6%	
as % Revenue	-11.9%	-48.4%	

Source: Barclays Research, Company Reports; Definitions of Bookings, Revenue, Contribution Profit, and EBIT standardized for comparison purposes

# TAM - Car Ownership vs. Mobility As A Service

Anyone who scanned through the Uber or Lyft S-1 can see that the total addressable market for ride-hailing is enormous. The US market alone is 3.5T miles travelled per year in cars, which represents around half of Uber's TAM and all of Lyft's. Another 2.3T miles are travelled in the other 56 countries where Uber's rides business operates today, and another 1.2T from the 6 regulatory problematic countries Uber hopes to add eventually (Japan,

Germany, Italy, Spain, S. Korea and Argentina). In short, the market is huge, and penetration measured by miles driven (16B for Uber in 2018, and 2B for Lyft) or by riders is less than 2%. This should mean a number of years of solid growth ahead.

Given the bookings growth deceleration we are seeing at Uber and to a lesser degree at Lyft, we do ask ourselves why the space is slowing down with such a low penetration rate. It could be that it just takes a long time to wire up supply (drivers) and hence the space will sustain high CAGRs and a steady S-Curve of growth (vs. hyper growth and then sharp deceleration that we see in other spaces like smartphone adoption over the past decade).

It could also be that society hasn't reached a critical tipping point around the value prop for car ownership vs. mobility as a service yet.

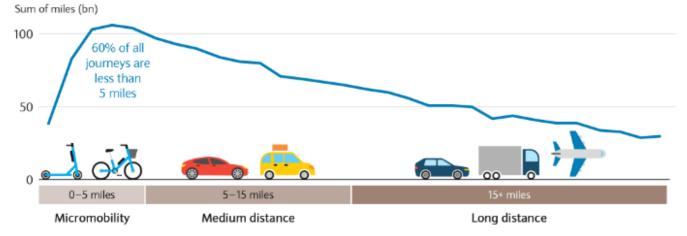
Our Global Autos & ESG Research Teams (both the UK and US based teams headed up by Kristina Church and Brian Johnson, respectively) have analyzed this question thoroughly in the accompanying report titled "Cutting the car ownership cord", 6/4/19).

A summary of their findings are found below. The net/net is that for shorter duration trips (those less than 5 miles) in urban settings where the rider has to factor in costs and headaches around parking, ride-haling is more cost effective today vs. car ownership. In most other instances, its simply cheaper to drive, especially for most suburban and rural trips of longer duration. As autonomous driving enters the picture and the cost-per-mile for a TNC collapses by 90% (likely in 10-20 years-ish) then the cost of vehicle ownership math tips massively in favour of ride-hailing. Hence if the price of ride-hailing doesn't come down over time, we think using the 7T miles travelled as the appropriate TAM is not likely the right way to look at it – that only happens when we go autonomous.

#### Why are 70% of short distance trips taken by car?

In our recent report on micromobility - Micromobility: Sustainable & Thematic Investing: Micromobility: Fast, Cheap and Good Solution for 'Smart Cities' (20th March 2019), we argued that it does not make sense that 70% of all short-distance trips (i.e. those less than 5 miles in length) in developed markets are travelled by car. We discussed why other forms of new mobility, and in particular micromobility (smaller, electric vehicles), should make sense for many short, urban journeys, assuming such vehicles were made more widely available. However, we are well aware that a consumer's decision on whether to own and drive a car is based to a large degree on subjective elements that are often hard to quantify. It may be faster or cheaper to travel by public transport (or even e-scooter) but you might still choose to take your car or be driven by taxi/ride-hail.

FIGURE 56
With 60% of All Journeys Less Than 5 Miles In Length, Why Are 70% Of Those Journeys Taken By Car In Developed Markets?



Source: Barclays Research

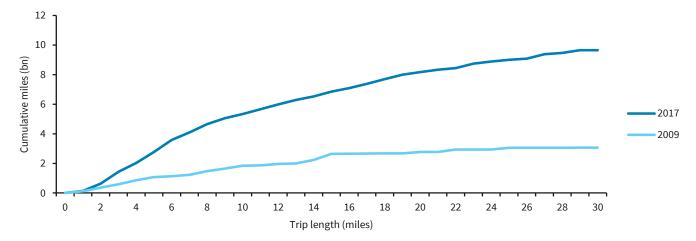
# How to quantify modal choice of mobility?

The choice of which mode of transport to take may be a combination of both quantifiable (cost, speed) factors as well as less quantifiable, intangible decisions such as ease of mobility, need to transport goods/children, weather considerations, wish to avoid strenuous activity, habit of using a certain mode, love of driving, or any number of other (sometime irrational) considerations.

In today's report we will look at whether it makes sense for consumers to continue to own their own vehicle, given the advent of MaaS (mobility as a service), which we discussed in more detail in our EU Autos report: European Autos & Auto Parts: Dinosaurs vs. Disruptors (14<sup>th</sup> May 2019). We will touch on both speed and "hassle" factor as a determinant of travel mode but we want to analyse in detail the idea that monthly *cost* of vehicle-use may to many consumers provide a tipping point to drive a switch from car ownership to MaaS. We do not expect the switch to happen overnight. In fact, we note that despite 12.1bn additional taxi miles being travelled in the US between 2009 and 2017 (which could be taken as a proxy for the impact of the advent of ride-hailing), global population growth and economic growth have been strong enough to mitigate any obvious impact on car ownership levels to date:

FIGURE 57

Cumulative miles travelled for taxi/limo trips have increased substantially from the 2017 NHTS survey 2009¹ and 2017

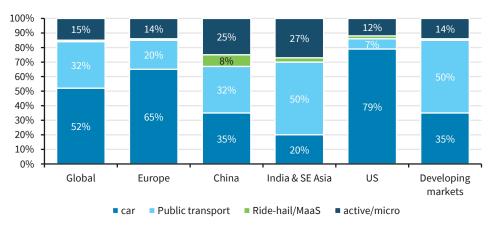


Source: Barclays Research, NHTS

Despite strong uptake in ride-hail miles, the personal car remains a favoured mode of transport today in many regions globally:

FIGURE 58

Mode of transport (trips) globally differs by region but the car dominates in all developed markets, with the US still the most car-centric geography



Source: Barclays Research, NHTS, national statistics \* currently the majority of active/micro is 'walking' e.g. in the US 11% of trips are on foot versus 1% using bicycles or mopeds as per 2017 NHTS data

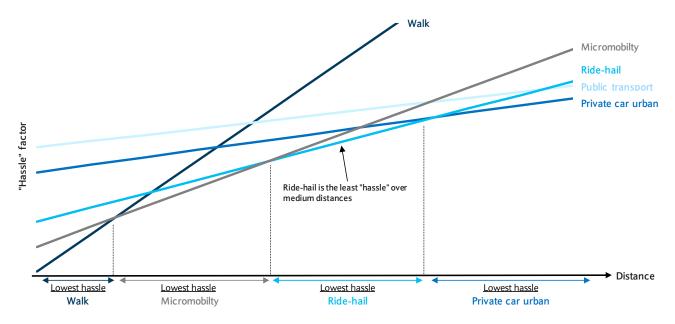
#### "Hassle factor" often as much a commuter consideration as cost

It is worth highlighting that many commuters choose travel mode based on less tangible factors than cost and also think about weather, infrastructure, the time spent looking for a parking space, distance of pick up/drop off to destination etc. These factors are much more difficult to analyse but we have attempted below to show how we think trip distance has a significant impact on these "hassle factor" considerations:

<sup>&</sup>lt;sup>1</sup> Federal Highway Administration. (2009). 2009 National Household Travel Survey, U.S. Department of Transportation, Washington, DC. Available online: https://nhts.ornl.gov.

FIGURE 59

Not only cost but also "hassle" is a key consideration for commuters and in dense, urban environments, a private car is more hassle to use and park for short/medium-distance trips

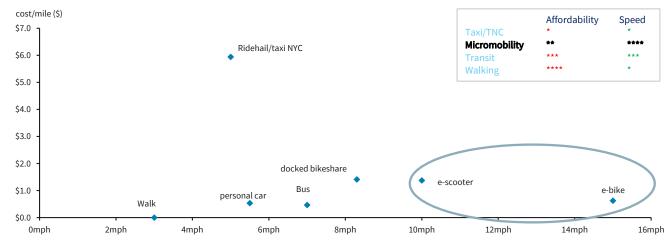


Source: Barclays Research

# Speed is also important in determining transportation mode

Another important consideration for mobility mode, particularly in urban areas where congestion means average speeds often drop below 10mph, is speed. It is clear that where available, micromobility is often the fastest mode of transport, although many riders might consider the "hassle" factors of weather, experience on vehicle, potential requirement for a helmet to negatively outweigh the faster commute times. So whilst in theory a large proportion of commuters should choose to switch to micro-vehicle if such a vehicle were made available, they might still decide to take a car due to the "hassle" factor considerations:

FIGURE 60
We think speed is one of the greatest benefits of micromobility, especially if urban infrastructure is adapted to improve safety



Source: Barclays Research, Uber, Lyft, Yellow taxi, Citi Bike, JUMP, Bird, NY Transit, AAA

# Should consumers think about "per mile" costs when choosing mobility mode?

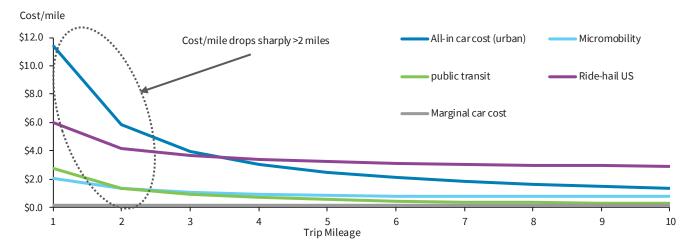
We will show in the following section that car ownership costs/mile in theory drop drastically after the first few miles of a commute (Figure 63), if you factor all-in costs of car ownership. Similarly, other urban mobility modes are also the most expensive for the consumer in the first few journey miles (given either minimum fare costs, upfront base rates or flat rate costs per trip). We discussed this dynamic in more detail in our deep dive report on Micromobility: Sustainable & Thematic Investing: Micromobility: Fast, Cheap and Good Solution for 'Smart Cities' (20th March 2019).

Our analysis of current per mile costs by transport mode shows that were the average consumer driven solely by cost-constraints, they should travel by micromobility (e-bike, e-scooter, e-moped) for the first mile of any journey, and public transport for all journeys above 2 miles.

However, were a car the preferred mode of transport and cost the only consideration, an urban commuter should currently choose to take ride-hail for journeys below 3.5 miles in length (assuming they look at all-in car ownership costs including full fixed cost absorption) and use their own car only for lengthier commutes. Of course, on a margin cost basis (i.e. only considering the variable costs of fuel and maintenance), a personal car is always the cheapest mode of transport:

FIGURE 61

The first two miles of any one-way commute are the most costly to the consumer. The tipping point between a fully loaded personal car (including fixed costs) and ride-hail in an urban area is c3.5 miles. But the marginal/variable cost is always lower



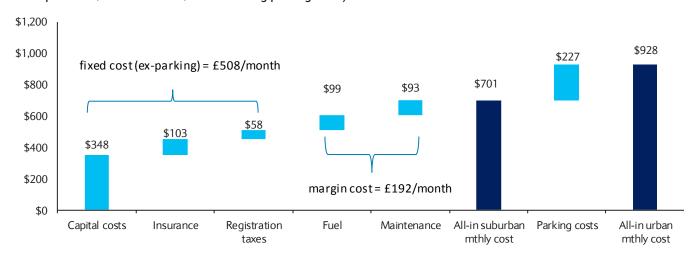
Source: Barclays Research, AAA, NY Transit statistics, Lime, Bird, Ford GoBike, JUMP, Taxify, Neuron

#### How much does it cost per month to drive a car?

Even where cost does come into consideration for a consumer (more notably in the lower income brackets), does that driver think in terms of marginal cost/mile, monthly vehicle-expenditure or all-in car costs over the period of vehicle ownership (i.e. total cost of ownership, TCO)? We think it depends on the individual but with leasing growing in prevalence in developed markets, think many consumers have already switched to thinking of a car purchase in terms of monthly expenditure, as opposed to upfront cost. But do they include fixed costs such as up front capital spend, depreciation, registration fees etc. into that monthly spend; or do they just think in terms of the ongoing monthly spend on vehicle-related items such as insurance, interest, taxation, fuel and maintenance? We believe many drivers may just think merely in terms of the marginal cost of using their vehicle, that is already bought (and in some cases paid down fully), for an individual trip. This marginal cost would just be the variable cost of fuel and potentially also maintenance (c\$0.18/mile or \$192/month for the average US sedan driver).

FIGURE 62

Average monthly expenditure for a mid-sized sedan driving ~13k miles a year in the US is all-in \$928 (or in terms of cost/mile this equates to \$0.86 all-in and \$0.65 excluding parking costs)



Source: Barclays Research, AAA

# Average US <u>urban</u> car ownership costs \$659/month (\$887 with parking costs)

While the average American drives ~13k miles each year, according to the AAA<sup>2</sup> the average urban driver travels only 10,841 miles/year (of which 1,476 miles are for vacation road trips and the remainder the average daily commute, which we calculate at 26 miles/day, or 13 miles one-way). For a mid-size sedan driver, this would equate to a monthly cost of \$659 (or \$887 factoring in urban parking charges), rising to \$705 and \$932 respectively for a mid-sized SUV driver.

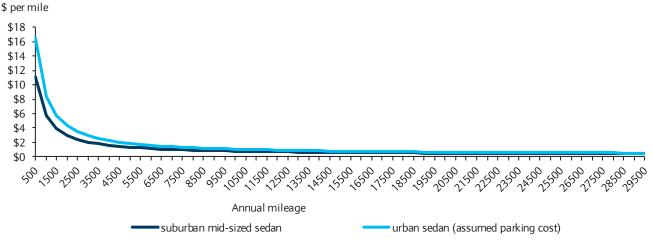
#### Monthly mileage is a key determinant of cost

While we believe the majority of drivers think in terms of monthly mobility costs, per mile costs are in theory significantly higher when a driver commutes less far, given few miles over which to cover fixed costs. For instance, someone travelling only 500 miles/year (the equivalent of a daily one-way commute of just 0.7 miles) would see their car ownership cost \$11/mile (\$16.5 including parking costs), or a monthly charge of \$462 and \$689 respectively. Monthly mileage in theory should be a key determinant of propensity to own a vehicle versus utilising other mobility services (MaaS) but it is also worth remembering that given the sunk upfront cost of buying and registering a car, when a driver is making a decision about monthly vehicle costs, only ongoing costs such as fuel, maintenance, insurance and taxation often come into consideration (as per Figure 62).

<sup>&</sup>lt;sup>2</sup> https://newsroom.aaa.com/2018/08/ride-hailing-double-cost-car-ownership/

#### FIGURE 63

Car ownership costs drop sharply as annual mileage increases. The average cost/mile of a mid-size sedan driving 15k miles/annum is \$0.50/mile (or \$0.64/mile including average US urban parking charges)



Source: Barclays Research

#### When do MaaS economics look more attractive than car ownership?

Even before the advent of autonomous driving, we can see a transition period for some drivers away from car ownership and towards MaaS (mobility as a service), driven in part by these cost dynamics. We think those commuters conscious of cost, or where a car is used for very few annual miles, will increasingly consider a switch to multi-modal mobility, paid for potentially as a monthly subscription, as opposed to upfront car ownership costs. We see MaaS accelerating most notably in dense, urban areas where car ownership costs are at their highest and the "hassle factor" of owning a car is already high (given lack of parking, congestion and local authority regulations to discourage car ownership). However, these are also the regions where car ownership statistics are already at their lowest (for instance according to the 2017 National Household Transport Survey for the US, there are 10mn cars in the fleet in the most densely populated cities in the US, versus 50mn in the most rural locations (with population density less than 500 people per square mile).

#### Car ownership costs differ based on location

In denser urban regions, where parking is at a premium, it costs more to own a car, given average US urban annual parking costs of \$2,728. It is currently cheaper to use ride-hail for all trips below 3.5 miles in length in urban regions but in regions where parking costs are negligible, ride-hail is a costly option for all trips over 2 miles in length. Or if looked at in terms of monthly all-in mobility costs, ride-hail costs trump car ownership in urban areas where monthly mileage is <3,000. If you overlay micromobility, the urban car appears even more expensive for lower mileage vehicles (Figure 64). But in suburban areas, with minimal parking costs and where the chances of finding a micro-vehicle or even ride-hail are significantly lower, car ownership seems like the more obvious solution, apart potentially for vehicles driving below 2,000 miles/month (Figure 65):

#### FIGURE 64

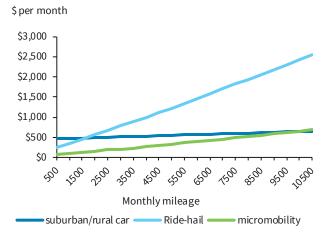
High urban parking costs means monthly all-in costs of car ownership are higher for urban vehicles and where both ride-hail and micromobility have made inroads...

# \$ per month \$3,000 \$2,500 \$2,500 \$1,500 \$1,500 \$5,000 \$5,

Source: Barclays Research, AAA, US transit statistics

#### FIGURE 65

... but where parking costs are minimal (and vehicles less available), in suburban and rural areas, car ownership is almost invariably cheaper and more convenient



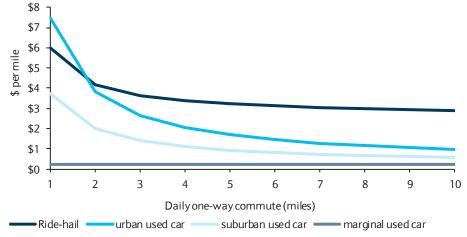
Source: Barclays Research, AAA, US transit statistics

#### Cost dynamics favour second-hand car ownership

We calculate significantly reduced fixed and variable costs/mile for used car ownership, such that in a region where parking costs are negligible (suburban or rural areas), it is always cheaper/mile to own a second-hand car than to utilise ride-hail. Even factoring in high urban parking charges, used car cost dynamics mean that all trips over 2 miles in length are cheaper by owned car than rid-hail. Of course, if you only factor in the margin cost of used car ownership, it always looks more attractive than ride-hail:

#### FIGURE 66

An average used car is cheaper on a cost/mile basis than ride-hail, apart from the first 2 miles of an urban commute



Source: Barclays Research, AAA, US transit statistics

#### Age Considerations

As ride-hailing has become ubiquitous, we believe there's still a significant runway for growth as the ride-hailing industry still has low penetration among all age cohorts. As

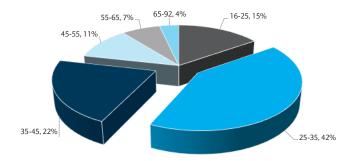
illustrated in the figures below, Gen Z and Millennials are the early adopters in ride-hailing (as evidenced by a higher share of total ride-hailing trips), while the older age groups, such as Baby Boomers, appear like they may become later adopters – perhaps as they age and look to utilize the ride-hailing as an alternative to driving themselves.

