## Flex Fare Pilot Evaluation Report - September 2023

## Background and Introduction

The ability to offer up-front, dynamic pricing to customers is one of the key factors that contributed to the growth of app-based for-hire vehicles (FHVs) in New York City and around the world. These apps give passengers the ability to know the final cost of the fare prior to the start of their trips, a competitive advantage that the taxi industry with its traditional mileage- and timebased taximeters was initially unable to provide.

To allow yellow taxi and green cab (also known as street hail livery or SHL) passengers similar price certainty as users of app-based FHV services, the New York City Taxi and Limousine Commission (TLC) launched the Flex Fare Pilot Program on March 29, 2018, with the first participant approved on June 27, 2018. The aim of the Pilot was to allow licensed e-hail companies more flexibility with regards to their fare structure and pricing models, outside of the constraints of the taximeter, under the condition that passengers were provided with a binding, up-front fare quote, and that drivers would not be required to accept e-hail or Flex Fare trips. By offering companies more flexibility in their pricing, TLC aimed to evaluate the impact of this flexibility on ridership and driver earnings, as additional trip sources could lead to more mobility options for passengers and more earning potential for drivers.

TLC issued e-hail licenses to three new e-hail companies (Waave, Myle, and Wapanda) following the adoption of the Pilot, joining existing e-hail licensees Curb and Arro. However, only Curb and Arro are currently offering e-hail service on a wide scale. ${ }^{1}$ While the Pilot has not greatly changed the landscape of e-hail service providers, the ability to offer up-front pricing for trips has contributed to a growth in e-hail trips and allowed the taxi industry to broaden its services when taxi trips as a whole remain significantly below pre-pandemic levels.

TLC issued an initial Pilot evaluation report in June of 2019, which found that over 99\% of trips conducted under the Flex Fare Pilot up to that point were part of the MTA's Access-ARide (AAR) program. ${ }^{2}$ While the ability for taxis to conduct AAR trips is a significant benefit of Flex Fare - for both drivers and passengers-the limited use of the Pilot for non-AAR purposes restricted TLC's ability to evaluate the overall impact of the Pilot at that time. As such, in its initial evaluation report TLC recommended, among other things, continuing the Pilot and continuing to monitor its effects on the industry. With the onset of the COVID-19 pandemic in early 2020 and its drastic impact on the industry, TLC determined that it would allow the Pilot to continue beyond its initial two-year scope, waiting until the taxi industry was in a more stable position and ample post-COVID data could be analyzed before determining next steps.

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## Flex Fare Pilot Evaluation

Since its inception in 2018 and the initial Pilot evaluation in 2019, the Flex Fare Pilot has evolved in several ways:

- Since the previous evaluation which found that Access-A-Ride trips made up over $99 \%$ of trips conducted as part of the Pilot, Access-A-Ride trips now constitute just over 50\% of Flex Fare trips, showing the growth of standard e-hail trips and making analysis of Flex Fare trips undertaken by members of the general public more feasible.
- Since the start of the Pilot, $\mathbf{1 1 , 7 6 0}$ taxis and $\mathbf{3 , 0 8 6}$ street hail liveries (SHLs) have conducted Flex Fare trips, showing the widespread nature of this type of e-hail service within the taxicab industry. ${ }^{3}$
- Since the initial Pilot evaluation in June 2019, over 6,000,000 Flex Fare trips have taken place. The ability to select Flex Fare trips, as well as the importance of this type of trip for Access-A-Ride users, underscores the importance of this service for both drivers and passengers.
- Because of the impact of COVID on the taxi industry - taxi trips are still at roughly $50 \%$ of their pre-pandemic levels-the additional trips provided through the Flex Fare program are more important to the taxi industry now than ever before.

Given that TLC launched the Pilot to explore the viability of offering flexible fares for taxis, this evaluation report will present data and findings that show the ways in which the industry has adopted these trips and any impacts that the Flex Fare option has had on the traditional meterbased trip model. To capture the effects of the Flex Fare Pilot on the taxicab industry, TLC must assess and report on the following metrics:
a) Effects of Flex Fare on driver income
b) Taxicab utilization of Flex Fare trips
c) Geographical distribution of trips
d) Driver acceptance and cancellation of Flex Fare trips

## a. The Effects of Flex Fare on Driver Income

Having the option to perform Flex Fare trips gives drivers the opportunity to earn additional income from passengers who prefer to rely on apps rather than street hails, a growing sector of the for-hire transportation market. To assess how Flex Fare trips affect driver income, TLC analyzed the fare data it collects from both metered and Flex Fare trips.

