# City of San Francisco
# San Francisco Municipal Transportation Agency

## Evaluation and Recommendations to Improve the Health of the Taxi Industry in San Francisco

FINAL REPORT

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## Table of Contents

Executive Summary ..... 3

Study Purpose ..... 5

Study Information ..... 8

National Trends ..... 9

Industry Views ..... 10

Study Findings ..... 11

Core Issues to Address ..... 22

Potential SFMTA Actions ..... 23

Implementation Plan ..... 30

Appendices ..... 32

## EXECUTIVE SUMMARY

The taxi industry in San Francisco was healthy for many years. Revenues from operating a taxi were sufficiently above the cost of operations and taxis were fully utilized throughout the week. Based on the health of the industry, a medallion sales program was launched in 2010, and the industry began transitioning to a purchased medallion fleet. The cost of owning a medallion was sufficiently covered through taxi revenues. At the same time, due to an undersupply of taxis and limited service in the outer areas of the City, the taxi industry was not meeting demand at the level required by the customer. This provided an opening for the rise of the Transportation Network Companies ("TNCs"), namely, Uber and Lyft. This has been a primary factor in the subsequent decline in the taxi industry over the last several years, including a major impact on the economics of owing a Purchased Medallion.

The rapid growth in TNCs has reduced the market for taxi ridership in cities across the country, including San Francisco, and has impacted the taxi industry itself. The demand to purchase new taxi medallions has softened and drivers are struggling to make a living in the current competitive market.

PFM Group Consulting, LLC and Schaller Consulting ("Project Team") were retained to review the current health of the taxi industry in San Francisco and to recommend potential regulatory changes that can support the industry in responding to the competitive market environment. The recommendations provided in this report focus on solutions that can be implemented in the near-term and provide immediate relief. Additional changes in the regulatory environment will most likely be necessary.

The Project Team met with key taxi industry stakeholders (medallion holders, drivers, color scheme representatives, San Francisco Federal Credit Union ("SFFCU"), San Francisco Airport ("SFO"), etc.). The Project Team also reviewed national industry trends, data collected by the SFMTA, and SFO, and information on medallion loan terms from the SFFCU to develop the findings and recommendations in this report.

### Key findings

The Project Team identified the following key study findings:

**Impact of TNCs on the San Francisco taxi industry**. The taxi industry's distressed condition arises primarily from the rapid expansion of TNCs such as Uber and Lyft in San Francisco, which arose as direct outcome of undersupply of taxi service in San Francisco.

**Overall taxi industry trends.** The taxi industry is suffering. This is demonstrated in a series of industrywide trends:

- **Underutilization of taxi medallions**. Only 17 percent of medallions earn a level of income that is financially sustainable and the majority of that group (92 percent) operate under one of the top three dispatch color schemes[1]
- **Unfilled shifts**. Both Color Schemes and owner-drivers have indicated difficulty in attracting and filling driver positions for taxis.
- **Aging profile of medallion holders:** The average age of Prop-K[2] Earned medallion holder is over 60.
- **Widespread leasing of purchased and Prop-K Earned medallions.** Most revenue is from taxi drivers who are not medallion holders.
- **Purchased Medallion holders are under severe financial pressure**. Foreclosures are up over the past two years.

**Financial health in the taxi industry is in decline**. Drivers' and medallion holders' net revenues are constrained by the overall industry trends listed above. Even with above-average revenue per shift ($250), a Purchased Medallion holder operating as an affiliate[3] nets less than $40,000 per year, while a Pre-K or Prop-K Earned Medallion holder operating as an affiliate nets over $54,000 annually.[4] The difference is the loan payments made by the Purchased Medallion holder. Under these market conditions, Purchased Medallion loans are being foreclosed.