According to the U.S. Census, in 2015, 62.7% of people in the U.S. lived in cities. We believe this percentage is likely higher in 2019 given ongoing urbanization trends, particularly among Millennials and Gen Z, who are graduating college and joining the workforce. As growth in urban areas continues from the younger cohorts, we see this as incrementally positive for ride-hailing, as the cost of car ownership in a city may be prohibitively expensive, especially to a large part of the young-professional population with substantial student loan debt.

As noted in a recent note by our European Autos & Auto Parts team (see: *Dinosaurs vs. Disruptors*, 5/14/19), the proportion of young people without a driver's license is increasing in many countries. In the UK, just under half of 17-20 year olds had licenses in the early 1990s, and that figure has dropped to 30% in 2017. We believe the high cost of car ownership in conjunction with the prevalence and convenience of ride-hailing has helped contribute to the decline, specifically in urban areas. Every year roughly 4mn people age into "adulthood" as they are getting jobs after high school/college and often times migrating to large cities; we believe this trend should continue to drive ride-hailing penetration as the younger demographic groups view ride-hailing as a viable alternative to traditional car ownership.

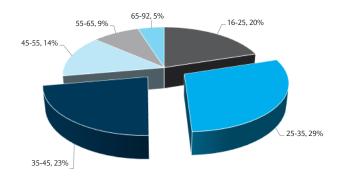
Using data from Barclay's Investment Sciences Team, we have analysed ride-hailing utilization by age group. As noted in Figure 67, the 25-35 age cohort is the largest consumer of ride-hailing in urban settings. Looking at the mix of riders in suburban settings, the mix of 25-35 year olds is significantly lower; and we believe this shows us that the utilization of ride-hailing in the suburbs is not as robust as urban environments, as car ownership is more likely in the suburbs.

FIGURE 67
Monthly Millions of Ride-hailing & Taxi Trips by Age: Urban



Source: Barclays Investment Sciences Team, National Transportation Bureau

# FIGURE 68 Monthly Millions of Ride-hailing & Taxi Trips by Age: Suburban



Source: Barclays Investment Sciences Team, National Transportation Bureau

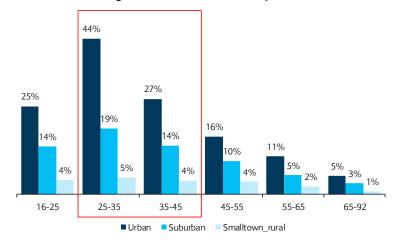
#### Urban vs. Suburban

Even though ride-hailing seems prevalent across major cities in the U.S., recent survey data from Pew Research <sup>3</sup> suggests ride-hailing in urban locations remains severely

underpenetrated, as most people don't use these platforms every day. In fact, the survey indicates that one-in-ten people use ride-hailing weekly, while only 2% use ride-hailing every day/almost every day. Despite the higher concentration of ride-hailing availability in urban settings, only 19% of urban users use ride-hailing weekly (vs. 6% for suburban users). Consequently, we believe there is significant room for growth in the *frequency* at which urban populations utilize these platforms (largely at the cost of public transportation, in our view).

We believe the trend of the younger cohorts continuing to move to urban locations after college will continue and provide tailwinds for the ride-hailing industry. However, even if this trend reverses, and Millennials decide to migrate to the suburbs (i.e., to start a family), we believe there could be an incremental increase in ride-hailing penetration in the suburbs, as this age group has already adopted ride-hailing for its on-demand convenience. As evidenced in data, provided by the Barclays Investment Sciences Team, in Figure 69, the 25-45 age demographics' utilization of ride-hailing drastically drops in the suburbs vs. their urban counterparts. We believe this is likely attributable to the lower cost of ownership and ease of storage/parking in the suburbs. Despite this potential headwind to meaningful penetration among suburban populations, we nevertheless believe there will be incremental adoption over time.

FIGURE 69
Has Used Ride-hailing or a Taxi in the Past 30 Days: Urban vs. Suburban vs. Rural



Source: Barclays Investment Sciences Team, National Transportation Bureau

# Unit Economics of Uber's Rides Business

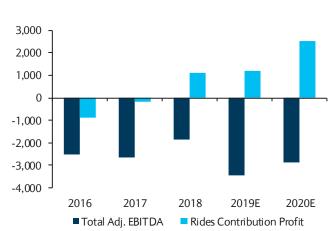
#### Rides Business Actually Already Generates A (Contribution) Profit

As we have outlined elsewhere in this report, Uber's Adj. EBITDA losses are substantial and we expect will only increase in 2019, but should moderate a bit in 2020. Still, exactly when (or if ever) the company will see an inflection remains a topic of intense debate and the lack of visibility will continue to dominate the investment narrative for Uber for the foreseeable future. It's worth noting, however, that Uber's Rides business has positive contribution profit, at least the way Uber defines it. We estimate Rides Contribution margin improved to 13% in 2018 from -3% in 2017 whereas total company reported Adj. EBITDA margin went from -33% to -16% over the same period.

What masks the underlying Contribution profit at the ride-hailing business is ongoing investments to expand the earlier-stage Eats food delivery business, as well as those for the

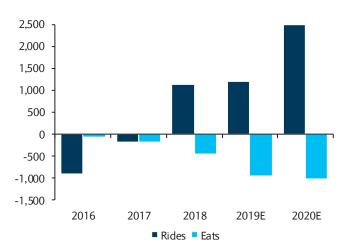
autonomous vehicle unit (ATG), Freight and new mobility (Bikes and Scooters). We estimate the losses from Uber Eats alone offset over 40% of the Contribution generated by Uber's Rides business in 2018.

FIGURE 70
Uber Actual/Expected Adj. EBITDA And Contribution (in \$ Mn)



Source: Barclays Research, Company Reports

# FIGURE 71 Estimated Contribution Profit By Business Segment (in \$Mn)



Source: Barclays Research, Company Reports, Uber Defined Contribution Profit

What these investments make hard to see is the fact that despite  $\sim\!80\%$  of gross bookings for each Ride going towards Driver Earnings (including performance incentives) we estimate contribution profit per trip in 2018 was  $\sim\!80.25$  from the average fare of  $\sim\!88.50$  and we estimate Rides total contribution profit last year exceeded \$1.1bn.

FIGURE 72
Uber Ride-Hailing Unit Economics Illustration

	Avg. Fare								
а	Gross Bookings	\$8.47	=Time & Distance + Taxes + Fees						
b	Driver Earnings	\$6.21	Payout rate fixed and varies by market						
	% Gross Bookings	73%							
С	Driver Incentives	\$0.39	Payout varies based on performance						
	% Gross Bookings	5%							
d	GAAP Revenue	\$1.87	=a - b - c						
	Take Rate %	22.1%	=d/a						
е	Referrals and Excess Driver Incentives	\$0.04	Amount Incentives exceeds Trip Fare (if applicable)						
	% Gross Bookings	0%	Recognized in COR (Incentives) or S&M (Referrals) below						
f	Adj. Net Revenue	\$1.84	=d - e						
	Adj. Take Rate %	21.7%	=f/a						
g	Insurance	\$0.51	Insurance for driver, passenger from the time of pick-up						
	% Gross Bookings	6%							
h	Other COR	\$0.28	Credit card processing, customer support, etc						
	% Gross Bookings	3%							
i	Gross Profit	\$1.05	=f - g - h						
	% Gross Bookings	12%							
j	Platform Direct Expenses	\$0.82	Includes Ops & Support, S&M, G&A, R&D and Other						
	% Gross Bookings	10%							
k	Contribution Profit	\$0.23	=l-j						
	Contribution Profit Margin	12.7%	=k/f						

Source: Barclays Research, Company Reports

For the Eats segment, driver earnings and excess incentives also account for a substantial portion of gross bookings. Hence, the revenue take-rate for an Eats order is less than half the take-rate for the average Rides fare and we estimate the contribution margin for Eats

remains negative. All in, we estimate Uber lost ~\$1.50 on each meal delivery in 2018 with total losses of >\$450mn.

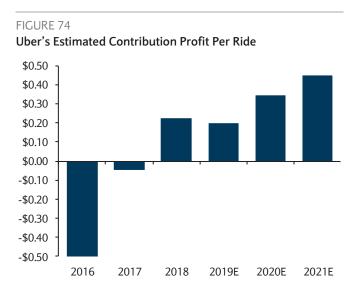
FIGURE 73

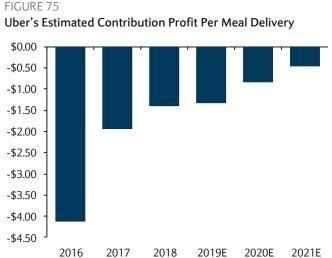
Uber Meal Delivery Unit Economics Illustration

	Avg. Ticket							
а	Gross Bookings	\$25.60	=Meal Ticket + Delivery Fees					
b	Restaurant & Driver Earnings	\$20.90	Payout rate fixed and varies by restaurant and market					
	% Gross Bookings	82%						
С	GAAP Revenue	\$4.71	=a - b					
	Take Rate %	18.4%	=c/a					
d	Referrals and Excess Driver Incentives	\$2.26	Amount Incentives exceeds Driver Payout (if applicable)					
	% Gross Bookings	9%	Recognized in COR (Incentives) or S&M (Referrals) below					
е	Adj. Net Revenue	\$2.45	=c - d					
	Adj. Take Rate %	9.6%	=e/a					
f	COR	\$1.45	Insurance, Payments, and Other as % Gross Bookings					
	% Gross Bookings	6%						
g	Gross Profit	\$1.00	=f - g					
	% Gross Bookings	4%						
h	Platform Direct Expenses	\$2.48	Includes Ops & Support, S&M, G&A, and Other					
	% Gross Bookings	10%						
i	Contribution Profit	(\$1.48)	=g - h					
	Contribution Profit Margin	-60.4%	=i/ e					

Source: Barclays Research, Company Reports

We expect the unit economics for both Rides and Eats to improve over the next several years, but admittedly the improvement is predicated on Uber continuing to see steady increases in take rate (cutting into driver earnings and incentives).





Source: Barclays Research, Company Reports Source: Barclays Research, Company Reports

Uber's Rides business is only contribution profitable under the company's definition, and one could make the argument that there are substantial un-allocated costs that should be part of the Rides businesses that the company has decided to separate out. To be specific, Uber excludes from its definition of Contribution any costs it believes are not reflective of its ongoing core operations including much of the overall G&A expense and R&D costs related to mapping and payment technology (mission critical functions of ride-hailing), the autonomous group, as well as internal IT infrastructure. In aggregate, these costs accounted for ~25% of Uber's total non-GAAP operating expenses in 2018 and if allocated to the Rides business at a rate in-line with the portion of bookings that segment generates

( $\sim$ 84%) we estimate the  $\sim$ \$1.1bn contribution profit of the Rides business would have actually been a  $\sim$ \$1.4bn loss (a good proxy for Rides EBIT).

FIGURE 76
Uber's Estimated EBIT By Business Segment (in \$ Mn)

\$6,000
\$4,000
\$2,000
-\$2,000
-\$4,000
-\$6,000

2018

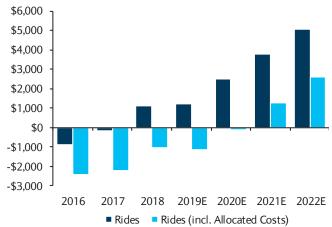
■ Rides ■ All Other

Source: Barclays Research, Company Reports

2017

2016

# FIGURE 77 Uber's Estimated Adj. EBIT For Rides Business Segment



Source: Barclays Research, Company Reports

# Long-Term Price Elasticity Unclear

2019E 2020E 2021E 2022E

As ride-hailing adoption has grown and local/regional markets achieve critical mass of drivers, gross bookings for ride-hailing providers has been a function of competitive intensity and level of incentives. TNCs have standardized price per mile for each market, but offer both drivers and riders incentives above these rate card rates. As illustrated in the figures below, Uber Rides average GB/trip has declined largely by geographic expansion into markets with lower average fares (e.g., Latin America and India) and competitive dynamics around incentives. As ride-hailing becomes ubiquitous and rides growth slows, and as TNCs shift their focus to profitability and dial back the pace of incentives, a key consideration for investors is how fare increases will impact demand, and how much of a pricing umbrella exists for Uber and Lyft to raise prices. Anecdotally, prior to ride-hailing, the cost of a regular commute from SFO to Los Altos CA was a standardized \$125 and a bit higher for a car-hire. Today with subsidized ride-hailing, the average fare is around \$50. So we think there is ample room for ride-hailing to increase fares and still be competitive with other transportation options across various trips.

As we detail below, the introduction and uptake in shared-rides (Pool) suggests there is a continued demand pull around lower prices. The fact that these trips have levelled out at around 25% share of ride-hail trips (and cannibalized single ride trips to some degree) in mature markets like NYC, likely suggests there is more work to be done by TNCs to optimize popular pool routes and more volume to be gained by such optimization.

FIGURE 78
Uber Rides Trips vs. Average Booking per Trip



Source: Barclays Research, Company Documents. Note: Uber bookings includes tolls, fees, and taxes while Lyft does not.

# FIGURE 79

Rides Trips-Barclays Estimate



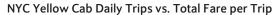
Source: Barclays Research, Company Documents. Note: Uber bookings includes tolls, fees, and taxes while Lyft does not.

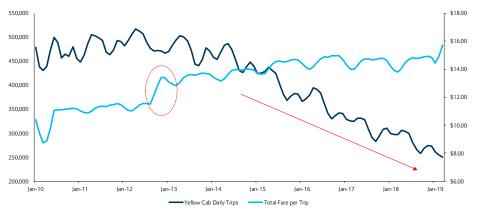
- Rides Booking Amounts Per Trip (\$)- Barclays Estimate

## NYC Yellow Cab Case Study

With this as a backdrop, we ask how price-sensitive are consumers in transportation? In the short-term, surge pricing can change consumer demand, but what about over the longterm? We found limited data/research on long-term consumer price elasticity for ridehailing, perhaps because of the industry dynamics outlined above. As a proxy for ridehailing, however, we did find data from the New York City Taxi & Limousine Commission on taxi trips and average fares since 2010. As detailed in Figure 80, yellow cab daily trips in NYC were in a fairly steady range (400-520k) from 2010 through the middle of 2012, during which time average total fares similarly remained steady and below a ~\$12/ride threshold. In the summer of 2012, however, the Taxi & Limousine Commission voted on an average +17% fare increase – the first major increase in fares in roughly eight years. Consistent with this targeted increase, average fares increased markedly in late 2012 to the \$13-14/ride range. Beginning shortly thereafter, average daily trips began to decline, and took a more marked leg down beginning in 2014-2015. To be fair, we cannot definitively claim that the decline in rides was caused by the rate increase, particularly as the decline also coincided with the adoption of subsidized ride-hailing. That said, we do believe this serves as a proxy for consumers' price sensitivity to price increases, particularly when alternative modes of transportation are available.

FIGURE 80





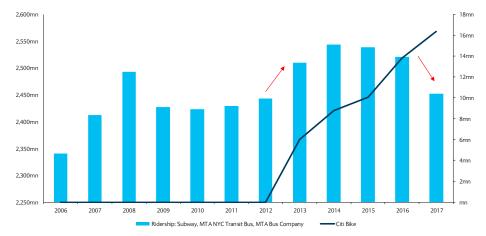
Source: Barclays Research, NYC Taxi & Limousine Commission.

Consumers seem to have responded negatively to the taxi fare increase in 2013 by shifting their transportation methods to cheaper alternatives such as riding the subway, the bus and Citi Bikes (Figure 81). Additionally, consumers were also rapidly adopting ride-hailing during this period which also put pressure on the traditional taxi business model.

The increases in taxi prices likely contributed to the 40-50mn increase in MTA ridership for 2013, and this is the largest increase we have seen outside of the 2008 Great Recession. As ride-hailing became more prevalent as time passed, the rapid adoption of ride-hailing appears to correspond to the fall of the MTA. MTA ridership appeared to peak in 2014, and fall off a cliff in 2017 declining roughly 70mn as ride-hailing became more widely adopted, particularly with the NYC launch of shared/pool rides in May (Via) and June (Uber/Lyft) of that year.

FIGURE 81

#### The Rise and Fall of the MTA



Source: Barclays Research, MTA, Citi Bike

#### ...And Some Other Considerations

To be clear, we believe at some point ride-hailing peers will have to increase fares in an effort to improve profitability. Given a myriad of industry dynamics at play, it's challenging to conclude exactly how price-sensitive consumer demand will be over the long-term, even when using the NYC Yellow Cab case study above. That said, we do believe there are several considerations that will influence this debate:

- Mix of Business MAPCs. We believe business riders are less sensitive toward price increases vs. non-business riders, as they often value convenience and the ability to manage business expenses in a streamlined fashion over marginal cost savings. However, we believe this cohort can experience more volatility and downside risk during layoffs caused by recessions. For non-business travellers in areas where ride-hailing is more frequently used, such as New York and London, we also believe there will be greater volatility and downside risk during recessions. For example, looking back to the 1990 to 1992 recession, adjusted revenue per mile decreased 2.8% in New York.
- Availability of Alternative Modes of Transportation. As we discuss in greater detail
  elsewhere in this report, micromobility is an attractive proposition for consumers as its
  often faster and less expensive for short trips in urban environments, potentially
  cannibalizing ride-hailing somewhat. Public transit solutions also become relatively
  more attractive from a price perspective if ride-hailing prices increase.
- <u>Autonomous Moonshot Could Reset Prices Lower</u>. If autonomous vehicles/robo-taxis
  become widely accepted (likely 10+ years from now, in our view), ride-hailing could see
  a meaningful reduction in costs due to the elimination of driver compensation, and
  consequently fares could be meaningfully reset lower, offsetting demand erosion from
  price increases.
- Congestion Pricing and Other Pass-Through Costs a Wildcard. With estimates for price elasticity of demand for ride-hailing often cited between -0.2 and -0.8 (implying consumers are relatively less price sensitive), we believe any small incremental increase in pricing will have an immaterial impact on demand. New York City recently implemented a \$2.50 congestion charge for taxis and a \$2.75 congestion charge for ride-hailing for any ride south of 96th street. We believe that any increase in fares done in parity between taxis and ride-hailing platforms will have an impact on demand, particularly as the congestion charge alone is the same as a one-way subway fare (\$2.75). Further, there is recent discussion regarding congestion pricing in New York possibly increasing to \$11-\$14 dollars beginning in 2021. Any large pricing change in absolute terms or in the case of the NYC proposal, the near doubling of fares overnight would be noticeable to consumers, and we believe this could cause a material decline in demand in the short-term and long-run if such a large change was implemented all at once vs. a slow ramp up.
- Service Tiers and Subscriptions Could Make Fare Hikes More Palatable. It's likely that ride-hailing providers would modify service tiers as a way for price-sensitive consumers to cope with fare increases (i.e., Uber Pool and Express Pool rides). Similarly, lower fares or discounts under a subscription model, or perks associated loyalty programs (discussed in greater detail in this report) could offset fare increases, or alternatively generate better profitability with static fares (due to lower customer acquisition costs, etc.). Uber's recently launched Ride Pass, for example, allows MAPCs to lock in flat rates on all rides, by tier, for a flat \$24.99 per month fee. Lyft continues to offer incentives around its \$9.99 ride-pass. The point here is that the ride-hailing providers have some optionality on how to drive fares/profitability while mitigating some of the impact on MAPCs.