- For metered trips, the driver revenue amount analyzed represents the portion of the passenger fare that is kept by the driver, i.e., the fare paid prior to additional surcharges such as the congestion surcharge or MTA surcharge.

[^1]- For Flex Fare trips, the driver revenue analyzed represents the amount that is paid to drivers by e-hail providers after commission, taxes, and surcharges are subtracted.
- Due to variations in average trip distance - the average e-hail trip is much longer than the average street hail trip-and the different driver payment methods between e-hail and metered trips, per-mile driver revenue was used to compare driver income for metered and Flex Fare trips. With these calculations, driver revenue across trip types can be more easily compared.
- All data used is from July 2019, when the last Pilot evaluation took place, through February 2023.

Table 1: Taxi Flex Fare Trip Information by E-Hail Provider

| E-Hail <br> Provider | Average Net <br> Driver Revenue | Average Trip <br> Distance (miles) | Number <br> of Trips | Driver Revenue <br> per Mile |
| :--- | :--- | :--- | :--- | :--- |
| Curb | $\$ 27.09$ | 6.55 | $3,109,541$ | $\$ 4.14$ |
| Arro | $\$ 17.45$ | 2.61 | 534,796 | $\$ 6.68$ |
| Myle | $\$ 28.15$ | 8.16 | 239,599 | $\$ 3.45$ |
| Waave | $\$ 46.61$ | 11.22 | 347 | $\$ 4.16$ |

- The average driver revenue per mile for all taxi Flex Fare trips, weighted according to number of trips per e-hail provider, is $\$ 4.44 /$ mile.

Table 2: Taxi Metered Trip Information

| Average <br> Passenger Fare | Average Trip <br> Distance (miles) | Number of <br> Trips | Driver Revenue <br> per Mile |
| :--- | :--- | :--- | :--- |
| $\$ 13.47$ | 3.15 | $132,259,057$ | $\$ 4.28$ |

Table 3: SHL Flex Fare Trip Information by E-Hail Provider

| E-Hail <br> Provider | Average Net <br> Driver Revenue | Average Trip <br> Distance (miles) | Number of <br> Trips | Driver Revenue <br> per Mile |
| :--- | :--- | :--- | :--- | :--- |
| Curb | $\$ 25.56$ | 6.71 | $1,411,428$ | $\$ 3.81$ |
| Arro | $\$ 17.04$ | 2.92 | 2,721 | $\$ 5.84$ |
| Myle | $\$ 18.63$ | 5.17 | 200 | $\$ 3.61$ |
| Waave | $\$ 62.35$ | 15.69 | 12 | $\$ 3.97$ |

- The average driver revenue per mile for all SHL Flex Fare trips, weighted according to number of trips per e-hail provider, is $\$ \mathbf{3 . 8 1} / \mathbf{m i l e}$.

Table 4: SHL Metered Trip Information

| Average <br> Passenger Fare | Average Trip <br> Distance (miles) | Number of Trips | Driver Revenue <br> per Mile |
| :--- | :--- | :--- | :--- |
| $\$ 13.15$ | 3.01 | $4,768,892$ | $\$ 4.36$ |

The fare information presented above allows us to draw some conclusions about the effects of Flex Fare trips on driver income for both taxi and SHL drivers. When looking at the average take-home income per mile for metered and Flex Fare taxi trips, we can see that while driver
revenue is similar, the average Flex Fare trip is more profitable for taxi drivers than the average street-hailed trip per mile (paying out $\$ 4.44$ per mile versus $\$ 4.28$ per mile for metered trips). Higher per-mile revenue coupled with longer average trip distances represents significant earning potential for drivers conducting e-hail trips with up-front fares. Variations in payments between different e-hail providers are also evident, with, for example, trips conducted via Arro generally being more profitable for drivers than trips conducted via Curb. Flex Fare trips conducted via Myle are an outlier, with drivers earning roughly $\$ 1$ less per mile than the average, and further examination into the payment methods for this e-hail provider may be warranted.

For SHL trips, there is a greater discrepancy between Flex Fare and metered trips when it comes to driver revenue per mile. While the average price per mile is similar for both trip modes, driver revenue per mile for Flex Fare trips is $\$ 0.47$ lower than for metered trips. However, with the additional consideration that the longer the trip, the less revenue each additional mile will generate for the driver, and since both SHL and taxi e-hail trips are typically much longer than street hail trips, the Flex Fare option still offers SHL drivers additional earning potential should drivers choose to accept those trips. The potential for additional income is especially true in areas where street hails are less prevalent and where Flex Fare trips can help avoid deadheading. This pattern is noticeable for SHL trips, where the proportion of Flex Fare trips among all trips is larger, since SHLs are more likely to conduct trips in areas in upper Manhattan and the outer boroughs where street hails are less frequent.