## Key Issues

In developing the recommendations in this report, the Project Team attempted to address several key issues important to the taxi industry:

- **Loss of value for purchased medallions** and a stalled purchased-medallion program
- **Reduction in paratransit ramp taxi availability**
- **Struggle to compete with TNCs** – Low fare revenue, struggle attracting drivers to fill shifts, and oversupply of taxis for the level of business available
- **Long wait-times** for taxi drivers at SFO

[1] Based on August 2016-April 2017 SFMTA Trip Data. 17 percent of medallions earned at least $7,200 per month during that 9 month period, or the equivalent of at least $65,000 over that period. Of that 17 percent, 92 percent of those medallions were associated with the top three dispatch color schemes. Based on average fare revenue of $250 per shift plus tips and an average of 29 days per month in operation.
[2] Definitions of types of medallions issued in San Francisco are included in Appendix A.
[3] An Affiliate is a taxi operated as an independent business by a medallion holder. Each Affiliate is required to associate with a Color Scheme to operate.
[4] Based on a general consensus from industry stakeholders that $250 in fares per shift was a reasonable high-end earnings scenario for analysis.

## Summary of Recommendations

The recommendations put forth in this study are provided as a means of addressing current issues and offering solutions that will support a healthy taxi industry. A healthy taxi industry requires taxi providers to adjust their service to better compete in today's for-hire transportation market.

**The taxi industry must compete in the current market. MTA regulations should support and encourage the industry in that effort.**

**Recommendation #1: Adjust Regulations to Promote Enhanced Management, Marketing, and Service, Through Creation of Full-Service Color Schemes** – The best immediate-term method of addressing the industry's stresses is to create an opportunity for color schemes to package branding, marketing, service improvements and pricing into an effective strategy to regain the industry's competitive position. Under this recommendation, full-service color schemes would have direct management of SFO pick-ups for their taxicabs, provide direct driver training, and set taxi fares at rates lower than the regulated maximum fare rate. A combination of SFO trips (with minimal wait times), dispatch trips from these color schemes and flag trips in the city would create a viable revenue stream for drivers.

**Recommendation #2: Address current misalignment of industry size and trip volumes** – The goal of this recommendation is to adjust industry size to better match current trip volumes. As a step toward this goal, the recommendation is for the City to recall Pre-K, Corporate, and unused Prop-K Earned medallions.

**Recommendation #3: Create a Sustainable Accessible Taxi Program** – The reduction in ramp taxis has compromised the availability of accessible taxis under the SF Paratransit Taxi and Paratransit Plus programs, which subsidize part of the taxi fare for eligible users.

An important part of the recommendations in this report is to rectify this situation. The most promising way to do so is to create an incentive structure for the purchase and operation of accessible vehicles. Incentives could be financed through a surcharge on taxi trips.

## STUDY PURPOSE

As noted above, the rapid growth in TNCs has reduced the market for taxi ridership in cities across the country, including San Francisco, and has impacted the taxi industry itself. The SFMTA has reviewed and revised taxi regulations to ensure a focus on public safety and consumer protection while also allowing more innovation and ability to respond to market conditions. Over the last few years, this has included:

- Eliminated vehicle age requirements. Prior restrictions required vehicles over nine model years to be taken out of service. Vehicles over nine model years and/or 200,000 miles are now subjected to inspections every six months to

ensure safety.

- Eliminated mileage limits for cabs on introduction, allowing Medallion Holders and Color Schemes more flexibility in their choices of new vehicles. Prior restrictions prevented vehicles with over 100,000 miles from being introduced as a Taxi.
- Reduced and eliminated various taxi industry fees—including the medallion renewal fee—from FY14 through FY18 estimated at $9.5M in foregone revenue
- Eliminated the requirement that Color Scheme facilities be located in San Francisco. Given the current real estate market, SFMTA allows Color Schemes more flexibility in finding facilities to house their operations.
- Eliminated the requirement that shift changes occur at Color Scheme yards. This requirement was costly, as it required cabs to return to the yard during shift changes, which took cabs out of circulation at peak times.
- Expedited the new driver on-boarding process. Transitioned to a new driver onboarding to a purely online format. Under the old system, it took at least two weeks to acquire a taxi driver permit (A-card). With the recently implemented changes, applicants can potentially have a taxi driver permit in one day. This timeline will be on par with competing services' onboarding.
- Revised medallion-holder eligibility requirements and application procedures (more streamlined process)
- Reduced the medallion re-transfer fee from 20% to 5%

The SFMTA also proposed the following medallion reforms, which have not been implemented as they were tabled until the completion of this study:

- Eliminating the requirement that only San Francisco taxi drivers can purchase a medallion
- Eliminating the driving requirement for medallion holders
- Allowing individuals, groups, or business entities to purchase up to a maximum of 50 medallions