# Case Study: Evolution of Ride-hailing in NYC

In an effort to analyse the lifecycle of ride-hailing, we've aggregated public transit, yellow cab and ride-hailing data in New York City over the last decade. Although neither Uber nor Lyft disclose revenue by city, we view NYC as a good proxy for the maturation of a major metro area as it: i) was one of the first markets to see meaningful adoption of ride-hailing, ii) is likely one of the top three largest markets for ride-hailing worldwide, and iii) it's one of the few markets where data on various modes of transportation is publicly available.

#### Ride-hailing Taking Share But Growth Slowing

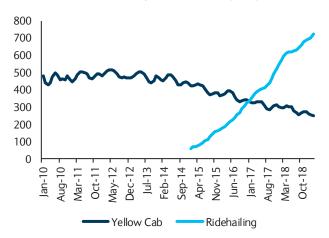
As we discuss in greater detail elsewhere in this report, NYC yellow cab trip volume was fairly steady in 2010-2012 before fare hike increases in September 2012 triggered the start of a decline in ridership, which continued to deteriorate following the launch of ride-hailing in the city<sup>4</sup>. As illustrated in Figure 82 below, ride-hailing reached parity with traditional taxi ridership in late 2016/2017 at approximately ~300-350k ride trips per day as ride-hailing adoption expanded. As of March 2019, daily ride-hailing trips are nearly 3x the volume of traditional taxis (~770k daily rides vs. ~252k). Interestingly, the combined ridership is roughly twice what it was in 2012 (~1m daily trips vs. ~400-500k), suggesting potentially both increased frequency among riders and/or the use of ride-hailing as an alternative to other modes of transportation, such as public transit, which was seen a decline in ridership in recent years. It is admittedly challenging to accurately quantify the entire NYC transportation market. That said, these data points suggest to us that ride-hailing has unquestionably reached critical mass in NYC and taken meaningful share from alternative modes of transportation.

As the volume of daily ride-hailing trips continues to grow, it's natural for growth to decelerate; 1Q 2019 Y/Y growth averaged just +21.9%, well below the +48% average growth in 2018, which could have also been impacted by congestion fee increases to fares. While this is still a healthy growth rate in absolute terms, the NYC market is clearly approaching some level of maturity. Consequently, market penetration gains will likely give way to competition to win market share from competitors, which we discuss in the next section.

<sup>&</sup>lt;sup>4</sup> The exact launch of ride-hailing in NYC is unclear. Postings on Uber's blog suggests pilot programs as early as 2011-2012, while NYC Taxi & Limousine Commission data only began in 2015.

FIGURE 82

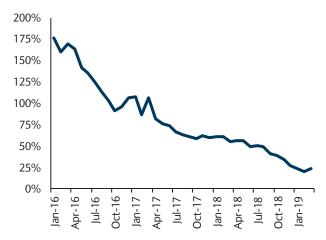
#### Yellow Cab vs. Ride-hailing Trips per Day ('000)



Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

#### FIGURE 83

#### Ride-hailing Trips per Day Y/Y% Growth



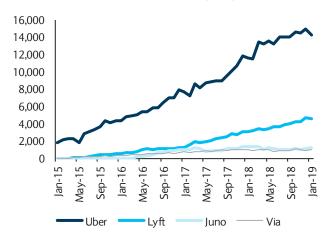
Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

#### Uber: Commanding Share, First-Mover Advantage

New York City Taxi & Limousine Commission licensing data for ride hailing peers enables us to parse out market share data – measured by the volume of monthly trips – for four of the largest ride-hailing peers. Since the beginning of 2015, at which time the city began disclosing ride-hailing data, Uber had a monopoly-like position in the market with 2m monthly trips and 100% market share. As other players entered the market, Uber lost some market share – roughly 15 percentage points in 2015 and 10 percentage points in 2016 – before stabilizing in the 68-72% range in 2017. Lyft has managed to grow its market share from mid-single digits in 2015 to nearly 22% in January 2019, while smaller peers have struggled to maintain mid-single digit shares, despite the rapid growth in trip volume. This suggests to us that there is very clearly a first-mover advantage to those companies that scale in a market quickly. While it's unclear how much of this advantage is a result of consumer preferences or driver adoption, or a combination thereof, it is clear that scaling quickly is key to winning and keeping market share as a given geographic market matures.

FIGURE 84

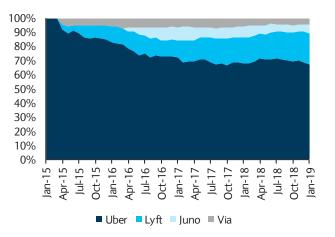
#### Monthly Dispatched Trips by Vendor ('000)



Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

#### FIGURE 85

#### NYC Ride-hailing Market Share (% of Total Trips)



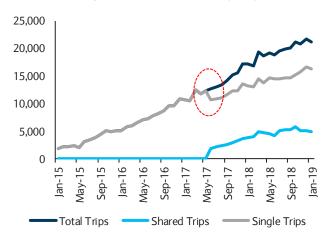
Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

#### Rideshare (Pool trips): After Initial Uptake, Mix Stabilized

The third facet of our NYC ride-hailing case study addresses the adoption of ridesharing (pool trips). Admittedly, data for shared rides parsed out from total ride-hailing may be somewhat inaccurate from a timing perspective, as NYC began reporting the two separately in 2017, long after the launch of UberPool. Despite the shortcomings in this data, it nevertheless leads us to two clear conclusions. First, the launch and adoption of shared rides as a more affordable, but arguably less convenient alternative to single rides, did not appear to meaningfully accelerate overall ride-hailing volume. In fact, it may have cannibalized some single ride volume, as suggested by a reset lower of single ride volumes concurrent with the reporting of shared rides. The second conclusion is that, after a rapid period of adoption, shared trips appear to have levelled off in NYC at roughly 25% of total ride-hailing volume.

FIGURE 86

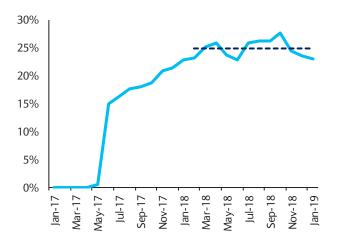
# Total Ride-hailing Trips and Shared Trips ('000)



Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

## FIGURE 87

# Mix of Shared Trips as a % of Total Ride-hailing



Source: Barclays Research, NYC Taxi & Limousine Commission, https://toddwschneider.com

## FOOD DELIVERY INDUSTRY

# Uber Eats: Still in Venture Stage with Long Term Upside Potential

Uber Eats, UBER's food delivery business, has grown rapidly to a run-rate of \$10B+ global bookings in 4Q18 in less than three years since inception. Eats provides a clear case study on how UBER can leverage its huge global customer base of over 90m MAPCs and drive adoption of high frequency additional services over long-term. Eats is available currently in over 500 markets worldwide and the company's near term goal is to expand Eats into 750 active markets where Uber's ridesharing business is already active.

There are four key questions that our analysis of Uber's Eats business sets out to answer:

- a. How Big Is TAM?: The addressable market for Eats is as large as the company's ridesharing business. According to Euro monitor, ~\$2.8 trillion is spend on restaurant services such as QSRs, FSR, and casual dining places worldwide. Delivered food currently accounts for \$168B, or less than 6% of the total consumer spend on food places. A more conservative estimate, accounting for Uber's currently serviceable market, would indicate the market opportunity is \$795B currently.
- b. What Does The Competitive Landscape Look Like?: There are several existing food delivery companies (regional and global) operating at scale in various countries. The space is slightly more fragmented compared to ride-hailing industry. Many leading players are growing slower than Uber Eats but are more profitable. The competitive intensity of the industry could diminish to some degree over the next few years as the industry consolidates and sub-scale players lose market share, which should bode well Uber Eats.
- c. What Are Drivers of Long-Term Unit Economics?: The unit economics of Uber Eats are well below steady-state at this time and reflect the aggressive market expansion coupled with meaningful subsidies on all sides including the drivers, diners and restaurants. Our calculations imply that. Uber Eats incurred negative \$2.00 in losses per order (on a contribution profit basis) in 4Q18. In addition to subsidies in International market, Uber's efforts to improve restaurant selection through partnerships with chains and independents are also weighing on take rates meaningfully. Over the next few years, we expect to see subsidies moderate and efficiencies improve, which should improve unit economics dramatically. Just getting back to industry-standard levels would translate into rapid increase in profitability. Our base case model currently expects Uber Eats contribution profit loss per order to moderate to \$0.50 in 2021 but our sensitivity analysis shows a number of levers that could drive profitability to levels above our estimates.
- d. What Is Eats Worth?: Global peers in the food delivery industry trade at 0.7x-0.8x FY2 GFS. If we assign Uber Eats valuation multiples at the lower end of the spectrum given Eats's lack of profitability from negative unit economics level at this time, we estimate Eats could be worth \$13B or \$7 per share.

#### Quick Note On Addressable Market & Competitive Landscape

The global market for food delivery is huge. Globally consumers spent \$8.8 trillion on food in 2017, according to data compiled by Euro monitor. Nearly \$2.8 trillion of that is spent on food away from homes at service providers such as restaurants, bars, cafes, and take-out

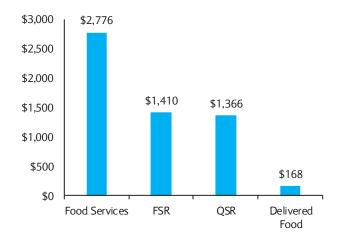
providers. If we slice the spend further to account for countries that are currently serviceable by Eats, the total opportunity is still large at \$795B.

Delivered food accounts for \$168B of the total \$2.8 trillion consumers spent at food service providers. In markets that are currently serviceable by Uber Eats, we think the total delivered food spend is currently around \$80B based on our calculations. UBER's total gross bookings currently represent less than 10% of the total delivered food.

With online food delivery companies including Uber Eats, DoorDash, Just Eat, etc. continuously improving selection on their marketplaces and extending the availability of delivery to a wide range of restaurants, the market for delivered food is likely to grow significantly faster than total sales at food service providers.

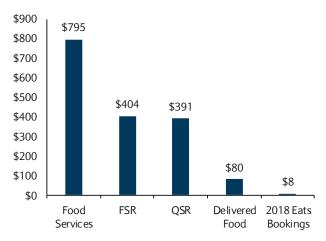
FIGURE 88

Total Market Opportunity For Eats (\$B)



Source: Barclays Research, Company Reports, Euromonitor 2017 Data

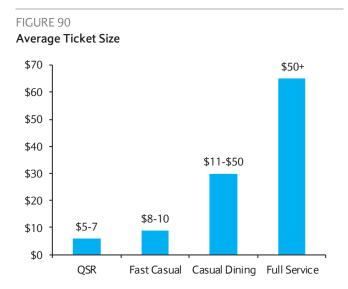
# FIGURE 89 Currently Serviceable Opportunity For Eats (\$B)

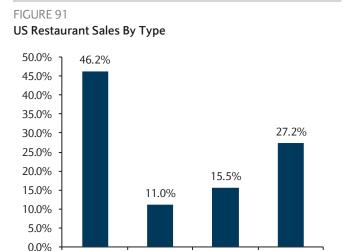


Source: Barclays Research, Company Reports, Euromonitor 2017 Data

It is important to note that delivery providers likely will have to continue to lower the cost of service to consumers and restaurants steadily in order to capture additional share of the food spend. As such, restaurants that have thin margins and smaller checks will not be able to afford the fees charged by Eats to provide delivery services. Similarly, consumers will be hesitant to pay delivery fees for small orders that are common in take-away, walk-in, or QSR transactions. In essence, the distribution of check size is likely to constrain the achievable penetration of food delivery services.

Admittedly, the data for food ticket size distribution is difficult to find. If we use US restaurant industry as a proxy, nearly 50% of the total restaurant sales comes from QSRs that have an average check size of \$5-\$7. Achieving meaningful penetration of food sales in QSR and fast casual restaurants is likely to require food delivery providers reduce delivery cost per order significantly.





Fast Casual Casual Dining Full Service

Source: Barclays Research, Company Reports

Source: Barclays Research, Company Reports

**QSR** 

## Food Delivery Market Is Competitive, Market Share Is More Distributed

The online food delivery market has a number of operators worldwide, often competing aggressively in various countries. In Figure 5 below, we illustrate the competitive landscape of the global food delivery space. Unlike the ridesharing industry, there is no monopoly or duopoly arrangement in many countries.

Global Competitive Landscape Of Food Delivery Delivery Hero Mail.RU **Uber Eats** Just Eat Takeaway **Uber Eats** Uber Eats Just Eat Delivery Hero **Door Dash** Grubhub Meituan Dianping Delivery Hero **Uber Eats** Delivery Hero Delivery Hero Zomato Just Eat **Uber Eats** Delivery Hero Just Eat

FIGURE 92

Global Competitive Landscape Of Food Delivery

Source: Barclays Research

Over the last few years, European food delivery companies Delivery Hero and Just Eat (covered by Barclays European Research analysts Andrew Ross and Geradus Vos respectively) have expanded their global presence by either acquiring local competitors or by organically launching aggressively into the market, and have emerged as leading global

players in the food delivery space. Although their business models were primarily marketplace and demand generation initially, the two companies are now expanding their logistics offerings to improve selection.

In addition to Western Europe (ex-Germany), Just Eat is a leading competitor to Uber Eats in Canada, Australia, and Brazil. Meanwhile Uber Eats competes aggressively against Delivery Hero in India and MEA. In the US, the market is more fragmented. Uber Eats competes aggressively against DoorDash and GrubHub.

Uber Eats is the fastest growing publicly traded food delivery company globally. However, other competitors have better profit margins and unit economics at this time as illustrated in the figure below.

FIGURE 93
How Public Peers Stack Up In The Food Delivery Space (2018)

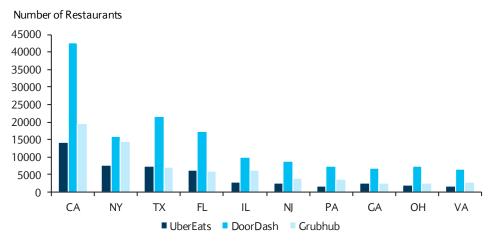
2018	UBER EATS	DHRO	GRUB	JE	TKWY
Primary Markets	USA, Canada, EMEA, India	MENA, LatAm, Korea, Greece	USA	UK, EU, Canada, ANZ, BRL, MX	Germany, Benelux, Austria, Poland
Delivery Mix As % of GFS	~100%	~20%	31%	16%	<5%
GFS (\$m)	\$7,919	\$6,064	\$5,057	\$5,600	\$2,118
Y/Y Growth	168%	41%	34%	-	43%
Orders (m)	309.3	403.5	159.1	221.2	93.9
Y/Y Growth	255%	38%	31%	28%	38%
Average Order Value (\$)	\$25.6	\$15.0	\$31.8	\$25.3	\$22.6
				,	,
Active Customers (m)	15.0	-	17.7	26.0	14.1
Y/Y Growth	36%	-	22%	21%	23%
Orders Per Customer	20.6x	-	9.0x	8.5x	6.7x
Gross Revenues (\$m)	\$757	\$952	\$1,007	\$1,039	\$283
Y/Y Growth	106.3%	55.1%	47.5%	47.8%	50.9%
Gross Take Rate	9.6%	15.7%	19.9%	18.6%	13.4%
Gross Profit (\$m)	\$79	\$550	\$553	\$750	\$232
Y/Y Growth	107%	41%	34%	29%	47%
Net Take Rate (GP / GFS)	1.0%	9.1%	10.9%	13.4%	10.9%
Gross Profit Per Order	\$0.26	\$1.36	\$3.48	\$3.39	\$2.47
Marketing (\$m)	\$470	\$521	\$214	\$195	\$151
Gross Profit Less Mktg (\$m)	-\$391	\$29	\$339	\$555	\$81
As % of GFS	-4.9%	0.5%	6.7%	9.9%	3.8%
Per Order	-\$1.26	\$0.07	\$2.13	\$2.51	\$0.86

Source: Barclays Research, Company Reports

The selection of restaurants on Uber Eats is still significantly small compared to leading players in the space. Over the past two years, partnerships with restaurant chains such as McDonalds and Starbucks enabled UBER to build supply from a varying range of restaurant suppliers that are traditionally underserved by food delivery companies. Looking ahead, we expect UBER to focus on building restaurant supply and bring selection on par with other players in the space. This is also evident in the UK where Just Eat and Deliveroo have better selection in several markets than Uber Eats.

FIGURE 94

#### Selection of Restaurants in Key States



Source: Barclays Research, Company Documents

The four leading publicly- traded players in the food delivery space are Grubhub, DeliveryHero, Just Eat and Takeaway.com. In the table below, we show the trading multiples of these four peers.

FIGURE 95
Food Delivery Companies are Currently Trading at 0.8x 2020E GFS

				EV/	GFS	EV/Re	venues	EV/Gro	ss Profit
Company	Stock Price	Market Cap	Ent. Val (\$m)	2019E	2020E	2019E	2020E	2019E	2020E
GRUB	\$63.85	\$5,933	\$6,140	1.02x	0.83x	4.5x	3.4x	9.1x	7.2x
DHRO	€ 38.54	\$8,525	\$8,160	1.05x	0.75x	6.4x	4.5x	12.3x	8.0x
TKWY	€ 78.30	\$5,300	\$5,476	1.66x	1.32x	11.9x	9.2x	16.8x	13.1x
JE	£6.85	\$6,226	\$6,115	0.87x	0.75x	4.3x	3.7x	6.4x	5.5x
Mean				1.15x	0.92x	6.8x	5.2x	11.1x	8.5x
Median				1.03x	0.79x	5.5x	4.1x	10.7x	7.6x

Source: Barclays Research, Refinitiv estimates for all stocks

# Eats Unit Economics Deep Dive

Uber Eats is a three sided marketplace, which means that Uber has three parties involved in every transaction, unlike other marketplaces that have two parties. In order to scale the business efficiently, Uber must make the value prop attractive to all three parties participating on the marketplace over the long-term. A three sided marketplace also provides incremental monetization opportunities for Uber.