Thus, when comparing the driver revenue per mile for Flex Fare and metered trips, we can conclude that Flex Fare trips are generally fairly priced when compared to metered trips, and do not have a negative impact on driver income.

## b. Taxicab Utilization for Flex Fare Trips

Since accepting Flex Fare trips is at the discretion of individual drivers, measuring the Pilot's success must include examining how many drivers choose to accept Flex Fare trips. To assess taxicab utilization TLC looked at the number of Flex Fare trips performed over time, the number of vehicles performing trips, and the distribution of trips among different e-hail apps. A review of the data shows that Flex Fare trips have significantly grown in popularity in recent years, with many more taxis performing Flex Fare trips now than before the pandemic. This growth is particularly stark considering that taxi trips overall are only at about $50 \%$ of their prepandemic levels.


In addition to the general numbers above, the information presented in the figures below shows that, since the start of the Pilot, Flex Fare trips have grown in popularity. However, the diversification of e-hail apps that was sought by simplifying the licensing requirements for new ehail providers has not been achieved, with Curb and Arro continuing to dominate the e-hail and Flex Fare segment of the market just as those two companies dominate the taxi in-vehicle technology system market.

Figure 1: Number of Monthly Flex Fare Trips over time, by Industry
July 2019 to December 2022


The breakdown of Flex Fare trips by industry (Figure 1) shows that, prior to COVID-19, SHL trips accounted for most flex fare trips. This observation is supported by the initial Pilot
evaluation, which showed a concentration of Flex Fare trips in the outer boroughs. ${ }^{4}$ Since the pandemic, illustrated by the steep drop in trips around April 2020,5 SHL Flex Fare trips have declined, which likely reflects a general decline in the SHL sector, and taxi trips now represent the overwhelming majority of Flex Fare trips.

Figure 2: Number of Taxis Conducting Flex Fare Trips each Month, by E-hail Provider June 2018 to February 2023


The graph in Figure 2 shows that, since the launch of the Pilot, the number of vehicles conducting Flex Fare trips has steadily grown. We can also see that Curb and Arro still dominate the Flex Fare market, as they dominate the e-hail market generally. The Flex Fare Pilot did broaden the e-hail market somewhat, since Waave and Myle joined as e-hail providers after the start of the Pilot, but their trip count remains limited.

[^2]

For the SHL industry, the landscape is somewhat different than for taxis. Curb is by far the most used e-hail app within the SHL industry, with other e-hail providers having much smaller trips counts. Additionally, due to the effects of the COVID-19 pandemic on the industry, the number of SHLs conducting trips of any kind has declined since 2020 and this broader trend is reflected in the Flex Fare numbers.

Overall, Flex Fare trip numbers have grown since 2019, alongside the number of vehicles conducting Flex Fare trips. During a period of great turbulence for the taxicab industry, the increased use of e-hail apps is a testament to the program's increasing popularity among passengers and drivers.

## c. Geographical Distribution of Flex Fare Trips

The initial Pilot evaluation report noted a heavier concentration of Flex Fare trips in the outer boroughs than metered trips, which tend to be concentrated around the Manhattan core. However, with the rise of Flex Fare trips that are not Access-A-Ride trips since that time, this distribution has shifted and is now more closely aligned with the traditional patterns of metered trips.

This change is likely due to several factors, including the shift to more non-AAR passengers requesting Flex Fare trips, and those non-AAR passengers being more likely to e-hail a taxi from within the traditional taxi territory of the Manhattan core, where taxis are more plentiful and wait times likely much shorter. Additionally, the prevalence of SHL Flex Fare trips at the time of the initial evaluation, which has now been far superseded by taxi trips, helps to explain the
change in geographical distribution. Additionally, the Pilot's limited reach during the initial evaluation may have skewed the analysis of trip distribution. The map below shows that Flex Fare trips are now mostly occurring in the traditional zone of operation for taxis, namely the area in and around the Manhattan core. One notable difference between Flex Fare and metered trip density is that e-hail trips are not permitted by the Port Authority at the airports, which are otherwise areas of very high taxi ridership.