The San Francisco taxi industry has a number of component parts. The table below provides a quick overview of industry basics and **Appendix A** includes further explanation of each type of taxi medallion in San Francisco, and the associated requirements associated with each medallion.

| San Francisco Taxi Industry Basics | |
|---|---|
| **Total Color Schemes** | 24 |
| **Total Dispatch Services** | 8 |

There are seven types of medallions in San Francisco, and as noted below, they are each subject to their own requirements. Two major factors that impact the medallion

holders are whether or not the medallion can be surrendered[5] or transferred[6] and whether or not the medallion has a driving requirement. The table below provides a summary by type of medallion, whether they are surrenderable or transferable, and if they are subject to a driving requirement.

| Medallion Type | Total In Service | Surrenderable or Transferable | Driving Requirement (Y/N) |
|---|---|---|---|
| Corporate | 84 | No | No |
| Pre-K | 184 | Eligible for surrender | No |
| Prop-K Earned | 579 | Eligible for surrender | Yes |
| Purchased* | 620 | Re-Transferable | Yes |
| Ramp | 40 | No | No |
| 8000-Series | 7 | No | No |
| S-Series | 61 | No | Yes** |
| **Totals** | **1,575** | | |

*Medallion Count As of 2/6/18; provided by SFMTA; * Purchased includes discounted and full price purchased medallions; **S-Series is restricted to no more than 90 hours per week.*

Because of the fragmented structure of the industry, it is difficult to adjust the regulations to keep up with changing market conditions. To that end, this study attempts to identify regulatory changes that provide the industry with the flexibility to react to market forces and compete effectively. This study also considers the impact of potential regulatory changes by the SFMTA on the various stakeholders in the taxi industry.

Stakeholders to be considered include:

- **Drivers**—this includes medallion holders as well as non-medallion holders
- **Medallion Holders**—in one of three categories: Purchased Medallions, Prop-K Earned medallions, and Corporate and Pre-K medallions[7]
- **Color Schemes**—those companies or cooperatives providing taxis with taxi colors, dispatch services, insurance, and/or vehicle maintenance

[5] A Pre-K or Prop-K Earned medallion holder may relinquish their medallion back to MTA ("surrender") for consideration if they are at least 60 years old or have a permanent disability. Surrender for consideration is conditioned on the availability of a qualified buyer able to purchase the surrendered medallion under the Transfer Program. Consideration is currently $200,000, and is set by the MTA Board

[6] A medallion holder who purchased their medallion under the Medallion Transfer program (2010 Pilot Program or 2012 Transfer Program) is eligible to transfer for sale at any time with no restriction on age or disability. Transfer of these medallions is conditioned on the availability of a qualified buyer able to purchase the medallion. Current Transfer price is $250,000, and is set by the MTA Board

[7] Some Pre-K and corporate medallions were purchased from the City for nominal cost prior to 1978. Some of these medallions were re-sold at higher prices; however, not from the City or the MTA. For purposes of this analysis, these medallions are not considered "Purchased."

- **Credit Unions**—includes the San Francisco Federal Credit Union (SFFCU), as the primary originator and servicer of Purchased Medallion loans, Montauk Credit Union, and other credit unions participating in these loans through contracts with the SFFCU
- **San Francisco International Airport (SFO)** —a major for-hire trip generator and destination
- **Customers**—those who use taxis or other for-hire transportation options
- **SFMTA**—as regulator of taxi service in San Francisco

## STUDY INFORMATION

As noted above, the focus of this study is to review San Francisco's taxi industry condition and recommend potential regulatory and operational changes to allow the industry to market and compete in the new market conditions while maintaining a focus on public safety and consumer protection, as well as support the Purchased Medallion program. As part of that process, the Project Team brought direct experience working with taxi medallion programs and taxi industry stakeholders nationwide through Schaller Consulting. In addition to the expertise provided by Schaller Consulting, the Project Team completed a review of recent changes to, and impacts on taxi medallion programs nationally due to growth in TNCs. While issues related to TNCs are a national trend, it is important to note that the dynamics of San Francisco's industry, regulatory structure, and market dynamics are unique to San Francisco. Though the lessons from other cities and programs can be helpful, the industry and the MTA are limited to what is feasible given San Francisco's regulatory structure and the existing market for taxis.