In Figure 96 below, we illustrate the unit economics of Uber Eats, in terms of contribution profit per order. On a high level, there are four factors that determine transaction level unit economics, and the long-term profitability, of Uber Eats. They are:

- 1) Average basket size, referred to as gross bookings per order
- 2) Total effective take rate, which is the commissions and fees charged by Uber Eats from restaurants and consumers respectively less various subsidies offered.
- 3) Cost of delivery, or the amount Uber pays its driver network to fulfil the order from restaurants to consumers
- 4) other direct variable platform expenses such as payment processing, hosting, and insurance.

FIGURE 96
Uber Eats Unit Economics On Per Order Basis

	4Q18	1Q19	2Q19E	3Q19E
Average Order	\$24.29	\$22.68	\$22.57	\$22.43
Restaurant Commissions	\$5.73	\$5.30	\$5.26	\$5.22
Commission rates	23.6%	23.4%	23.3%	23.3%
Commission rates	23.0%	25.470	23.370	23.370
Delivery Fee from diners	\$1.74	\$1.61	\$0.51	\$0.51
Service Fee	\$0.00	\$0.74	\$2.22	\$2.20
Total Consumer Fees	\$1.74	\$2.35	\$2.73	\$2.71
Incentives	\$0.53	\$0.74	\$0.73	\$0.73
% of Avg. Order Value	2.2%	3.3%	3.2%	3.3%
Commissions + Fees - Incentives	\$6.94	\$6.90	\$7.25	\$7.20
% of Avg. Order Value	28.6%	30.4%	32.1%	32.1%
Driver cost	\$5.37	\$5.14	\$5.07	\$4.98
% of Avg. Order Value	22.1%	22.7%	22.5%	22.2%
Adj. Revenues	\$1.56	\$1.76	\$2.18	\$2.21
% of AOV (Take Rate)	6.4%	7.8%	9.7%	9.9%
Credit Card Processing	\$0.61	\$0.57	\$0.56	\$0.56
% of AOV	2.50%	2.50%	2.50%	2.50%
Platform Expenses	\$2.94	\$3.50	\$2.94	\$2.79
% of AOV	12.1%	15.4%	13.0%	12.5%
	(44.55)	(40.51)	(44.55)	(4.7.1)
Contribution Profit	(\$1.98)	(\$2.31)	(\$1.33)	(\$1.14)
% of AOV	-8.2%	-10.2%	-5.9%	-5.1%

Source: Barclays Research, Company Reports

As indicated in Figure 96 above, UBER Eats generates ~\$1.76 per order in adjusted revenue but over ~\$2 in contribution loss currently. Over the next few quarters, we expect contribution losses to moderate as the pressure on revenue margin stabilizes and reverses

back higher (a result of the new pricing model rolled out in mid-March) and also from improvements in platform expenses such as ops & support.

Uber's financial reporting structure makes it difficult to parse out the underlying components of Eats' unit economics. As such, Uber recognizes total commissions and fees less delivery costs as GAAP revenues, which is different from other food delivery companies such as GRUB where driver costs are reported under ops & support expenses below revenues. Figure 97 below illustrates how the various components of unit economics flows through the company's financial reporting.

FIGURE 97
Uber Eats Unit Economics As Reported In P&L Financial Reporting, FY18

	Avg. Ticket							
а	Gross Bookings	\$25.60	=Meal Ticket +Delivery Fees					
b	Restaurant & Driver Earnings	\$20.88	Payout rate fixed and varies by restaurant and market					
	% Gross Bookings	82%						
С	GAAP Revenue	\$4.72	=a - b					
	Take Rate %	18.4%	=c/a					
d	Referrals and Excess Driver Incentives	\$2.27	Amount Incentives exceeds Driver Payout (if applicable)					
	% Gross Bookings	9%	Recognized in COR (Incentives) or S&M (Referrals) below					
е	Adj. Net Revenue	\$2.45	=C - d					
	Adj. Take Rate %	9.6%	=e/a					
f	COR	\$1.45	Insurance, Payments, and Other as % Gross Bookings					
	% Gross Bookings	6%						
g	Gross Profit	\$1.00	=f - g					
	% Gross Bookings	4%						
h	Platform Direct Expenses	\$2.48	Includes Ops & Support, S&M, G&A, and Other					
	% Gross Bookings	10%						
i	Contribution Profit	(\$1.48)	=g - h					
	Contribution Profit Margin	-60.5%	=i/e					

Source: Barclays Research, Company Reports

#### Average Order Size Has Trended Lower

We estimate that the average ticket for Uber Eats is currently below \$25, which has trended down from \$35+ over the prior four quarters as the company has seen meaningful volumes from QSR chains such as McDonalds and also strong growth in orders from Emerging markets such as India where the order size is significantly lower. Lower order size from QSRs pressure unit economics since the commission charged by Uber (as discussed below) is significantly lower, both in terms of absolute dollars and as % of total order value.

FIGURE 98

#### Uber Eats Avg. Basket Size (Barclays Estimate)

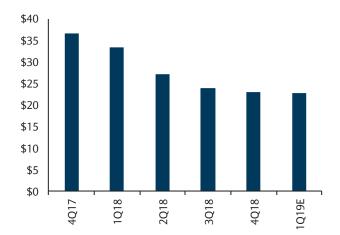
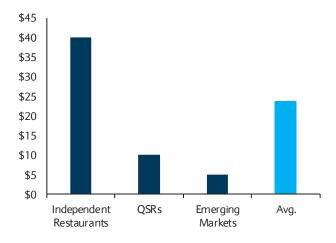


FIGURE 99

#### How Basket Sizes Compare, 4Q18



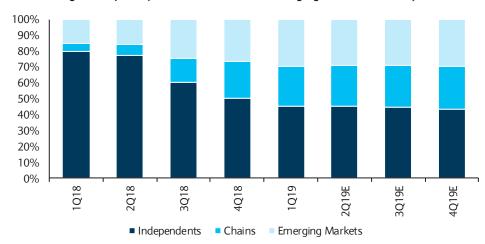
Source: Barclays Research, Company Reports

Source: Barclays Research

We currently estimate that QSR chains where Uber has corporate level agreements account for ~25% of the total Eats bookings, up from low single digits in 2017. Looking ahead, we expect average order value to see some pressure continuously but we think the impact from mix shift towards QSRs and emerging markets should moderate over the next few quarters.

FIGURE 100

# EATS Bookings Mix By Independents, Chains, and Emerging Markets – Barclays Estimate



Source: Barclays Research, Company Reports

# Total Take Rates Are Pressured by Emerging Market Subsidies and Chain Partnerships

As noted previously, Uber Eats generates revenues from two sources: a) commissions from restaurants and b) service and delivery fees from diners. Uber Eats' take rates vary significantly between independent restaurants and QSRs. Meanwhile, effective take rates at emerging markets are sharply impacted by aggressive subsidies on all three sides of the marketplace. On average, Uber Eats takes anywhere from 15-30% from restaurants depending on the type of the restaurant, exclusivity arrangement, and the service levels provided by Uber for delivering food from the restaurant.

FIGURE 101
Uber Eats Adjusted Revenues Take Rates



Source: Barclays Research, Company Reports

On the consumer side, Uber charges diners a flat per order delivery fee that ranges from \$2-\$5 depending on the restaurant and time of the day. The company subsidizes delivery fees regularly to drive frequency on the platform higher and also optimize volume to make its delivery operations more efficient during the day.

Faster growth in emerging markets and volumes from QSR partnerships, as shows in Figure 101 above, has significantly impacted EATS's take rates over the past four quarters. Based on our conversations the street is attributing too much of the take-rate decline to QSR deals and too little to regions like India which still have negative take rates.

Incentives also impact effective take rates meaningfully. Uber offers incentives in various forms to both diners and drivers on its marketplace to increase purchase frequency and transaction velocity. Promotions include free delivery, 10-15% OFF on first order, refer your friend to get a free order, etc. On the driver side, Uber Eats also offers drivers frequency based incentives to encourage drivers to remain active on its platform. These subsidies are currently aggressive particularly in emerging markets, and as mentioned above in places like India Uber Eats generates negative adjusted revenues as a result.

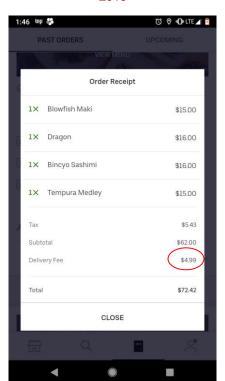
In March 2019, Uber Eats tweaked it's pricing model to include a 15% service fee, in addition to per order delivery fee, in the US, which brings the fee structure more in-line with industry practices (Figure 102). This new service fee should enable Uber Eats lower delivery fees substantially, while achieving improvement in take rates starting in 2Q19. In addition to per order delivery fee and service noted above, the company also charges users a small order fee of \$2 for orders that are below \$10.

Our checks suggest that Eats may have picked up market share in April as a result, as lower delivery fees drive higher conversion rates in app. So higher GFS with improving take rate may have meaningful impact on Eats' financials going forward.

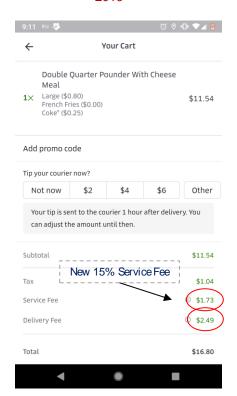
FIGURE 102

#### Old vs. New Consumer Delivery Fee Structure

#### Pre March 2019



#### Since March 2019



Source: Barclays Research. Screenshot of Uber App taken on May 16, 2019. The owner of rights in the pictured website, including any images and trademarks, is not affiliated with Barclays.

#### Driver Costs Can Improve Steadily

Driver fleet expenses are meaningful in the food delivery business. In order to be successful, food delivery services must be able to fulfil orders placed by consumers on their platforms in less than 30 minutes. Delivery companies require a highly liquid network of drivers readily available at their services to meet consumer expectations.

Typically, food delivery companies pay drivers a per order fee, which is a combination of a) pick up fee b) distance fee and c) drop-off fee, and these earnings need to match what the driver would make per hour driving for alternative options in the gig economy (Amazon package delivery, other food delivery, Instacart, etc.). To illustrate, an Uber Eats driver delivering an order from Otto's Tacos in Chelsea to Barclays HQ at mid-town will be paid \$2 pick-up fee + \$2.60 (2.1miles x 1.30 per mile) distance fees + \$1 drop off fee, or a total of \$5.60 in deliver fees per order.

Our calculations imply that UBER currently incurs a cost of ~\$5 to deliver each order, which is \$6.50 per order in western markets and \$2 per order in emerging markets. The company's delivery efficiencies continue to improve and we expect to see steady leverage over the next few years. As such, Uber achieves meaningful reduction in delivery cost per order by batching and chaining multiple orders per delivery trip. A driver delivering two orders from the same restaurant is only paid one pick up. Similarly, two drop-offs at the same destination can help driver utilization as more orders can be delivered per hour. While it hard to parse out the delivery costs from UBER's financials, we have seen evidence of steady improvement in delivery efficiency gains from other companies in the space.

FIGURE 103

#### **GRUB Delivery Cost Per Order**



Source: Barclays Research, Company Reports

Uber should be in a position to achieve meaningful efficiencies by routing drivers to chain multiple pick-up and drop-offs in a single route. Furthermore, Uber Eats can also lower its driver acquisition costs by better leveraging the driver network of its Rides business. The company currently has over 3.5m drivers on its platform. At this time, there is less than 10-15% overlap in driver network between Eats and Rides business.

## Other Variable Expenses

Below the take rate and S+M and other subsidies, other Eats variable costs include: a) credit card processing b) hosting expenses c) insurance costs d) customer support and e) direct R&D and G&A. Total variable expenses accounted for 3.6% of total order value but we think there is opportunities for healthy leverage long-term specifically in payment processing and customer cost.

#### Sensitivity to FY21 Eats Contribution Profit Per Order

On a high level, we think there are four major areas of improvement to unit economics over the long-term. These include: a) higher commission rates driven by stable restaurant mix b) lower subsidies to consumers c) improving delivery efficiencies and d) leverage from platform expenses.

In the Figure 15 below, we illustrate the sensitivity of Uber Eats' long term unit economics and FY21 contribution profit to components discussed above.

Scenario 1 would double ANR per order by reducing driver cost per order from the current 23% to 15% by 2021. Scenario 2 would similarly double ANR per order by reducing contra incentives for diners from current 3% of AOV down to 0%. Scenario 3 involves reducing credit card processing from current 2.5% of AOV to 2.2%, while also decreasing other variable expenses per order (Ops, G+A, R+D) to 8% of AOV from current 15%.

FIGURE 104
What Drives UBER Contribution Profit Long Term

	2Q19E			FY21E		
	Base Case	Base Case	Scenario I	Scenario II	Scenario III	<b>Bull Case</b>
			+ Driv. Effic.	No Discount	Lower Opex	Scenario I+II+III
	¢24.72	420.02	#20.02	#20.02	#20.02	#20.02
Average Order	\$21.73	\$20.93	\$20.93	\$20.93	\$20.93	\$20.93
Restaurant Commissions	\$5.26	\$4.19	\$4.19	\$4.19	\$4.19	\$4.19
Commission rates	24.2%	20.0%	20.0%	20.0%	20.0%	20.0%
Delivery Fee from diners	\$0.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Service Fee	\$2.22	\$2.51	\$2.51	/ \$3.14 \	\$2.51	\$3.14
Total Consumer Fees	\$2.73	\$2.51	\$2.51	\$3.14	\$2.51	\$3.14
Incentives	\$0.73	\$0.25	\$0.25	\$0.00	\$0.25	\$0.00
% of Avg. Order Value	3.4%	1.2%	1.2%	0.0%	1.2%	0.0%
				`\/		
Commissions + Fees - Incentives	\$7.25	\$6.45	\$6.45	\$7.32	\$6.45	\$7.32
% of Avg. Order Value	33.4%	30.8%	30.8%	35.0%	30.8%	35.0%
Driver cost	\$5.07	\$3.94	/ \$3.14	\$3.94	\$3.94	\$3.14
% of Avg. Order Value	23.3%	18.8%	15.0%	18.8%	18.8%	15.0%
Adj. Revenues	\$2.18	\$2.51	\$3.31	\$3.39	\$2.51	\$4.19
% of AOV (Take Rate)	10.0%	12.0%	15.8%	16.2%	12.0%	20.0%
			`\/		/**\	
Credit Card Processing	\$0.54	\$0.52	\$0.52	\$0.52	\$0.46	\$0.46
% of AOV	2.50%	2.50%	2.50%	2.50%	2.20%	2.20%
Other Platform Expenses	\$2.97	\$2.46	\$2.46	\$2.46	\$1.67	\$1.67
% of AOV	13.6%	11.8%	11.8%	11.8%	8.0%	8.0%
	(11.50)	(+- +-)		** **	\/\	
Contribution Profit Per Order	(\$1.33)	(\$0.48)	\$0.32	\$0.40	\$0.37	\$2.05
% of AOV	-6.1%	-2.3%	1.5%	1.9%	1.8%	9.8%
Total Contribution Profit (\$m)	\$411	\$254	\$173	\$215	\$199	\$1,096

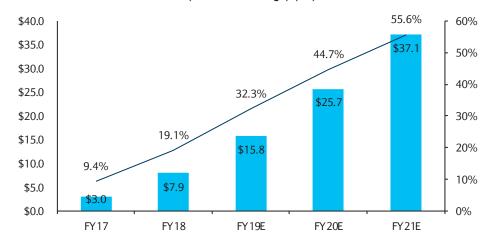
Source: Barclays Research, Company Reports

## Are Eats Forecasts Aggressive?

Current consensus expectations call for gross bookings from Eats to reach \$37B in 2021, growing at a healthy CAGR of 70% over the next three years from 2019-2021. In terms of \$ volumes, this represents a nearly 4.5x the current run-rate, which is prompting some of the members of investment community to be concerned about whether these forecasts are too aggressive.

We think these concerns are reasonable but we also believe that Uber's ridesharing business provides the company significant long-term competitive advantages and operational benefits to scale the Eats side of the business. In the near-term, we expect Uber to expand Eats into more ridesharing markets while expanding selection in existing markets. FY21 Eats forecasts currently imply ~56% of the total ridesharing GB's, up from 19% in 2018. Some of the 750 ridesharing markets are already very competitive on the food delivery side, so we don't expect penetration to look the same across all geos.

FIGURE 105
UBER Eats Penetration Into Rides (As % of Bookings) (\$B)



Source: Barclays Research, Company Reports

# TAAS INDUSTRY OVERVIEW

# Challenges of Ride Hailing, Food Delivery & The Scorched Earth Playbook In General

Aside from the obvious massive FCF burn and the need to continuously raise outside capital to fund operations, we see a number of challenges in today's ride hailing and food delivery markets. The first being the entire "giq economy" labor force legal classification problem.

# Gig Economy - Independent Contractors or Part Time Employees?

87%

2016

One of the biggest debates surrounding and risks to the gig economy is whether drivers will (or should) reclassified from independent contractors to employees. The classification of drivers as independent contractors is a topic that is challenged by government agencies domestically/internationally, and the companies are facing litigation as some drivers claim they should be treated and compensated as employees. Both Uber and Lyft defend their classifying drivers as independent contractors as the drivers have discretion over if, when and where they choose to be drivers, characteristics of work that often serve as a litmus test for employee vs. contractor classification. Drivers have the flexibility to choose how long to work, and at what times. Further, drivers also have the option operate on competing platforms freely, as they are not contractually bound to operating on just a single platform.

FIGURE 106

Total Annual Ride-Hailing Marketing and Incentives as

Percent of Bookings

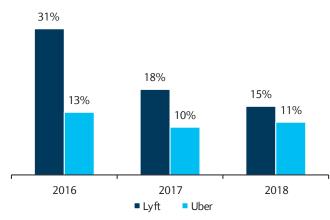
# FIGURE 107 Ride-Hailing Driver Earnings As % Gross Bookings

73%72%

2019

71%70%

2020





2017

2018

79%

Source: Barclays Research, Company Reports

The debate has come to the forefront in several states, including California. In 2018, the California Supreme Court redefined the classification for independent contractors. Under this new definition, employers now have to prove that a worker is outside the firm's control, the worker is performing a task outside the firm's normal scope of business, and the worker has decided to go into business by themselves. Due to the broad language under this new definition, drivers for Uber and Lyft could arguably be reclassified from independent contractors to employees. At present, the debate is far from resolved; California politicians are suggesting that certain industries could be exempt, while certain industries, including ride-hailing, are aggressively lobbying for carve-outs and exemptions. Both Uber and Lyft could face a financial headwind as they are forced to continuously defend themselves against litigation from both governmental agencies as well as drivers. If drivers are ultimately classified as employees, ride-hailing companies would likely incur significantly higher labor costs to meet minimum hourly wage requirements (\$12/hour in California in

2019), which continue to see upward pressure across most of the country. Beyond higher wages, ride-hailing companies would be responsible for half (6.2%) of employees social security and Medicare (1.45%) tax, as well as the costs for administering any employee benefits (e.g., healthcare, 401k). With current driver earnings and incentives running at an estimated 78% and 76% of gross bookings for Uber and Lyft, respectively, a 25% increase in driver wage/benefit costs would essentially drive take rates to zero (absent rate increases to riders). We think an adverse ruling on the contract workforce issue would potentially bankrupt both Uber and Lyft, hence is a material risk to monitor.