## Figure 4: Geographical Distribution of Flex Fare Trips, Pickups per Zip Code

 January 2022 to December 2022

Number of Flex Fare Pickups per Zip Code (equal count by quantile)


## d. Driver Acceptance and Cancellation of Flex Fare Trips

Unlike with street hails, drivers can accept or decline any e-hail or Flex Fare trip offer they receive. As a result, driver cancellations are an important element in understanding how the taxicab industry has responded to the greater flexibility afforded by Flex Fare trips. By analyzing request data for trips that were not completed, we can see that:

- Overall, more requested trips are cancelled by passengers than by drivers: about $20 \%$ of requested trips were cancelled by passengers, and about $14.8 \%$ of requested trips were cancelled by drivers. ${ }^{6}$

[^3]- For Access-A-Ride requests, drivers are much more likely to cancel than passengers: about $15 \%$ of requests are cancelled by drivers, compared to around $6.2 \%$ of requests cancelled by passengers.
- For non-AAR and non-WAV (wheelchair accessible vehicle) trips, passengers are twice as likely to cancel their trips than drivers: the cancellation rate for drivers is around $14 \%$, while the cancellation rate for passengers is around $30 \%$.

These figures highlight important dynamics within the Flex Fare model. The rate of driver and passenger cancellations for all Flex Fare trips is high. This high cancellation rate is a concern raised by drivers as it negatively impacts their earnings if the passenger cancels when the driver has already been dispatched to the pickup location. Likewise, passengers have complained that driver cancellations make e-hail service less reliable and thus less attractive, decreasing passenger mobility options, taxi trip volumes, and driver earnings. Since the previous Pilot evaluation, passenger cancellation fees have been instituted by e-hail companies. More information is needed to determine if these fees are enough to account for lost earnings, if these fees have been effective in disincentivizing passengers from cancelling trips, or if e-hail companies can adopt other policies to discourage driver and passenger cancellations. ${ }^{7}$

For Access-A-Ride trips, the rate of driver cancellations is particularly high when compared to passenger cancellations. However, these driver cancellation rates are roughly equivalent to cancellation rates for all e-hail trips and do not indicate lower driver acceptance for these types of trips. Rather, the data reflects that Access-A-Ride passengers are particularly unlikely to cancel a requested trip. The lower cancellation rates among passengers may be due to the pre-arranged nature of Access-A-Ride trips, where customers request a trip well in advance, or the more limited alternative transportation options for AAR users making the cancellation of a reserved service less likely.

## Lessons Learned and Recommendations

Because of the growth that the Flex Fare program has experienced since the start of the Pilot, the data presented above allows TLC to draw more significant conclusions than at the time of the initial Pilot evaluation.

Flex Fare trips have been widely adopted in both the taxi and SHL sectors, with the number of drivers choosing to conduct Flex Fare trips over time steadily growing. Additionally, the program's continued popularity as part of Access-A-Ride underscores its importance among passengers relying on transportation provided by TLC-licensed vehicles. While Flex Fare trip numbers remain small as a proportion of all taxi trips, the additional income earning opportunities

[^4]for drivers and the flexibility it affords to passengers has positively affected the for-hire landscape in New York City.

While the Pilot's objective of offering up-front fares as an alternative to metered trips has been successful, the simplification of the e-hail licensing process has not led to a greater number of e-hail providers operating. Nevertheless, the program's popularity among drivers and passengers leads TLC to recommend the following:

- Make the Flex Fare Pilot permanent by making the necessary rule changes that will allow e-hail companies to continue to offer trips with up-front fares not directly linked to the metered rate of fare.
- Continue to monitor the impact of flexible up-front pricing on industry dynamics such as driver income and passenger service.
- Further investigate the causes of high cancellation rates among drivers and passengers and explore ways that e-hail companies or TLC can remedy this issue.
- Explore ways to encourage more competition in the e-hail market and give taxicabs further flexibility in the types of services they can offer.


[^0]:    ${ }^{1}$ See data below.
    ${ }^{2}$ See "Flex Fare Pilot Report June 2019", pg. 2.

[^1]:    ${ }^{3}$ At the time of the Pilot's launch in March 2018, there were about 12,000 taxis and 3,700 SHLs in operation.

[^2]:    ${ }^{4}$ See pg. 4: Flex Fare Pilot Report June 2019
    ${ }^{5}$ Note also the sharp decline in trips during January of 2022, which coincided with the Omicron wave of COVID cases.

[^3]:    ${ }^{6}$ A passenger cancellation signifies that the passenger canceled the e-hail request either before or after it was accepted by a driver.
    A driver cancellation signifies that the driver accepted the request but then canceled the trip.

[^4]:    ${ }^{7}$ In addition to cancellation fees, Curb riders are charged a $\$ 5$ No-Show fee if they do not show up within five minutes after the pick-up time - however, drivers must manually call Curb to receive the No-Show fee. See Curb Driver App FAQ's.