As part of the data gathering and information vetting portions of the study, the Project Team spoke with representatives from various stakeholder groups across the industry. There was an initial set of meetings in May 2017 with targeted industry members prior to the primary data gathering and analysis. In October 2017, a second set of meetings were held with a broader range of industry participants. The purpose of these meetings was first to listen to industry players about what is occurring in the industry, and secondly, to assess common themes, issues, and solutions discussed between all of the groups. Meetings included the following groups:

- SFMTA Board members
- SFMTA Staff, and Transdev Staff
- San Francisco taxi drivers (both medallion and non-medallion owners; Prop-K Earned and Purchased)
- Taxi Workers Union and Medallion Holder's Association
- Color scheme representatives
- SFCU
- SFO
- San Francisco Convention Center, Hotel Council, and downtown hotel staff
- California Public Utilities Commission (CPUC)
- TNC Drivers, including former taxi drivers

The Project Team also reviewed data and information from across the industry with a particular focus on taxi trip data from August 2016-April 2017, including fare earnings, and taxi medallion loan structures.

## NATIONAL TRENDS

Concerns regarding the health of the taxi industry are not exclusive to San Francisco. Across the country, taxi companies and drivers have experienced loss of ridership, revenue and medallion values.

As of June 2017, taxi ridership had declined by 13 percent in New York City and 44 percent in Chicago compared to the previous year.[8] A report from March 2017 showed that more than 2,900 of Chicago's approximately 7,000 licensed taxis were inactive.[9] In New York City, TNCs have shown increased growth in ridership in peripheral areas of Manhattan, further perpetuating the growth in TNC ridership as a whole.[10] A June 2017 report from the San Francisco County Transportation Authority noted that though TNC trips are concentrated in the "densest and most congested parts of San Francisco," the TNC's are also providing "…broader service across the city than taxis, particularly in the western neighborhoods."[11]

The economic strain from the decrease in taxi ridership has affected not only taxi owners and drivers but also financial institutions that have provided medallion financing. Medallion Financial, which finances medallion loans in markets across the country, including New York, Chicago, and Boston, reported $58.3 million in medallion loans as delinquent in September 2016; an increase of over $50 million from the previous year. Several credit unions that have substantial taxi portfolios have been taken over by other financial institutions or regulators.[12] In 2015, Montauk Credit Union, one of the approved lenders in San Francisco's medallion sales program, was placed into conservatorship in 2015 (and subsequently merged into Bethpage Federal Credit Union[13]), in large part due to taxi medallion loans made for NYC taxi cabs.

Some cities and states have begun to draw on TNCs for additional revenue[14]. For example, Chicago requires TNCs to pay the City a per trip fee and five dollars for each pickup at prime pickup locations in the City—O'Hare and Midway airports, McCormick Place, and Navy Pier[15]. Massachusetts imposes a 20 cent fee on TNC trips, of which

[8] New York City Taxi and Limousine Commission trip record data; City of Chicago taxi trip data
[9] Cab Drivers United – AFSCME Local 2500, AFL-CIO. *Run Off The Road, Chicago's Taxi Medallion Foreclosure Crisis.* 11 Jun. 2017.
[10] Schaller Consulting. *Unsustainable? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City.* February 27, 2017
[11] San Francisco County Transportation Authority. *TNCs Today, A Profile of San Francisco Transportation Network Company Activity.* June 2017.
[12] Mosendz, Polly, and Shahien Nasiripour. "Taxi Medallion Prices Are Plummeting, Endangering Loans.", Bloomberg, 30 Jan. 2017; Gladstone, Alexander. "Medallion Financial Becomes House of Cards as Ride-Hailing Apps Hammer Yellow Taxi Market.", Forbes, 3 Jan. 2017; Hickman, James. "In New York, Chicago and Boston, Taxi Woes Continue, Spelling Trouble for Lenders.", The Street, 19 Dec. 2016.
[13] National Credit Union Administration. "Montauk Credit Union Merges into Bethpage Federal Credit Union, 16 Mar. 2016.
[14] Levying a fee on TNCs in California would require CPUC approval or other State-level authorization.
[15] Speilman, Fran. "Ald. Beale backs off on fingerprinting Uber and Lyft drivers." Chicago Sun Times, 04 Oct. 2017.

five cents is used to encourage the adoption of new technologies and support other taxi industry development initiatives[16]. It is unclear whether these or other regulatory changes will have any significant impact on competition between TNCs and taxis. However, in California, the CPUC reuglates TNCs. If TNCs were regulated at the local level – the way taxis are – local public entities would have more control.