# Financial Risk From The "Scorched Earth" Playbook

Uber and Lyft usher in a new era of companies that have abandoned the previous standard venture-capital-backed approaches in the past ("rule of 40" or "lean start-up," etc.) in favour of throwing caution against the wind and despite negative unit economics, plowing billions of dollars in late-stage private capital towards winning the local ground-and-pound game. We see this in ride hailing, food delivery, micro-mobility, etc. We doubt the space would have gone this route if it weren't for the abundance of capital being thrown at these companies over the years, in some cases we think irresponsibly thrown. While Uber likes to draw the analogy of its losses to that of Amazon, we'd note that Amazon went public after only raising a seed and A round, and had positive cash flow from its core retail franchise at the time of the IPO despite having operating losses. Amazon was self-funding from its working capital, in very stark contrast to this generation of companies. We think this dynamic will take some time for public market investors to digest. The initial reaction has been underwhelming and that's not at all surprising, as capital and market share don't seem to build as big of a moat as in prior examples of two-sided marketplace models.

Despite claiming to hold >50% market share of rides in each of its serviceable countries, Uber did see its rides market share fall off in 2018 in its home market due in part to the carryover from the changes in brand perception from "delete Uber", but mostly because of an aggressive marketing push by local competitor Lyft. In 2018, Lyft's S&M expense increased 42% Y/Y compared to 25% Y/Y for Uber and its share of US ride market (measured by gross bookings for both companies) fell to ~70% from ~80% in 2017. There is significant risk of similar market share erosion for Uber as it sees multiple well-funded competitors in battleground countries, such as Didi in LatAm, DoorDash in food delivery in the US, and Ola in India.

Aggressive marketing by competitors is something that Uber has seen before and has been somewhat disciplined in its response. In 2016, Uber ceded the Chinese ride-hailing market to local competitor Didi and in 2018 made the same strategic decision to relinquish the Southeast Asia and Russian markets to Grab and Yandex, respectively.

# Case Study – Germany Food Delivery

It's difficult to quantify the impact to Uber's business to-date from competitors that are aggressively pursuing this "scorched earth" approach to gaining market share, but looking at what has happened in the food delivery space in Germany provides a glimpse of what could happen when a market leader makes a concerted effort to build supply and demand for its platform.

From 2014 through 2017, Takeaway's (covered by Barclays analyst Andrew Ross) total S&M expense increased at a 45% CAGR with much of its going towards offline marketing in Germany. By comparison, that is a  $\sim$ 50% faster than DHER (its primary competitor in Germany at the time) and is nearly 2x the rate that GRUB grew its S&M expense here in the US where it was the market leader at the time. Also, Takeaway's S&M as a percentage of

revenue increased from 57% in 2014 to ~75% in 2016 while DHER's (covered by Barclays analyst Andrew Ross) marketing margin remained relatively unchanged. Though not all of this marketing went towards the German market it does show the level of aggressiveness and investment the company was going through and Takeaway did still account for over 50% of the total gross offline marketing in Germany from 2014 to 2017.

FIGURE 108
Percent Of Total Gross Offline Marketing Spend (Germany)



Source: Barclays Research, Takeaway Company Update 2019, Nielsen Media Research

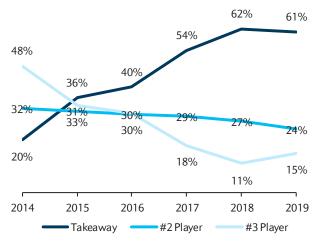
Likely as a result, Takeaway's share of the German market increase from  $\sim$ 46% in 2014 to  $\sim$ 61% by 2017, according to Google Trends data, and its share of unique web traffic increased  $\sim$ 3x, according to comScore, to  $\sim$ 61%.

# FIGURE 109 Relative Market Share Food Delivery (DE)



Source: Barclays Research, Takeaway.com Company Update 2019; Google Trends (January 2014 – January 2019)

# FIGURE 110 Relative Unique Visitor Traffic Share Food Delivery (DE)



Source: Barclays Research, Takeaway.com Company Update 2019; comScore (January 2014 – January 2019); comScore Media Metrix desktop. Unique visitors defined as individual visitors per website in each period; unique visitors may be included as duplicate visitors of other websites in the same period

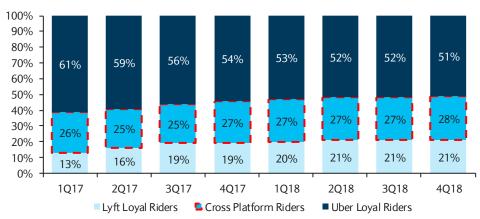
Takeaway ultimately won the German market with the recent merger of DeliveryHero's domestic business in 1Q19, but it came at a tremendous cost. The same thing likely played out in the Middle East whereby Uber and Careem competed aggressively "scorching the earth" for years, until Uber decided it was cheaper to acquire Careem for \$3B vs. continue to

burn cash. Oddly, the same playbook seems to be happening in the US food delivery space with DoorDash. We'll see how it ends up.

# What May Solve Churn & Build A Moat? Potentially Rewards Programs

One can argue that the main value prop for ride hailing companies is simply convenience and price. However, a key differentiator to determine bookings growth and profitable unit economics going forward could be how ride hailing companies utilize their respective reward programs (something that would be more difficult to implement for alternative public transportation and taxi companies). Reward programs for ride hailing companies can effectively leverage their users' digital footprint on the app by converting user activity to accumulate points that in turn will provide perks such as discounts and higher level of service for future rides, a flywheel effect that should in turn should improve user stickiness and most importantly, reduce the use of heavy incentives. Nuances between different reward programs could also be a differentiating factor between the ride hailing apps, especially in a future state where price of the trip is no longer the only deciding factor.

FIGURE 111
U.S. Rides Market Share By Rider Type



Source: Barclays Research, Yipit Data

In most geos today, there are two main competing ride sharing apps (Uber & Lyft in the US, Uber vs. 99 in Brazil, Uber vs. Gett in the UK, etc.). Therefore, the ability to attract user's engagement and loyalty could be a key determinant of bookings growth and profitability over the long term. In a duopoly environment with little differentiation in service levels, the percentage of cross platform riders (riders who use more than one rider hailing app) will inevitably increase over time as savvy users would download both apps in order to compare prices, thus becoming agnostic to brand affinity. In the US, the percentage of users that use both Uber and Lyft apps increased from 25% in 2Q17 to 28% in 4Q18 (Figure 111) and we believe this number will only go higher. In order to offset this trend, we need to see ridehailing take the same shape as certain hotel companies such as Marriott and Hilton, where miles programs represent 50-60% of total room nights and companies have been able to differentiate on areas other than price.

# **How Effective Are Reward Programs?**

Reward programs was a marketing strategy introduced in the 1980s that has one main objective: to increase the average spend per customer. According to the Bond Loyalty

Report, customers on average spend 37% more with brands that have a rewards program than those that do not and as high as 2x more in categories such as gas (Figure 113). Other benefits include users being more likely to recommend the brand to others as well as lower churn rates due to increased satisfaction.

FIGURE 112

Benefits Of Having A Rewards Program

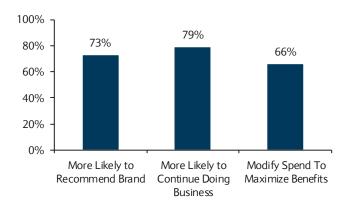
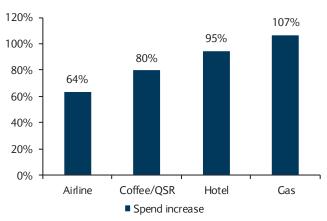


FIGURE 113

Users Tend To Spend More On Brands That Have A Rewards Program (by sector)



Source: Barclays Research, 2017 Bond Loyalty Report,

Source: Barclays Research, 2019 Bond Loyalty Report

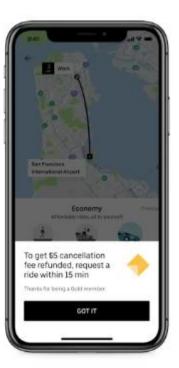
# What Does This Mean for Ride Hailing Companies?

In Nov 2018, Uber launched its own rewards program called Uber Rewards to nine cities in the US (rolled out to the entire US by Mar 2019). For the first time, the program gave users a sense of brand affinity by rewarding members who reach a certain amount of points, unlocking additional benefits such as longer free cancellation periods along the way. Likewise, Lyft launched Lyft Rewards in Dec 2018 in select cities, rewarding user points for every dollar spent on the platform, which can then be redeemed for perks such as ride upgrades. Unlike Uber, Lyft rewards have not yet launched nationwide.

FIGURE 114
Uber Rewards – Example Of Unlocking Additional Benefits







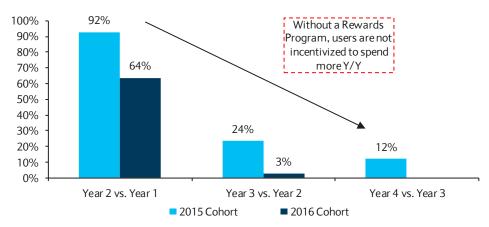
Source: Barclays Research, Company Reports. Screenshot of Uber.com taken on May 16, 2019. The owner of rights in the pictured website, including any images and trademarks, is not affiliated with Barclays.

We believe there are three main objectives of having a rewards program for ride hailing companies:

# 1) To Increase the Lifetime Value Per Customer.

With both Uber and Lyft subsidizing a large portion of their rides heading into their respective IPOs, we believe sooner or later, competition and influx of promotions will stabilize as the public markets start to hold the companies responsible and show signs of profitability. Therefore, we believe maximizing lifetime value per customer will be a main focus for both companies in the middle to near term. However, for Lyft, its cohort data provided in its S-1 suggests that spend on the platform decelerates Y/Y the longer the user stays on the platform, a sign that customer satisfaction is low, leading to churn and appears to be headed towards declining spend. Implementing a rewards program nationwide could help Lyft reverse this trend.

FIGURE 115 Lyft Rides Y/Y Growth By Cohort



Source: Barclays Research, Company Reports. Note: Growth in Year 2 vs. Year 1 is due to Year 1 not being a full calendar year for some of the riders.

#### To Cross Promote/Sell Other Products & Services

As shown in Figure 112, 73% of users are more likely to recommend a brand that has a reward program. For Uber specifically, this means that it will be able to effectively cross promote its Rides MAPCs to other business segments such as Uber Eats by enabling cross benefits in its rewards system. In fact, one of the top perks of the Uber Rewards program includes three free deliveries on the Uber Eats platform (Figure 116). Uber Cash, of which \$5 is rewarded to each tier you unlock (including the first Tier), can also be used on both Uber Rides and Eats platform. Similarly, both Uber and Lyft can leverage a reward system to expand into other transportation offerings such as bikes/scooters and potentially even other services such as car rentals by incentivizing their users to accrue points in order to redeem rewards across all services (ex. free scooter trip after 10 rides, free car rental after 100 rides).

FIGURE 116
Perks Of Uber Rewards By Tier

Uber Rewards	Blue	Gold	Platinum	Diamond
Earn points with every eligible ride of Uber Eats order	√	V	<b>V</b>	V
\$5 Uber Cash rewards for every 500 points you earn	$\sqrt{}$	<b>V</b>	<b>√</b>	√
Flexible cancellations		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Priority support		$\sqrt{}$	$\sqrt{}$	$\sqrt{}$
Price protection between your 2 favorite places			$\sqrt{}$	$\sqrt{}$
Priority pickups at airports			$\sqrt{}$	$\sqrt{}$
Complimentary upgrades				$\sqrt{}$
Special access to highly rated drivers				$\sqrt{}$
Premium support				√
Free delivery (\$0 fee) on 3 Uber Eats orders				V

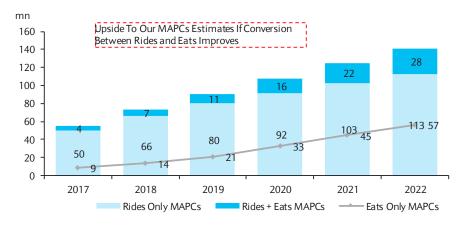
Source: Barclays Research, Company Reports.

#### 3) To Lower Customer Acquisition Cost

Uber management has mentioned that 50% of new Uber Eats MAPCs have not used the Uber platform previously, implying that 50% of MAPCs came from the Rides business and thus at virtually no cost, a large economic advantage compared to competitors who have to

spend to acquire every single customer. Therefore, in our model, we are currently assuming that the ratio of Eats Only MAPCs to Rides + Eats MAPCS stays constant at 1:2. However, over time, if the cross benefits of Uber Rewards prove to increase in effectiveness and is able to convert users to Rides to Eats (and even vice versa) at a higher rate, that ratio could end up being much higher, and could provide upside to both our MAPCs and bookings estimates.

FIGURE 117
Success of Uber Rewards Could Provide Upside To Our MAPCs and Bookings Estimates



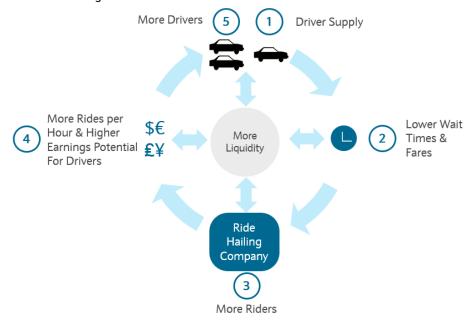
Source: Barclays Research, Company Reports

# How Can Reward Programs Impact Driver Supply?

Driver supply and retention is a core issue for all ride hailing companies as the more the supply, the lower the customer wait time, the better the service levels, and the higher the customer demand. This virtuous cycle highlights why driver density is key to creating driver efficiencies and increase user demand on the platform.

FIGURE 118

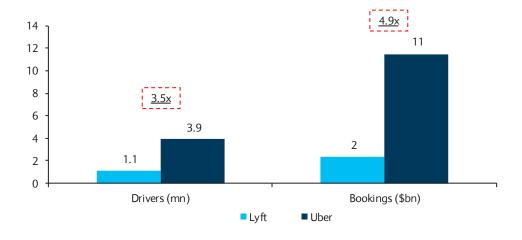
Network Effort Begins With The Drivers



Source: Barclays Research

As of 4Q18, Uber and Lyft have disclosed that they have 3.9mn and 1.1mn drivers on their platforms respectively, meaning Uber has 3.5x the amount of drivers as Lyft. We attribute Uber's large global footprint as the key differentiator between the driver counts since pay is usually attributed to being the top motivation in deciding which platform to drive for and is similar between the two competitors.

FIGURE 119
As of 4Q18, Uber Has 3.5x The Drivers and 4.9x the Rides Bookings As Lyft



Source: Barclays Research, Company Reports

In a survey with 1,150 drivers conducted by the RideShareGuy, roughly 44% of drivers in the US drove for two on-demand companies while 24% of drivers drove for three or more. Even more so than users, drivers have every reason to shop around the apps to ensure they are maximizing their earnings.

FIGURE 120
How Many On-Demand Services Have You Signed Up To Drive/Deliver For?

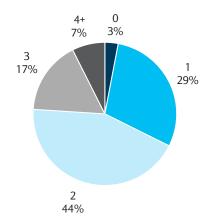
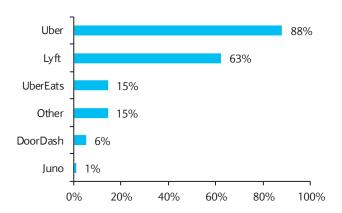


FIGURE 121
Services You Are Currently An Active Driver With

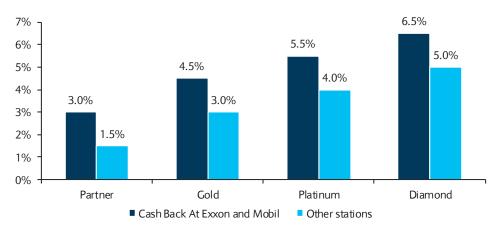


Source: Barclays Research, RideShareGuy Driver Survey 2017.

Source: Barclays Research, RideShareGuy Driver Survey 2017.

In attempt to strengthen its driver supply, Uber launched its Driver Rewards Program called Uber Pro in eight cities in Nov 2018 and has since expanded it to 20 cities as of May 2019. Similar to its user rewards program, it is split into four tiers with additional benefits as the driver earns points and advances up each of the tiers.

FIGURE 122 Example Of Uber Pro Rewards By Tier: Gas Cash Back



Source: Barclays Research, Company Reports.

Uber drivers are required to meet certain thresholds such as rides acceptance and cancellation rates to reach/maintain their rewards status. Over time, as additional benefits are added to the higher tiers, drivers would need to decide whether it is worth sacrificing maximum pay-outs per trip vs. the long term benefits of being a Platform or Diamond member. As a top tier Uber Pro member, drivers earn 3% and 6% extra for their earnings on time and distance amongst other perks, which may be enough to prevent them from bouncing between competitor apps as Lyft has yet to launch its own driver rewards program.

FIGURE 123

# Uber Pro Rewards By Tier

Uber Pro Rewards	Partner	<del>^</del> Gold	Platinum	<b>♦</b> Diamond
Earn up to 6% extra on time and distance rates			+3%	+6%
Up to 5% Cash Back on gas at all stations	1.5%	3%	4%	5%
Up to 6.5% Cash Back on gas at Exxon and Mobil stations	3%	4.5%	5.5%	6.5%
Up to 25% off car maintenance	•	•	*	•
Consecutive Trips promotion	•	•	•	•
Recognition in the riders' app		•	•	•
Quest promotions		•	•	•
See trip duration and direction		Long Trips	All Trips	All Trips
Priority support			*	•
Free 24/7 roadside assistance		•	+	•
L00% tuition coverage			+	•
aster pickups at airports				•
Free dent repair				•

Source: Barclays Research, Company Reports. Screenshot of Uber.com taken on May 16, 2019. The owner of rights in the pictured website, including any images and trademarks, is not affiliated with Barclays.