## INDUSTRY VIEWS

The stakeholder groups (noted above) reported varying concerns across many topics related to the taxi industry. However, across the groups, there was consistency regarding recent changes in the industry and the current state of the taxi medallion program. These issues were further validated by the data analyzed by the Project Team, and include the following findings:

- The medallion sales program is currently stalled by lack of buyers—there has not been a sale since April 2016
- Drivers are working split and partial shifts—traditional 8-12 hour shifts account for less than half of driver work days.[17]
- Medallion lease values are declining (averaged $2,500 per month several years ago, now range up to $750 per month, based on Color Scheme representative's comments)
- Long driver wait times at SFO—frequently over 60 to 90 minutes and periodic back-ups onto public roads trying to getting into the taxi hold lot
- Reports of a reduction in the number of street-hail and dispatch taxis available downtown
- Reduced driver earnings and purchased medallion holders under increasing financial stress

Despite these concerns, stakeholders also said they believe that there is still a consumer market for taxis, and advantages to taxi operations, such as access to flag trips and the SFO taxi dispatch line (non San Francisco-based taxi companies cannot do pick-ups at SFO). There was unanimity that with appropriate changes in the industry, the overall health of the industry can improve over the next five years.

The SFMTA and Industry stakeholders also shared their views and ideas regarding the impact of TNCs on the market, SFMTA's responsibility in addressing the decline in the taxi industry, and color schemes' and drivers' roles in improving the market for the taxi Industry. Views held by substantial industry segments include:

**Taxi industry views on itself:**

- The industry should focus on improving service and competing with TNCs.
- There should be a universal smartphone app.

[16] Ingram, David. "Massachusetts to tax ride-hailing apps, give the money to taxis." Rueters, 19 Aug. 2016.; Chapter 187 of Massachusetts General Laws.
[17] Based on taxi medallions with fare revenue in consecutive hours over a 24-hour period based on the data provided by the MTA.

- Drivers who primarily work SFO tend to lack the skills needed to make money on flag and dispatch work in the City.

**Taxi industry views on TNCs:**

- Taxis have difficulty competing with TNCs due to disparate regulatory treatment, a higher fare structure, and the lack of a universal smartphone app.
- Taxis need a "level playing field" with TNCs on insurance costs and driver and vehicle requirements, including driver training, background checks, and requiring commercial license plates.

**Taxi industry views on MTA:**

- The MTA has a moral obligation to repay the Purchased Medallion holders what they paid for their medallions, given that the City benefitted financially from medallion sales.
- The MTA is too involved in trying to engineer the taxi industry market and should back off and allow the industry the room to compete for customers.
- The City should support the cab industry with red lane enforcement, additional red lanes, and special turn lanes for taxis.
- The MTA should strictly enforce against traffic violations by TNC drivers, including TNC drivers driving in red lanes, special turn lanes, etc.

## STUDY FINDINGS

The meetings with industry and other stakeholders and the review of available data yielded a rich, in-depth understanding of current industry conditions spanning ridership and financial trends, status of the medallion sales program, and industry dynamics among color schemes, drivers, SFFCU and SFMTA. The following summarizes key findings that directly inform recommendations in this report.

### Impact of TNCs

The taxi industry's distressed condition arises primarily from the rapid expansion of TNCs such as Uber and Lyft in San Francisco, as in cities across the United States. These impacts were seen first in San Francisco as "ground zero" for the rise of TNCs, a product of there being too few taxicabs in the city to serve customer demand. Uber and Lyft filled that gap, and enlarged the for-hire market by offering reliable and convenient for-hire service at an attractive price.

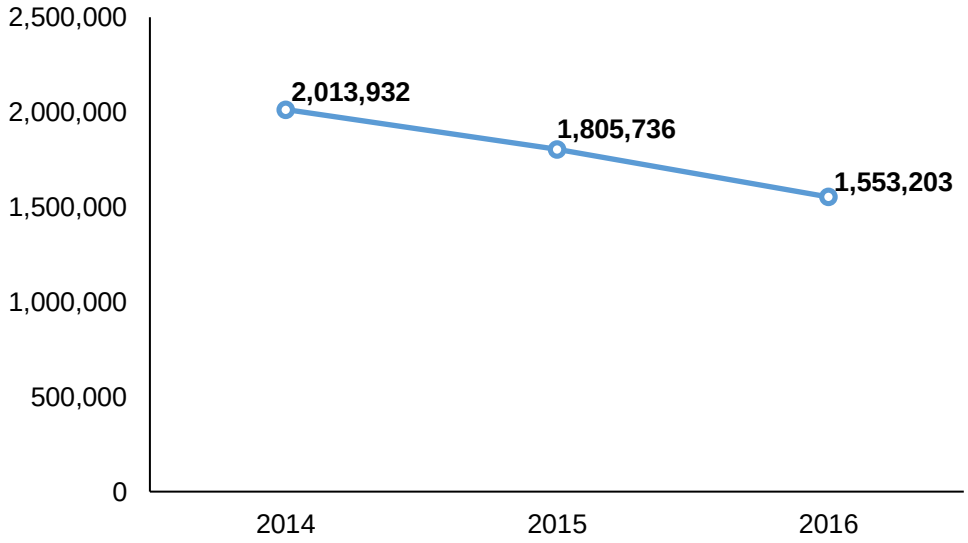
Much attention has been given to TNC smartphone apps as fueling the rise of TNCs. Smartphone apps allow customers to request rides and pay the fare at the completion of each trip without having to fumble with cash or credit cards. The apps also provide approximate (and now exact) fares at the time of ride requests, show the location of the driver responding to the trip request and provide an estimated arrival time. These features have proven to be hugely attractive to potential customers, some of whom

were frequent taxi users and some not. In addition, there is evidence to suggest that TNCs have eclipsed taxis in perceived safety and customer service. An independent survey found that 78 percent of Uber users reported being satisfied or very satisfied with the service, whereas only 3 percent reported slightly satisfied or not satisfied at all responses.[18] As a result, TNC growth reflects a combination of customers shifting from taxicabs, fulfillment of unmet demand for cab service, and expansion of the market for for-hire services.

TNC trip volumes now far outnumber taxi trip volumes. The San Francisco County Transportation Authority (SFCTA) estimates there are 12 times more TNC trips than taxi trips per day in San Francisco.[19] TNC growth is also seen at SFO, which has, and continues to, account for a large portion of taxi fare revenues. TNC trips to and from SFO have grown from 33 percent of recorded transportation at SFO in 2014 to 69 percent in 2016.[20] This is not just a shift in who provides trips, but an increase in total trips as well.[21]

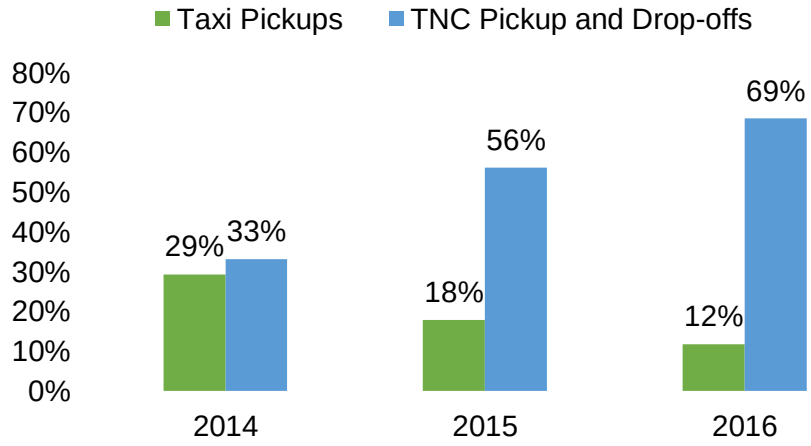
**Figure 1** below shows the decline in taxi ridership from SFO since 2014 and **Figure 2** shows the decline relative to the growth in TNC ridership. (Note: **Figure 2** uses available data, which varies for taxis—pickups only—and TNCs—both pickups and drop-offs.)