# Uber's Other Bets Segment – Micromobility & Freight – A Closer Look

The third, and smallest of Uber's three primary business segments, "Other Bets", includes the company's nascent offerings in New Mobility (i.e., electric scooter/bike rentals) and Freight brokerage. Combined, the two businesses generated just \$367m of gross bookings in 2018 (~1% of total, ~4% of adjusted revenues) and collectively were a drag in terms of contribution profit. Anticipating investor questions on the relevancy/necessity of these seemingly non-core bets, in this section we briefly illustrate the economics for New Mobility/Freight, the market opportunity for each of these business lines, and by extension, why they fit with core ride hailing as part of Uber's multi-service approach.

# Low Touch, High Take Rate Revenue Model

The revenue model for New Mobility/Freight are as distinctly different as the mode of transportation (consumer self-service on an Uber-owned scooter vs. B2B delivery of goods in a third-party truck) and duration of the trip. Similar to core Rides unit economics, New Mobility gross bookings are a function of time plus taxes and fees. This is where the similarities end, however, as New Mobility generates much lower per trip gross bookings (\$1.49/trip vs. \$8.47/trip for Rides) – a reflection of shorter average trips, negligible pass-through costs (i.e., no driver to pay), and competitive dynamics in the shared bikes and scooter space. Consequently, the adjusted take rate for New Mobility (~99%+) is substantially higher than that of Rides (21.7%).

In contrast, Freight is a B2B model in which a shipper posts a shipment listing defining an upcoming trip – trip length, the items to be shipped (size & weight), vehicle requirements, and specific load requirements (e.g., refrigeration). Uber Freight then calculates a shipment cost, typically ranging from \$735 to \$1,850, based on these criteria. Beyond the much higher \$1,300 average per trip gross bookings (which includes some fees), the Freight business handles transportation costs, from an accounting perspective, very differently than the core Rides business. From its gross bookings, Freight only deducts modest (~1% of gross bookings) "accessorial" contra revenue items, with payments to carriers (the Rides equivalent of driver earnings, referrals and incentives) treated as a Cost of Revenue. As a result of this gross-revenue-recognition accounting, the take rate for Freight (~99%+) is significantly higher than for Rides.

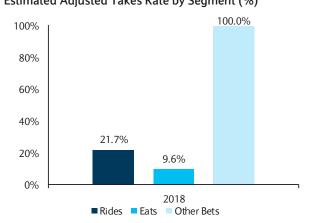
FIGURE 124
Economics of New Mobility and Freight

	, ,						
	New	Mobility	Freight				
2018E Trips (m) 2018E Gross Bookings (\$m) 2019E Gross Bookings (\$m)	\$	9.4 614 698	0.3 \$359 \$980				
Gross Bookings	Includes: Usage Fee + Unlock Fee + Price per Minute + Taxes	\$1.49 per Trip	Includes: Shipment Costs + Fees	\$1,300 per Trip			
Less: Contra Revenue Items	Promotions	<1%	Accessorial	<1%			
Uber Adjusted Take Rate	~9	99%+	~99	9%+			
Less: Cost of Revenues	Includes: E-Scooter Charging Maintenance	>100% of Bookings	Includes: Payments to Carrier	~95% of Bookings			
Gross Profit	Lo	osses	Slightly	Positive			
Less: Core Platform Direct Expenses							
Other Bets Contribution Profit	-41% in 2018, -60% in 2019E and Break Even by 2021-2022						

Source: Barclays Research, Company documents.

Despite the accounting difference which leads to structurally higher adjusted take rate for Other Bets vs. Rides and Eats, the business is still a drag from a contribution profit/margin perspective. To be fair, both New Mobility and Freight are in their infancy, having both been launched in earnest following the Jump and Otto acquisitions, and a fraction of the scale of Rides and Eats. Given a number of secular tailwinds supporting the case for micro mobility and a sizable \$2.3bn global TAM for freight (discussed in greater detail immediately below), we believe these two business lines have the potential to become a greater piece of the Uber narrative in the coming years, and see a path for the Other Bets segment achieving break even contribution profit in 2021 or 2022.

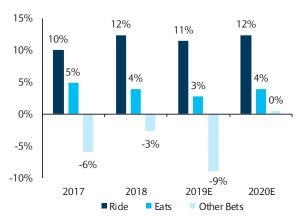
FIGURE 125
Estimated Adjusted Takes Rate by Segment (%)



Source: Barclays Research. Company documents. Other Bets est. at ~99-100%

#### FIGURE 126

## Estimated Gross Margin by Segment (%)



Source: Barclays Research, Company documents.

## New Mobility - Faster, Cheaper, More Efficient

Uber's New Mobility sub-segment includes the rental of Uber-owned electric bikes and scooters, under the Jump brand (which Uber acquired in August 2018), competing in the micro mobility (i.e., any compact, two-wheeled electric vehicle under 500kg) segment. Our European Autos & Auto Parts team lead by Kristina Church recently did a deep dive on the micro mobility market (see: *Sustainable & Thematic Investing: Micro mobility: Fast, Cheap and Good Solution for 'Smart Cities'*, 3/20/19), concluding that this subset of transportation could be an \$800bn global revenue opportunity by the mid-2020s, with varying degrees of market penetration by country<sup>5</sup>. Rapid adoption of micro mobility is predicated on three key factors that make it a better mode of transportation and an incredibly attractive value proposition as an extension of the ride-hailing business. Specifically, micro mobility is:

- Faster than private car or public transit. Barclays Research estimates and data from the National Household Travel Survey (NHTS) suggests that as much as 60% of all journeys are for trips of five miles or less, with an even greater concentration of short-distance trips in urban environments. Given a high frequency of short trips, consumers want to minimize wait times for vehicles to arrive and time wasted in traffic. Micro mobility, and in particular bicycles/e-bikes, have been found to be significantly faster in many inner cities, averaging more than 10 miles per hour vs. less than 10 MPH in a car. This convenience factor should contribute to consumer uptake.
- A cheaper alternative. On a cost per mile basis, we estimate that a trip via micro mobility costs consumers \$3 for the first mile, dropping to well below \$2/mile after just a few miles. Although this is comparable to the cost of public transit, this is one-half to one-third the equivalent per-mile cost of car ownership. In dense urban environments where the cost of owning a car can be prohibitively expensive, micro mobility serves as an attractive, inexpensive alternative for a *portion* of a consumer's transportation needs. From the perspective of ride-hailing service providers, micro mobility can also be viewed as a cheaper alternative to ride-hailing. In contrast to ride-hailing, micro mobility requires a sizable initial investment in a fleet of bikes/scooters. That said, an individual current generation e-scooter *retails* for \$1,299 (per Bird), and so we estimate that a fleet of scooters at wholesale pricing would likely be a few hundred dollars each. With gross bookings averaging \$1.49/ride, we estimate that the payback period could be as short

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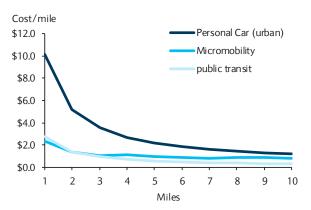
<sup>&</sup>lt;sup>5</sup> Micromobility, as defined by being a two-wheeled electric vehicle, has low penetration rates globally. Gas powered scooters/mopeds and shared bikes have moderate penetration in countries such as China and India and should serve as an adoption model for electric two-wheeled vehicles. See the Micromobility note referenced above for a more detailed discussion of Barclays Research forecasts for market penetration.

as one month<sup>6</sup>, with unit-level contribution margin improving markedly thereafter. Despite the large up-front investment, as we discuss earlier in this report, scale begets more scale, and we believe once a company achieves critical mass in micro mobility, the incremental margins improve materially, with the potential to achieve better ride-level profitability vs. ride-hailing due to the absence of driver-related costs.

- More efficient. Micro mobility is more efficient than private car ownership in a number of ways. From a fuel/energy consumption perspective, micro mobility has an estimated carbon footprint per mile of 28g vs. 292g for a full-sized vehicle<sup>7</sup>. In the context of urban planning, Barclays Research estimates that nine bikes/20 scooters can be stored in the same space as one car. Repurposing existing car parking spaces for micro mobility could facilitate the transportation needs for a greater number of individuals and improve utilization of those vehicles.
- <u>Provides TNC supply relief during peak times</u>. Scooter and bike share is especially
  valuable to Uber and Lyft during peak ride-hailing dayparts, as the cannibalization of
  Rides trips provides relief on the driver supply which reduces surge pricing and ETAs,
  increasing service levels.

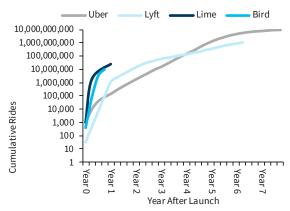
Given these positives, it's not surprising that micro mobility adoption is ramping at a faster rate than ride-hailing, as illustrated in Figure 128 below. Two key risks, however, are that micro mobility should continue to cannibalize the core ride-hailing business (which is negative to overall unit economics for now) and that the micro mobility sector is very competitive. Peers Birds Ride and Lime (both private, not covered) already operate in more than 100+ cities (vs. 19 domestic and six international cities for Jump as of May 2019), and traditional automotive manufacturers are also joining in. BMW and Daimler, for example, have launched a micro mobility business, Hive, within their FREE NOW joint venture, with an expected roll out to 20 European cities in 2019. In this increasingly competitive market, we believe achieving scale first is critical, as the service offering is commoditized and convenience likely outweighing price; consequently, consumers won't need multiple providers, but rather one or two players/apps with broad geographic coverage.

FIGURE 127
Micromobility Cheaper Than Private Car For Short Trips



Source: Barclays European Auto & Auto Parts Team, NYC Transit Statistics

FIGURE 128
Micro Mobility Adoption Ramping Faster Than Ride-hailing



Source: Barclays EU Auto & Auto Parts Team, company documents, CB insights

 $<sup>^6</sup>$  For illustrative purposes, assuming gross bookings of \$1.49/ride and 10 rides per day, we estimate that a  $\sim$ \$450 scooter could recoup its initial cost in  $\sim$ 30 days, with payback periods improving as adoption/utilization grows.

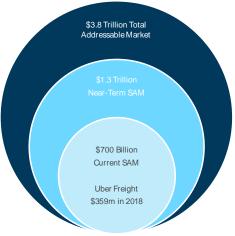
<sup>&</sup>lt;sup>7</sup> "Electric scooters battle to prove 'green' worth", Financial Times, 3/11/19, https://www.ft.com/content/cd6fcae8-28a6-11e9-9222-7024d72222bc

# Freight

The opportunity in Freight for Uber is really two-fold. First, this is an incredibly large global market, with estimated annual spend of \$3.8tn globally. Second, this market, although mature, is highly fragmented with innumerable individual suppliers (i.e., a driver with a truck) servicing a wide range of purchasers and what we believe to be a labor-intensive booking model with little pricing transparency. Uber's three step booking process in which: a) shippers input criteria to book a load, b) shippers select a qualified driver, and c) shippers monitor their load streamlines a process that currently is coordinated by phone/fax, often requiring 30 phone calls (~6 hours of labor) and 2-3 days to arrange a shipment. Further, booking via Uber Freight facilitates greater utilization of trucks, which frequently run at 50% utilization (i.e., carrying a load one way, return trip empty). With rising shipping costs, an aging demographic of drivers, and the cost of trucks/maintenance weighing on corporate balance sheets, it's not tough to see why this is a meaningful opportunity.

At present, Uber Freight participates in the estimated \$72bn US freight brokerage service business, implying a modest 0.5% Uber market share (\$359mn Freight adjusted revenue in 2018). This brokerage piece is a subset of the \$700bn estimated (2017) US trucking spend, which includes for-hire/private fleets, apportioned truckload shipments, and courier/parcel delivery – all of which we believe is serviceable. Following Uber's March 2019 announcement that it plans to enter Europe soon, the near-term SAM has nearly doubled to \$1.3tn annually, with a further \$2.3tn TAM in the rest of the world, which could become serviceable over time.

FIGURE 129
Freight Total Addressable Market



Source: Barclays Research, Company Documents; American Trucking Associations, Armstrong & Associates

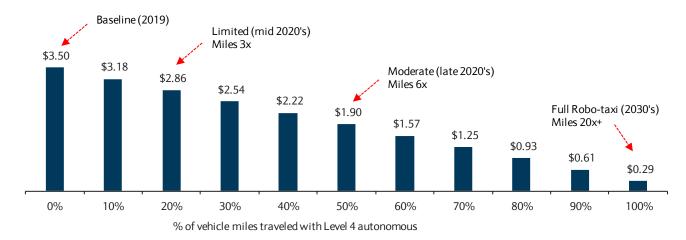
# The Shift To Autonomous

In our companion report from Brian Johnson and Kristina Church (See Cutting the car ownership cord", 6/4/19), we highlight the shift from car ownership to autonomous as a similar dynamic that we see playing out in traditional media whereby cable subscribers are "cutting the cord", as the cost of service for legacy cable bundles is being undercut by an unbundled broadband and skinny bundle combination. Even worse, there are new digitally native "never corders" who won't subscribe to cable, in the same way that digitally native urban ride-hailers may never take the plunge and buy a car. We see this tipping point whereby ride-hailing starts to change the behaviour of consumers as the service levels improve and new options are added, like micro-mobility and weekend rentals, etc. (ride-hailing's version of a bundle). As these services proliferate, we think the total cost of ownership argument will start to tip in favor of an asset light lifestyle for urban dwellers. The math will tip even more aggressively in favour of ride-hailing as autonomous comes into the picture, as the cost of fulfilment starts to drop massively, and the volume of ride-hailing-feasible trips expands well beyond what we see today.

In the report we look at the cost of driving through the lens of monthly consumer vehicle spend to compare car ownership costs to a monthly mobility budget for MaaS (mobility as a service). In other words, at what point might a consumer decide to "cut the cord" on car ownership in favour of other more flexible forms of mobility such as Micromobility, ride-hail, car share or rental.

Even without robo-taxis, about 25mn vehicles in the US are vulnerable to replacement by ride-hailing, adding 23bn VMT to the near-term serviceable market for ride share as those households give up their vehicles, a significant increase over the ~10bn miles Uber and Lyft posted in 2018. By the late 2020s, when robo-taxis can address a portion – but not yet all – of urban and suburban trips, an estimated total of 42mn vehicles and 64bn VMT could be in play, or over 6x the volume of miles taken by Uber and Lyft combined in 2018 in the US. In the future "utopian" state, where robo-taxis are prolific (100% penetration) then the TAM for ride-hailing would potentially be 20x+ or larger than today, including non-passenger trips like freight and logistics.

FIGURE 130 Shift To Autonomous Dramatically Expands The Trips TAM As Cost-Per-Mile Comes Down



Source: Barclays Research estimates, AAA Note – 0% indicates all rideshare miles are human driven

We see four stages of development for ride-hailing's transition to autonomous, each with its various uptick in serviceable miles and trips:

Baseline (right now, 2019): Even before robo-taxis and with only very limited Micromobility, US households owning ~25mn lightly driven vehicles (~ under ~3k miles per annum) in urban and suburban areas would find cutting the cord and shifting to ride share (and limited Micromobility) cost effective – which would open up ~23bn vehicle miles travelled (VMT) for rideshare operators even before robo-taxis— significant growth over the ~10bn VMT rideshare posted in 2018. The cost of fulfilment would be similar to what we see currently, or around \$3.50 per mile for driver earnings (which covers gas and wear and tear) and insurance.

**Limited robo-taxi (Mid 2020's):** With limited geofenced rollout of robotaxis in denser suburbs and urban areas, the monthly mobility bills for most would come down somewhat so moderately higher mileage vehicles become less economic - enough to put into play 7mn additional vehicles and 20bn additional VMT (for a total of 32mn vehicles and 43bn VMT). We see the cost per mile of fulfilment in this scenario coming down 10%-20%, which will expand the available number of ride-hailing trips 2x-4x vs. today.

Moderate robo-taxi (Late 2020's): As level 4 robo-taxis can handle more rides (we estimate c40% of miles capable of travelling autonomously in urban areas by the late 2020's), households with vehicles that are moderately driven (roughly between 4k to 8k miles) will find ridesharing and Micromobility more cost effective – which could put into play a total of 42mn vehicles and 64bn VMT. Cost of fulfilment would drop 50%+ below today and open up significantly more trip volumes to ride-hailing.

Full robo-taxi: 2030's: This is when disruption becomes significant, both for the potential miles available for rideshare and robo-taxi operators and for the impact on vehicle ownership and vehicle sales. Were level 5 autonomy available everywhere, at estimated robo-taxi costs dropping from \$0.5/mile (mid-2020's) to \$0.3/mile (2030's) (90% below today), 145mn vehicles and 1.7tn VMT (out of ~2.8 total light vehicle VMT, excluding motorcycles, fleet LVs and trucking) could be at risk.

# **But Who Owns The Fleet?**

A key question that the investment community has been asking Google for a few years is if Waymo ultimately proves to be successful in building out a fully autonomous robo-taxi TNC, who is going to pay for all the vans and the maintenance? Right now Google is covering all the expenses, which amount to lots of engineers and a few thousand vans in Mountain View, Phoenix and a few other geos. Uber similarly has its fleet of AVs in Pittsburg today and is bringing a third generation robo-taxi to market in 2020 (with cockpit driver in tow) likely from Volvo, Daimler and/or Toyota who have all partnered with ATG at this stage. Similarly, Lyft is testing its own vehicles, partnering with Waymo in Phoenix and has many other OEM deals in place. These investments, in total across all players, add up to around less than \$5B if we had to guess, which is a big number but nowhere near what would be required in the future state of hundreds of thousands of robo-taxis.

We would guess as this market forms, so will many different sub-markets that will be set up to help facilitate a future of robo-taxis, including: financing companies, fleet maintenance companies, mechanics on demand, various software and entertainment providers, garages and charging stations, etc. We think Uber and Lyft are most interested in the dispatch and routing software, and maintaining the direct relationship with the end user (the passenger) but not really interesting in financing the build out of fleets of robo-taxis on their respective balance sheets. For as financially solid as Google is, we doubt it aspires to take on that level of investment (full ownership) in the future state. We'd guess that there will be asset light players (like Uber, Lyft and Waymo eventually) and then asset heavy participants (fleet

owners, financiers, etc.). Each piece of the value chain likely becomes its own micro-industry around the shift to autonomous robo-taxis. This will take a long time, well into the 2030's based on our estimates above.

Back to the cable analogy, there is some vertical integration (from acquisitions) in that space, however the market cap is distributed fairly broadly across the content creators (movie studios and talent), distributors (cable companies), advertisers (brands and agencies) and even the asset light players who sit on top like Netflix and YouTube who establish a direct relationship with the end user. Micro-industries all around sending content over a pipe to a viewer, with no single entity owning or controlling the entire value chain.