**Figure 1: Historical Taxi Airport Trips, 2014-2016[22]**



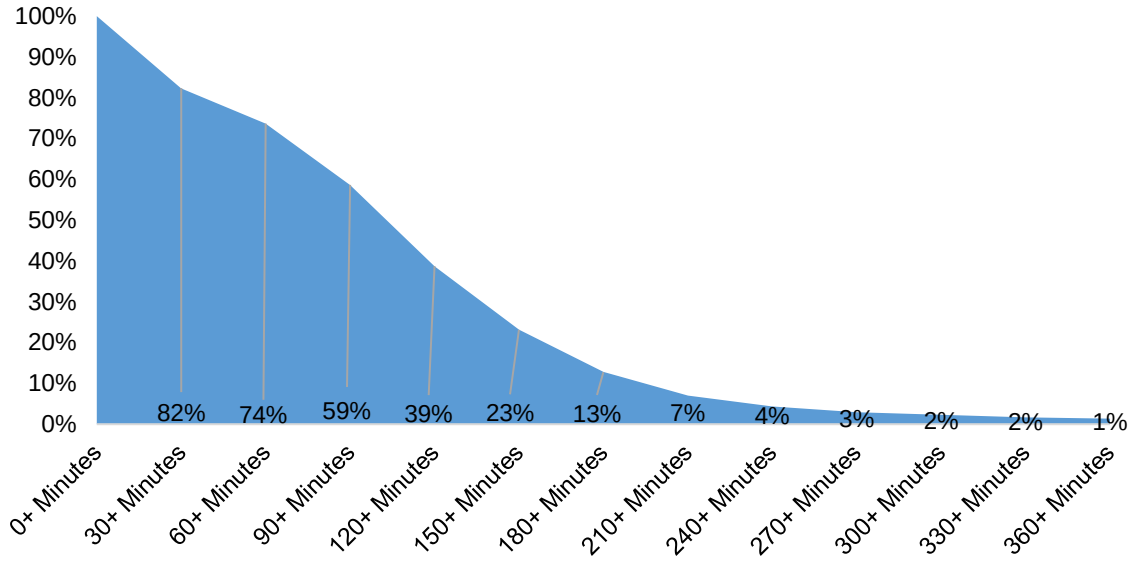

[18] Schaller Consulting. *Unsustainable? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City.* February 27, 2017
[19] San Francisco Transportation Authority, "TNCs Today", June 2017
[20] SFO Ground Transportation Report, December 2016
"Recorded transportation" methods include TNC, taxi pickups, limousine, shared ride van, hotel shuttle, off-airport park, scheduled bus, charter bus, and pre-arranged van
[21] Note: The chart shows TNC pickups and drop-offs whereas Taxi data only includes Taxi pickups.
[22] SFO Historical Taxi Airport Statistics – January 2012 through December 2016.

**Figure 2: Percent of Total Recorded Transportation at SFO, 2014-2016**




Another consequence of the growth in TNCs and the associated decline in taxi usage at the airport is longer wait times in the taxi hold. As shown below in **Figure 3**, wait times (which may be understated in this data set), show nearly 60 percent of drivers are waiting at least 90 minutes or more in the airport hold between airport fares. The Airport has tried to address these long wait times through a mobile app for taxi drivers that manages “short trips” (allowing head-of-line privileges to drivers who don’t receive fares back to the City) and provides real-time information on space availability. This information has not resulted in measurable changes in driver behavior, however, as congestion and long wait times persist from drivers seeking entry to the holding lot when it is full or during low-demand periods. A further enhancement of the app to reduce wait times through a “virtual queue” was planned but later cancelled due to opposition from drivers.

**Figure 3: Time Between SFO Drop-off and SFO Pickup (August 2016 to April 2017)**




To achieve this predominant position in the for-hire marketplace, TNCs have also taken advantage of differences in regulation with taxis. These include:

- **Differential regulation.** TNCs are able to operate at a lower cost of service because they are not required to comply with the same regulations as the taxi industry. For example:
  - No fare restrictions. Taxi drivers can charge a lower fee than allowed; however, a Color Scheme is not allowed to charge lower fares for all of their taxis.
  - TNC drivers are not required to have commercial driver's licenses.
  - TNC drivers have lower insurance requirements (commercial insurance provided by TNC company when vehicle is operating as a TNC; personal insurance policy applies when there are no passengers in the vehicle) — Taxis are required to meet the minimum $1,000,000 insurance coverage.
  - No geographical restrictions and therefore less deadheading.
  - No restrictions on total number of vehicles operating as TNCs. This provides the competitive advantage of supply being able to quickly match demand.