# Comparable Companies Valuation Analysis

Uber trades at  $\sim$ 2.9x 2021 EV/Sales, a +25% discount to Lyft at 3.9x despite greater scale and slightly higher near-term top-line growth. This may reflect greater risk to Uber's global operations from regional competition across both ride-hailing and food-delivery, as well as a view Lyft's revenue and profit profile may be more sustainable as a pure-play in ride-hailing. Uber is also trading at a discount to the average of Food Delivery and Ride-Hailing peers that trade at 3.4x 2021E EV/Sales and Mega-Cap Internet peers at 4.0x. While we acknowledge the risk to Uber's business from greater competition across multiple sectors, as well as the above-average investment in emerging technology (i.e. autonomous, scooters, bikes) we think there is greater potential for Uber than for its peers to leverage its scale in ride-hailing to drive more-material upside to our estimates in the near-term. Hence, we believe a multiple at least in-line with the Food Delivery & Ride-Hailing peer set.

FIGURE 131 Comparable Valuation Analysis

Company	Ticker	Price	Rev	Growth `	// Y	EBI	TDA Mar	gin	2	2020E	;	2021E	Market Cap	Ent. Value
Company	Tioner	5/ 31/ 2019	2019E	2020E	2021E	2019E	2020E	2021E	EV/S	EV/ EBITDA	EV/S	EV/ EBITDA	(\$ Mn)	(\$ Mn)
Uber	UBER.N	\$40.41	21%	37%	34%	-26%	-16%	-9%	3.9x	NM	2.9x	NM	\$73,627	\$67,110
Lyft	LYFT.O	\$57.66	53%	26%	27%	-63%	-21%	-8%	5.0x	NM	3.9x	-49x	\$16,484	\$20,601
Food Delivery & Ride Ha	ailing													
Delivery Hero	DHER.DE	\$43.67	65%	44%	34%	-25%	-5%	8%	4.2x	NM	3.1x	39x	\$8,137	\$7,720
Just Eat	JE.L	\$7.59	29%	24%	16%	18%	18%	21%	3.1x	17x	2.7x	13x	\$5,218	\$5,126
GrubHub	GRUB.K	\$65.15	35%	29%	35%	18%	21%	22%	3.5x	17x	2.6x	12x	\$6,054	\$6,188
Takeaway	TKWY.AS	\$89.50	74%	35%	22%	3%	15%	23%	6.4x	42x	5.3x	23x	\$3,870	\$3,939
Median			50%	32%	28%	11%	17%	21%	3.9x	17x	2.9x	18x		
Average			51%	33%	27%	4%	12%	18%	4.3x	26x	3.4x	22x		
Mega-Cap Internet														
Amazon	AMZN.O	\$1,775.07	18%	18%	12%	16%	16%	18%	2.7x	16x	2.4x	13x	\$891,085	\$878,758
Google	GOOGL.O	\$1,106.50	17%	16%	17%	36%	36%	35%	3.6x	10x	3.0x	9x	\$775,109	\$665,687
Facebook	FB.O	\$177.47	24%	21%	21%	54%	54%	55%	5.5x	10x	4.6x	8x	\$509,161	\$463,918
Alibaba	BABA.N	\$149.26	34%	31%	28%	30%	31%	29%	4.4x	14x	3.5x	12x	\$391,808	\$399,895
Tencent Holdings Ltd	0700.HK	\$41.53	24%	26%	23%	36%	34%	34%	5.6x	16x	4.5x	13x	\$397,359	\$405,241
Netflix	NFLX.O	\$343.28	28%	23%	23%	15%	18%	20%	6.5x	37x	5.3x	27x	\$155,136	\$162,092
Booking	BKNG.O	\$1,656.22	5%	10%	9%	39%	38%	38%	4.8x	12x	4.4x	11x	\$75,252	\$79,524
Median	•	•	24%	21%	21%	36%	34%	34%	4.8x	14x	4.4x	12x		
Average			19%	21%	19%	32%	32%	33%	4.7x	17x	4.0x	13x		

Source: Barclays Research, Refinitiv consensus for all estimates

FIGURE 132 **UBER Income Statement** 

	2017	2018	1Q19 Mar-19	2Q19E Jun-19	3Q19E Sep-19	4Q19E Dec-19	2019E	2020E	2021E	2022E
Income Statement - Non-GAAP			War-19	Juli- 19	<b>э</b> ер- 19	Dec-19				
Gross Bookings	34,409	49,799	14,649	15,746	16,784	18,536	65,715	85,727	107,916	126,377
	ĺ	,	,	,	,					•
Adj. Net Revenue	7,258	10,398	2,761	3,053	3,327	3,647	12,788	17,336	23,255	28,470
% Y/ Y	125%	43%	14%	17%	24%	36%	23%	36%	34%	22%
Take Pate	21.1%	20.9%	18.8%	19.4%	19.8%	19.7%	19.5%	20.2%	21.5%	22.5%
Cost of Revenue	3,583	4,697	1,378	1,637	1,768	1,848	6,631	9,019	11,946	14,140
Gross Profit	3,675	5,701	1,383	1,416	1,559	1,798	6,156	8,318	11,309	14,330
Gross Margin %	46%	51%	45%	42%	42%	44%	43%	44%	45%	48%
Ops & Support	1,229	1,439	433	493	516	526	1,968	2,235	2,544	2,853
S&M	2,041	2,933	1,004	852	952	990	3,798	4,563	5,205	5,715
R&D	1,172	1,440	406	551	567	565	2,088	2,385	2,571	2,505
G&A	1,394	1,609	409	456	427	471	1,763	2,030	2,124	2,234
D&D	510	426	146	121	106	106	478	532	642	720
Total Operating Expenses	6,346	7,847	2,398	2,472	2,567	2,657	10,095	11,744	13,086	14,027
as % Revenue	87%	75%	87%	81%	77%	73%	79%	68%	56%	49%
Income (loss) from operations	(2,671)	(2,146)	(1,015)	(1,056)	(1,008)	(859)	(3,938)	(3,426)	(1,777)	303
Op Margin %	-37%	-21%	-37%	-35%	-30%	-24%	-31%	-20%	-8%	1%
Adjusted EBITDA	(2,642)	(1,847)	(869)	(935)	(903)	(753)	(3,460)	(2,894)	(1,134)	1,023
% EBITDA Margin	-36%	-18%	-31%	-31%	-27%	-21%	-27%	-17%	-5%	4%
Gain on bargain purchase	0	0	0	0	0	0	0	0	0	0
Other income (loss), net	(16)	5,009	260	49	64	57	430	223	232	232
Interest expense	(479)	(703)	(217)	(150)	(84)	(84)	(536)	(332)	(329)	(327)
Profit (Loss) from continuing operations before income taxes	(3,166)	2,160	(972)	(1,158)	(1,029)	(886)	(4,044)	(3,534)	(1,874)	207
Provision for (benefit from) income taxes	375	(480)	(19)	(69)	(62)	(53)	(224)	(318)	(187)	23
Income Tax Pate	-12%	-22%	2%	6%	6%	6%	6%	9%	10%	11%
Profit (Loss) form continuing operations	(3,541)	2,493	(953)	(1,088)	(967)	(833)	(3,841)	(3,216)	(1,686)	184
Income (loss) from discontinued operations, net of income taxes	0	10	(6)	0	0	0	(6)	0	0	0
Net income (loss)	(3,541)	2,503	(959)	(1,088)	(967)	(833)	(3,847)	(3,216)	(1,686)	184
Basic EPS	(\$9.46)	\$2.08	(\$2.24)	(\$3.06)	(\$0.89)	(\$0.72)	(\$6.36)	(\$3.12)	(\$2.51)	(\$1.66)
Diluted EPS	(\$9.46)	\$2.08	(\$2.24)	(\$3.06)	(\$0.89)	(\$0.72)	(\$6.36)	(\$3.12)	(\$2.51)	(\$1.66)
										4 007
Basic Shares Outstanding	426	443	454	1,638	1,814	1,823	1,432	1,857	1,913	1,967

Source: Barclays Research, Company Reports; EPS numbers are Non-GAAP.

FIGURE 133 UBER Balance Sheet

	2017	2018	1Q19	2Q19E	3Q19E	4Q19E	2019E	2020E	2021E	2022E
			Mar-19	Jun-19	Sep-19	Dec-19				
Balance Sheet										
Assets										
		0.400		40.700	40.000	40.740	40 740			
Cash and cash equivalents	4,393	6,406	5,745	12,720	12,099	10,748	10,748	6,235	3,600	2,986
Restricted cash and cash equivalents	240	67	136	140	220	239	239	294	336	378
Accounts receivable, net of allowance	739	919	1,074	1,013	1,045	1,082	1,082	1,489	1,910	2,323
Prepaid expenses and other current assets	425	860	975	1,208	1,229	1,372	1,372	1,343	1,468	1,654
Assets held for sale	1,138	406	0	0	0	0	0	0	0	
Total Current Assets	6,935	8,658	7,930	15,081	14,594	13,441	13,441	9,361	7,315	7,341
Destricted such and such annihilations	4.405	4 700	4 004	4.005	0.450	0.000	0.000	0.005	0.000	0.000
Restricted cash and cash equivalents	1,195	1,736	1,801	1,365	2,150	2,328	2,328	2,865	3,282	3,682
Investments	5,969	11,667	11,716	11,716	11,716	11,716	11,716	11,716	11,716	11,716
Right of use asset	0	0	0	0	0	0	0	0	0	C
Property and equipment, net	1,192	1,641	1,325	1,378	1,474	1,519	1,519	1,318	1,101	891
Intangible assets, net	54	82	78	74	71	67	67	55	45	37
Goodwill	39	153	153	153	153	153	153	153	153	153
Other assets	42	51	1,387	1,387	1,387	1,387	1,387	1,387	1,387	1,387
Total Assets	15,426	23,988	24,390	31,154	31,544	30,611	30,611	26,854	24,999	25,207
Liabilities, Redeemable Convertible Preferred Stock & Stockholders' Deficit	1									I
Accounts payable	213	150	151	222	260	289	289	401	519	606
Short-term insurance reserves	469	941	961	924	1,226	1,295	1,295	1,502	1,663	1,818
Accrued and other liabilities	2,713	3,157	3,602	4,259	4,091	4,108	4,108	3,663	3,817	3,639
Liabilities held for sale	452	11	0,002	0	0	0	0	0,000	0,017	0,000
Total Current Liabilities	3,847	4,259	4,714	5,404	5,577	5,692	5,692	5,566	6,000	6,062
Total out of Edwinson	0,0	.,	.,	0,.0.	0,0	0,002	0,002	0,000	0,000	0,002
Insurance reserves	1,527	1,996	2,137	1,715	2,278	2,405	2,405	2,790	3,089	3,376
Lease liabilities from operating leases			1,225	1,225	1,225	1,225	1,225	1,250	1,000	1,000
Long-term debt, net of current portion	3,048	6,869	6,939	3,997	3,992	3,988	3,988	3,972	3,956	3,940
Other long-term liabilities	3,351	4,072	3,587	1,569	1,569	1,569	1,569	1,569	1,569	1,569
Other long-term liabilities, net of convert embedded derivatives	'	2,054	1,569	1.569	1.569	1,569	1,569	1,569	1,569	1,569
Convert debt embedded derivatives		,	2,018	,	,	,	0	0	0	0
Total Liabilities	11,773	17,196	18.602	13,910	14,641	14.880	14,880	15,147	15,613	15,947
Redeemable non-controlling interest	0	0	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4
Redeemable convertible preferred stock	12,210	14,177	14,224	0	0	0	0	0	0	\ c
·	'									
Common stock, \$000001 par value, 2,655,107 authorized, 455,051 & 443,394 shares										
issued & outstanding, respectively	0	0	0	0	0	0	0	0	0	C
Additional paid-in capital	320	668	682	31,639	32,834	33,005	33,005	34,911	37,514	40,752
Accumulated other comprehensive income (loss)	(3)	(188)	(246)	(246)	(246)	(246)	(246)	(246)	(246)	(246
Accumulated deficit / retained earnings	(8,874)	(7,865)	(8,868)	(14,145)	(15,681)	(17,024)	(17,024)	(22,954)	(27,878)	(31,243
Adjustment for change in Real Estate Accounting Standard	` '	/	/	/	,	/	` ' /	` ' /		` ' '
Total Stockholders' Deficit	(8,557)	(7,385)	(8,432)	17,248	16,907	15,735	15,735	11,711	9,389	9,263
Total Geometric Beriot	15,426	(1,000)	(0,102)			10,100	10,100	,	24,999	3,233

# FIGURE 134 UBER Cash Flow

	2017	2018	1Q19 Mar-19	2Q19E Jun-19	3Q19E Sep-19	4Q19E Dec-19	2019E	2020E	2021E	2022E
Cash Flow										
Net income (loss)	(4,033)	990	(1,016)	(5,277)	(1,536)	(1,343)	(9,166)	(5,929)	(4,925)	(3,364)
Adjustments to reconcile net loss to net cash used in operating activities:										
Depreciation and amortization	510	426	146	121	106	106	478	532	642	720
Stock-based compensation	124	170	11	3,821	420	381	4,633	1,905	2,603	3,238
Accretion of discount on long-term debt	244	318	53	2	2	2	60	10	10	10
Payment-in-kind interest	69	72	6	66	0	0	72	0	0	0
Other adjustments	(242)	(4,395)	(142)	0	0	0	(142)	0	0	0
							0	0	0	0
Changes in operating assets and liabilities, net of effect of acquisitions:							0	0	0	0
Accounts receivable	(442)	(279)	(210)	61	(32)	(36)	(218)	(407)	(421)	(413)
Prepaid expenses and other assets	(120)	(412)	(75)	(233)	(21)	(143)	(472)	29	(125)	(186)
Right of use asset / lease liabilities from operating leases	0	0	0	0	0	0	0	25	(250)	0
Accounts payable	(79)	(39)	0	71	38	30	138	112	118	86
Accrued Insurance Reserve	1,284	943	161	(459)	865	197	764	592	459	442
Accrued expenses and other liabilities	1,267	664	344	657	(168)	16	850	(445)	155	(179)
Net cash used in operating activities	(1,418)	(1,542)	(722)	(1,171)	(326)	(791)	(3,004)	(3,577)	(1,734)	355
		/·							,	
Purchase of property and equipment	(821)	(558)	(129)	(169)	(199)	(147)	(644)	(318)	(416)	(502)
Purchase of intangible assets	(8)	0	0	_	_	_	0	0	0	0
Other adjustments	342	(136)	333	0	0	0	333	0	0	0
Net cash used in investing activities	(487)	(694)	204	(169)	(199)	(147)	(311)	(318)	(416)	(502)
IDO assessed and of feed law sets and assessed		0	0	9.890	1,000		10.890			
IPO proceeds, net of fees/ Investment proceeds RSU settlement	0	0	0	-,		(240)	.,			
	- 1	-		(2,000)	(225)	(210)	(2,435)			
Principal repayment on term loan	(12)	(20)	(7)	(7)	(7)	(0)	(50)	(00)	(00)	(05)
Other adjustments	1,027	4,660	(39)	(7)	(7)	(6)	(59)	(26)	(26)	(25)
Net cash provided by financing activities	1,015	4,640	(46)	7,883	768	(216)	8,396	(26)	(26)	(25)
Effect of exchange rates on cash, cash equivalents & restricted cash and cash equivalents	22	(119)	3							
Beginning Cash Balance	6,826	5,828	8.209	7.682	14,225	14,469	8,212	13,315	9.393	7,218
Net increase (decrease) in cash, cash equivalents and restricted cash and cash equivalents		2,285	(561)	6,543	244	(1,154)	5,082	(3,921)	(2,175)	(172)
Reclassification from (to) assets held for sale during the period	(130)	2,263	34	0,343	244	(1,134)	3,062	(3,921)	(2,173)	(172)
Ending Cash Balance	5.828	8.212	7.682	14,225	14.469	13.315	13.315	9.393	7.218	7.046
Entiting Cash Dalance	5,6∠8	8,212	7,002	14,225	14,409	13,315	13,315	9,393	1,218	7,046

Source: Barclays Research, Company Reports

U.S. Internet						Industry View: POSITIVE
Uber Technologies Inc. (	(UBER)					Stock Rating: OVERWEIGHT
Income statement (\$mn)	2018A	2019E	2020E	2021E	CAGR	Price (31-May-2019) USD 40.41
Revenue	10,398	12,788	17,336	23,255	30.8%	Price Target USD 50.00
EBITDA (adj)	-1,847	-3,460	-2,894	-1,134	N/A	Why Overweight? UBER screens well on two things
EBIT (adj)	-2,273	-3,938	-3,426	-1,777	N/A	we care about with our ratings: i) sentiment is
Pre-tax income (adj)	2,160	-4,044	-3,534	-1,874	N/A	washed out, and ii) fundamentals are better than what the street gives them credit for. Its scale gives
Net income (adj)	2,503	-3,847	-3,216	-1,686	N/A	some advantage and Rides unit economics are
EPS (adj) (\$)	2.08	-6.17	-3.18	-2.59	N/A	attractive. If GB, take rates improve in 2H19, we think
EPS (reported) (\$)	2.08	-5.01	-3.18	-2.59	N/A	estimate revisions and the multiple firming up drive
Diluted shares (mn)	479	1,487	1,863	1,901	58.3%	share outperformance.
DPS (\$)	0.00	0.00	0.00	0.00	N/A	share outperformance.
Margin and return data					Average	Upside case USD 68.00
EBITDA (adj) margin (%)	-17.8	-27.1	-16.7	-4.9	-16.6	Uber's scale and multi-service approach may prove to
EBIT (adj) margin (%)	-21.9	-30.8	-19.8	-7.6	-20.0	be a stronger competitive advantage than we
Pre-tax (adj) margin (%)	20.8	-31.6	-20.4	-8.1	-9.8	anticipate, driving higher engagement and better unit economics. Uber's ATG autonomous business is a
Net (adj) margin (%)	24.1	-30.1	-18.6	-7.3	-8.0	moonshot, but could drive 50% reduction in cost per
ROIC (%)	-87.6	-39.8	-18.2	-11.6	-39.3	mile, markedly improving unit ec
ROE (%)	-130.4	306.3	126.3	220.4	130.6	Time, markedly improving and ee
NOL (70)	-130.4	300.3	120.5	220.4	150.0	Downside case USD 35.00
Balance sheet and cash flow (S	\$mn)				CAGR	Competitive pressures may continue to depress GB
Tangible fixed assets	1,641	1,519	1,318	1,101	-12.5%	growth in Rides and take rates in both Rides and Eats
Intangible fixed assets	82	67	55	45	-18.1%	businesses; in that scenario, the acceleration we
Cash and equivalents	6,406	10,748	6,235	3,600	-17.5%	anticipate in 2H19 may not materialize. This could
Total assets	23,988	30,611	26,854	24,999	1.4%	contribute to negative estimate revisions and multiple
Short and long-term debt	6,869	3,988	3,972	3,956	-16.8%	compression.
Other long-term liabilities	4,072	1,569	1,569	1,569	-27.2%	
Total liabilities	17,196	14,880	15,147	15,613	-3.2%	Upside/Downside scenarios
Net debt/(funds)	463	-6,760	-2,263	356	-8.4%	Price History Price Target
Shareholders' equity	-7.385	15,735	11,711	9,389	N/A	Prior 12 months Next 12 months
Change in working capital	877	1,061	-94	-64	N/A	High Upside
Cash flow from operations	-1.542	-3,004	-3.577	-1.734	N/A	68.00
Capital expenditure	-558	-644	-318	-416	N/A	
Free cash flow	-2,100	-3,648	-3,895	-2,150	N/A	
	2,.00	3,0.0	3,033	_,.50	.,,,	Target
Valuation and leverage metric	S				Average	45.00 50.00
P/E (adj) (x)	19.4	N/A	N/A	N/A	19.4	40.41
EV/sales (x)	7.1	5.8	4.2	3.2	5.1	36.08 35.00
EV/EBITDA (adj) (x)	-39.9	-21.3	-25.4	-64.9	-37.9	
FCF yield (%)	-2.9	-5.0	-5.3	-2.9	-4.0	Low Downside
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0	
Net debt/EBITDA (adj) (x)	-0.3	2.0	0.8	-0.3	0.5	

Source: Company data, Barclays Research Note: FY End Dec

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FIGURE 135 LYFT Income Statement

	2016	2017	2018	1Q19 Mar-19	2Q19E Jun-19	3Q19E Sep-19	4Q19E Dec-19	2019E	2020E	2021E
Income Statement										
Revenue	343.3	1,059.9	2,156.6	776.0	800.9	830.1	887.2	3,294.3	4,152.1	5,137.2
% Y/ Y		209%	103%	95%	59%	42%	33%	53%	26%	24%
Cost of Revenue	278.5	659.1	1,239.2	391.1	418.4	432.7	463.0	1,705.3	1,928.4	2,194.5
Gross Profit	64.8	400.8	917.4	385.0	382.5	397.4	424.2	1,589.0	2,223.7	2,942.7
Gross Margin %	19%	38%	43%	50%	48%	48%	48%	48%	54%	57%
Ops & Support	96.8	181.0	338.2	133.4	140.2	149.4	159.7	582.7	649.1	666.2
R&D	62.0	134.3	296.7	107.6	126.5	147.8	157.9	539.8	650.4	694.1
S&M	433.4	566.6	803.5	227.0	222.7	235.8	252.0	937.4	995.0	1,033.3
G&A	155.8	217.7	444.2	146.9	182.6	205.9	220.0	755.4	888.3	927.5
Total Operating Expenses	1,026.5	1,758.6	3,121.9	1,005.9	1,090.4	1,171.6	1,252.6	4,520.5	5,111.3	5,515.5
as % Revenue	3.0	166%	1.4	130%	136%	141%	141%	1.4	1.2	1.1
Income (loss) from operations	(683.2)	(698.7)	(965.2)	(229.9)	(289.5)	(341.4)	(365.4)	(1,226.2)	(959.2)	(378.4)
Op Margin %	-199%	-66%	-45%	-30%	-36%	-41%	-41%	-37%	-23%	-7%
Adjusted EBITDA	(682.7)	(698.7)	(947.0)	(216.0)	(283.4)	(334.8)	(358.2)	(1,192.3)	(922.8)	(328.6)
% EBITDA Margin	-199%	-66%	-44%	-28%	-35%	-40%	-40%	-36%	-22%	-6%
Interest income, net	7.0	20.2	66.5	19.7	16.6	16.6	16.6	69.5	66.5	66.5
Other income (loss), net	3.2	0.3	0.7	0.1	0.6	0.6	0.6	1.9	2.4	2.4
Income/ (Loss) before Taxes	(673.0)	(678.2)	(898.1)	(210.1)	(272.2)	(324.2)	(348.2)	(1,154.8)	(890.3)	(309.5)
Provision for (benefit from) income taxes	0.4	0.6	0.7	1.4	0.4	0.7	(0.6)	1.8	2.2	1.0
Tax rate	-0.1%	-0.1%	-0.1%	-0.7%	-0.1%	-02%	0.2%	-02%	-02%	-0.3%
Net income (loss)	(673.4)	(678.8)	(898.9)	(211.5)	(272.6)	(324.9)	(347.6)	(1,156.6)	(892.5)	(310.5)
Basic Share				23.5	291	292	292	225	295	298
Diluted Shares	18	19	21	23.5	345	347	348	266	360	369
% Y/ Y		5%	9%	20.0	0.0	0	0.0	1155%	35%	3%
Diluted EPS	(\$36.57)	(\$35.04)	(\$42.45)	(\$9.02)	(\$0.79)	(\$0.94)	(\$1.00)	(\$4.35)	(\$2.48)	(\$0.84

FIGURE 136 LYFT Balance Sheet

	2017	2018	1Q19 Mar-19	2Q19E Jun-19	3Q19E Sep-19	4Q19E Dec-19	2019E	2020E	2021E
Assets									
Current assets									
Cash and cash equivalents	1,106.1	517.7	329.5	2,283.3	1,958.0	1,618.6	1,618.6	863.6	719.5
Short-term investments	1,284.6	1,520.2	705.4	705.4	705.4	705.4	705.4	705.4	705.4
Prepaid expenses & other current assets	173.0	282.6	345.5	369.2	401.5	429.1	429.1	444.5	462.1
Total current assets	2,563.7	2,320.4	1,380.4	3,357.8	3,064.9	2,753.1	2,753.1	2,013.4	1,887.0
Property and equipment, net	14.2	109.3	120.5	143.0	160.0	178.0	178.0	264.2	364.6
Goodwill	0.0	152.1	150.7	150.7	150.7	150.7	150.7	150.7	150.7
Intangible assets, net	4.3	117.7	108.6	114.9	113.5	112.0	112.0	106.4	100.7
Restricted cash and cash equivalents	72.8	187.4	172.5	172.5	172.5	172.5	172.5	172.5	172.5
Restricted investments	360.9	863.7	993.3	993.3	993.3	993.3	993.3	993.3	993.3
Other assets	0.8	9.4	315.0	315.0	315.0	315.0	315.0	315.0	315.0
Total assets	3,016.7	3,760.0	3,240.9	5,247.2	4,969.8	4,674.6	4,674.6	4,015.3	3,983.7
Liabilities 9 Charlebaldows Fourity (Deficit)									
Liabilities & Stockholders' Equity (Deficit)  Ourrent liabilities									
Accounts payable	66.9	32.3	39.4	41.7	42.6	45.6	45.6	55.3	63.3
Insurance reserves	376.5	810.3	937.0	937.0	983.8	1,033.0	1,033.0	1,255.6	1,526.2
Accrued and other current liabilities	253.4	606.2	702.0	702.0	702.0	702.0	702.0	702.0	702.0
Operating Lease Liability - Current	255.4	000.2	73.7	73.7	73.7	73.7	73.7	73.7	73.7
Total current liabilities	696.8	1.448.8	1,752.1	1,754.4	1,728.5	1,780.7	1,780.7	2,012.9	2,291.6
Operating Lease Liability	090.0	1,440.0	264	263.8	263.8	263.8	263.8	263.8	263.8
Other liabilities	15.3	30.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Total liabilities	712.1	1.479.3	2.020.5	2.022.8	1.996.9	2.049.1	2.049.1	2.281.3	2,560.0
Total liabilities	7 12.1	1,47 3.3	2,020.5	2,022.0	1,550.5	2,043.1	2,043.1	2,201.5	2,500.0
Redeemable convertible preferred stock	4.284.0	5.152.0	5.152.0	5.152.0	5.152.0	5.152.0	5.152.0	5.152.0	5.152.0
Common stock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Additional paid-in capital	55.6	73.9	150.0	2,426.6	2,500.0	2,500.2	2,500.2	2.501.2	2,501.5
Accumulated other comprehensive income (loss)	(1.0)	0.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Accumulated deficit	(2,034.0)	(2,945.3)	(4,083.8)	(4,356.4)	(4,681.3)	(5,028.9)	(5,028.9)	(5,921.4)	(6,231.9
Total stockholders' equity (deficit)	2,304.6	2,280.8	1,220.4	3,224.4	2,972.9	2,625.5	2,625.5	1,734.0	1,423.8
Total liabilities & stockholders' equity (deficit)	3.016.7	3,760.0	3,240.9	5,247.2	4.969.8	4,674.6	4.674.6	4,015.3	3,983.7

FIGURE 137 LYFT Cash Flow

	2017	2018	1Q19 Mar-19	2Q19E Jun-19	3Q19E Sep-19	4Q19E Dec-19	2019E	2020E	2021E
Cash flows from operating activities									
Net loss	(688)	(899)	(1,138.5)	(408)	(460)	(482)	(2,489)	(1,431)	(850)
Depreciation and amortization	3	19	23.1	6	7	7	43	36	50
Stock-based compensation	10	9	859.5	135	135	135	1,264	540	540
Amortization of premium on marketable securities	1	0	0.0				0	0	0
Accretion of discount on marketable securities	(6)	(24)	(10.1)				(10)	0	0
Revaluation of preferred stock warrant liability	Ô	o o	, ,				O O	0	0
Other	0	1	0.1				0	0	0
Changes in operating assets and liabilities									
Prepaid expenses and other assets	(112)	(76)	(46.3)	(24)	(32)	(28)	(130)	(15)	(18)
Accounts payable	` 21	(41)	1.2	` 2	` 1 <sup>′</sup>	` 3	` 7	10	` 8
Insurance reserves	245	434	126.7	0	47	49	223	223	271
Accrued and other liabilities	133	308	94.2	0	0	0	94	0	0
Other Changes in Working Capital		308	5.2	0	0	0	5	0	0
Net cash used in operating activities	(394)	(268.2)	(84.8)	(288.1)	(303.0)	(315.6)	(991.5)	(638.2)	0.5
	, ,	, ,	` ,	` ,	,	, ,		, ,	
Cash flows from investing activities									
Purchases of marketable securities	(2,559)	(5,454)	(607.2)				(607)	0	0
Proceeds from sales of marketable securities	872	900	466.2				466	0	0
Proceeds from maturities of marketable securities	708	3,838	838.2				838	0	0
Cash paid for acquisitions, net of cash acquired	0	(258)					0	0	0
Purchases of property and equipment and scooter fleet	(8)	(69)	(25.1)	(21)	(22)	(24)	(93)	(117)	(145)
Purchases of other intangible assets	(4)	(2)	(1.7)	` '	, ,	` /	(2)	) O	Ò
Other	`	` '	0.0	0			`o´	0	0
Net cash used in investing activities	(991)	(1,044)	670	(21)	(22)	(24)	603	(117)	(145)
Cook flows from financing activities									
Cash flows from financing activities									
Proceeds from issuance of redeemable convertible preferred stock, net of	2,045	843	0.0	0	0	0	0	0	0
Proceeds from exercise of stock options and other common stock issuan	4	10	1.6				2	0	0
Payment of deferred offering costs	0	(0)	(5.0)				(5)	0	0
Other Financing Activities			(784.7)	2,249			1,464	0	0
Net cash provided by financing activities	2,049	852	(788.2)	2,249	0	0	1,461	0	0
Effect of foreign exchange on cash, cash equivalents and restricted cash	0	(0)	0.1				0	0	0
Net increase (decrease) in cash, cash equivalents and restricted cash	664	(460)	(202.6)	1,939	(325)	(339)	1,072	(755)	(144)
The same ( and same) in same, same squiral into and restricted same		(-100)	(202.0)	1,000	(020)	(555)	1,012	(100)	(1-1-1)
Cash at Beginning of Period	515	1,179	719.0	516	2,456	2,130	719	1,791	1,036
Cash at End of Period	1,179	719	516.4	2,456	2,130	1,791	1,791	1,036	892
oasi at Life of Fellou	1,179	119	310.4	2,400	2,130	1,191	1,131	1,030	032

U.S. Internet						Industry View: POSITIVE
Lyft, Inc. (LYFT)						Stock Rating: EQUAL WEIGHT
Income statement (\$mn)	2018A	2019E	2020E	2021E	CAGR	Price (31-May-2019) USD 57.62
Revenue	2,157	3,294	4,152	5,137	33.6%	Price Target USD 55.00
EBITDA (adj)	-947	-1,192	-923	-329	N/A	Why Equal Weight? As a founder-lead company,
EBIT (adj)	-966	-1,235	-959	-378	N/A	singularly focused on drivers and concentrated in NA,
Pre-tax income (adj)	-898	-1,155	-890	-310	N/A	LYFT is unquestionably winning share. Below peer
Net income (adj)	-899	-1,157	-892	-311	N/A	level unit economics are also improving. In light of
EPS (adj) (\$)	-42.45	-4.35	-2.48	-0.84	N/A	scale disadvantage and gross bookings growth likely
EPS (reported) (\$)	N/A	-9.36	-3.98	-2.30	N/A	slowing to parity with peers in a few quarters,
Diluted shares (mn)	21	266	360	369	159.3%	valuation, which is comparable to peers, seems fair.
DPS (\$)	0.00	0.00	0.00	0.00	N/A	
						Upside case USD 66.00
Margin and return data	42.0	26.2	22.2		Average	To the extent Lyft can take share in the US - a market
EBITDA (adj) margin (%)	-43.9	-36.2	-22.2	-6.4	-27.2	with healthy unit exonomics at scale - ANR could
EBIT (adj) margin (%)	-44.8	-37.5	-23.1	-7.4	-28.2	grow faster than we anticipate, particularly if
Pre-tax (adj) margin (%)	-41.6	-35.1	-21.4	-6.0	-26.0	driver/rider incentives rationalize. Lyft's track record
Net (adj) margin (%)	-41.7	-35.1	-21.5	-6.0	-26.1	of leading market innovation could help close scale
ROIC (%)	-39.2	-47.1	-40.9	-19.7	-36.7	gap vs. peers.
ROE (%)	94.1	134.3	190.5	325.4	186.1	
Balance sheet and cash flow (\$mn	)				CAGR	Downside case USD 39.00
Tangible fixed assets	109	178	264	365	49.4%	Sub-scale and decelerating GB growth in a mature
Intangible fixed assets	118	112	106	101	-5.1%	ride-hailing market could result in unit economic
Cash and equivalents	518	1,619	864	719	11.6%	improvement flatlining. Scale/capital disadvantages
Total assets	3,760	4,675	4,015	3,984	1.9%	vs. peers could result in current valuation parity
Short and long-term debt	0	0	0	0	N/A	eroding, particularly if sentiment or the macro environment worsens.
Other long-term liabilities	30	5	5	5	-46.5%	environment worsens.
Total liabilities	1,479	2,049	2,281	2,560	20.1%	
Net debt/(funds)	-518	-1,619	-864	-719	N/A	Upside/Downside scenarios
Shareholders' equity	2,281	2,625	1,734	1,424	-14.5%	·
Change in working capital	934	200	217	261	-34.6%	Price History Price Target Prior 12 months Next 12 months
Cash flow from operations	-268	-992	-638	1	N/A	High Upside
Capital expenditure	-71	-94	-117	-145	N/A	88.60
Free cash flow	-337	-1,084	-755	-144	N/A	66.00
Valuation and leverage metrics					Average	66.00
P/E (adj) (x)	N/A	N/A	N/A	N/A	N/A	Current
EV/sales (x)	9.2	6.0	4.8	3.9	6.0	57.62 55,00
EV/EBITDA (adj) (x)	-21.0	-16.7	-21.6	-60.6	-30.0	
FCF yield (%)	-1.7	-5.4	-3.8	-0.7	-2.9	47.17
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0	39.00
Net debt/EBITDA (adj) (x)	0.5	1.4	0.0	2.2	1.3	Low Downside
3000, 20 (44)/ (//)	0.5		0.5		1.5	DOWNSIGC

Source: Company data, Barclays Research Note: FY End Dec

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Lyft, Inc. (LYFT, 31-May-2019, USD 57.62), Equal Weight/Positive, CE/FB/J

Uber Technologies Inc. (UBER, 31-May-2019, USD 40.41), Overweight/Positive, A/CD/CE/D/J/K/L/M/N

Prices are sourced from Refinitiv as of the last available closing price in the relevant trading market, unless another time and source is indicated.

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Positive - industry coverage universe fundamentals/valuations are improving.

Neutral - industry coverage universe fundamentals/valuations are steady, neither improving nor deteriorating.

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NetEase, Inc. (NTES)Pinterest, Inc. (PINS)Shopify (SHOP)Snap, Inc (SNAP)Spotify Technology S.A (SPOT)Stitch Fix (SFIX)

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# Lyft, Inc. (LYFT / LYFT)

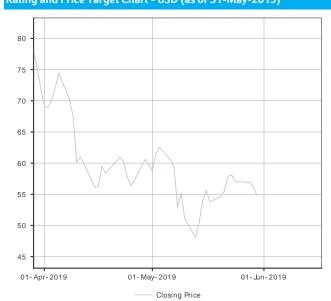
USD 57.62 (31-May-2019)

# Stock Rating **EQUAL WEIGHT**

Industry View

**POSITIVE** 

# Rating and Price Target Chart - USD (as of 31-May-2019)



### Currency=USD

**Publication Date** Closing Price Rating **Adjusted Price Target** Source: Refinitiv, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

Source: IDC, Barclays Research

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Valuation Methodology: \$55 PT based on 4x our FY20/21E revenue estimates.

Risks which May Impede the Achievement of the Barclays Research Valuation and Price Target: Decelerating booking growth, high cash burn, and limited capital reserves may make it more challenging to fund incremental growth investments. Lyft's lower utilization and scale may also be a structural disadvantage. An upside risk is that Lyft's single-service, US market focus may enable it to take share and achieve above peer level ANR growth, potentially driving upside to estimates and the stock.

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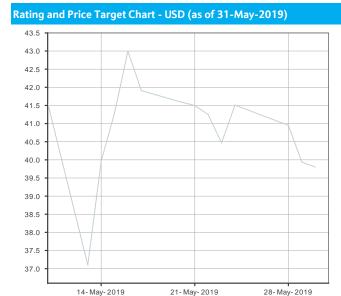
# Uber Technologies Inc. (UBER / UBER) USD 40.41 (31-May-2019)

Stock Rating

OVERWEIGHT

Industry View

**POSITIVE** 



Closing Price

#### Currency=USD

**Publication Date** Closing Price Rating Adjusted Price Target Source: Refinitiv, Barclays Research

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Source: IDC, Barclays Research

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Valuation Methodology: \$50 PT based on 4x our 2020E/2021E revenu estimates.

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