- **Ease of onboarding drivers.** The onboarding process for new drivers of TNCs often takes less time than the process for onboarding a taxi driver. This helps TNCs recruit new drivers and provide customers a consistent supply of available drivers.

**Fare flexibility.** TNCs set their own fares and employ surge pricing to increase revenues and increase the supply of drivers during peak demand.[23] In addition to these regulatory issues, venture capital funding for Uber and Lyft contribute to these companies' ability to undercut taxi fares, although what fare level would reflect actual costs is unknown.

Also revealing of the competitive dynamics of TNCs and taxis are app usage levels and, more generally, levels of pre-arranged trip-making. While TNC users have embraced Uber and Lyft smartphone apps, this has not been the case for taxi apps. Taxi service continues to be primarily by flag-oriented business – either street hail or at taxi stands (including SFO).[24]

Taxi customers who pre-arrange their trips continue to rely primarily on telephone orders. Trip data shows 7 percent of trips are pre-arranged by phone dispatch. **Three of the twenty-four color schemes account for a majority of dispatched trips.** Medallions operating at dispatch-heavy color schemes have higher median fare revenue than other medallions due to the additional channel of dispatched business. Notably, drivers for color schemes that have significant volumes of dispatch trips generate more fare revenue than other drivers. Median earnings by medallion are significantly higher than those operating under the other color schemes, as shown in **Figure 5** below.

**Figure 5: Median Medallion Fare Revenue by Color Scheme Type, August 2016 - April 2017[25] - (Nine Months Only)**

| | |
|---|---|
| Dispatch-Heavy[26] | $45,940 |
| Less Dispatch | $26,000 |

The three main dispatch-heavy color schemes[27] have a higher number of medallions averaging at least $65,000 in fare revenue over that same nine-month period. Trip data from August 2016-April 2017 shows only 17 percent of all medallions earning $65,000 or more in fare revenue over that time period.[28] Of that 17 percent, 69 percent are from the top three dispatch heavy color schemes.

[23] Taxis cannot surge but they can choose to charge below-meter rates.
[24] Section 1107(c)(7) requires that all color schemes "Must affiliate with an e-hail application provider that meets criteria established by the Director of Transportation."
[25] Based on MTA trip data from August 2016-April 2017.
[26] Dispatch Services include: Yellow, Luxor, Flywheel, Town, National, Fog City, Citywide, and San Francisco Taxicab
[27] Dispatch heavy color schemes include: Yellow, Luxor, and Flywheel. Note: Only 17 percent of all medallions in the data set had earnings of $65K or more during the August 2016-April 2017 time period.
[28] $65,000 represents expected earnings for a medallion operating for 9 months (the duration of trip data available) at 30 days per month, earning $200 fares per shift and 1.2 shifts per day

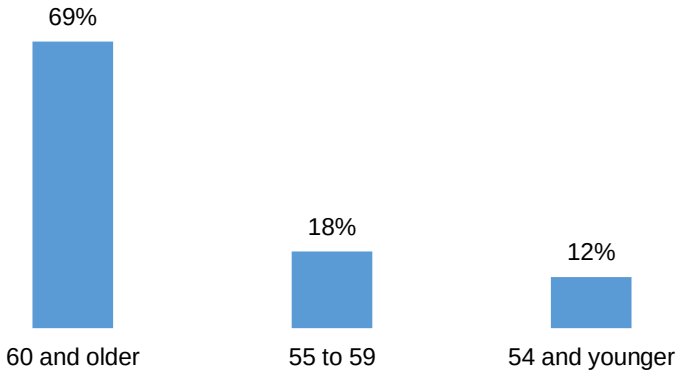
## Overall Industry Trends

Declining trip volumes and fare revenues have affected every segment of the San Francisco taxi industry – color schemes and drivers, medallion holders who lease and who drive a cab, color schemes that provide dispatch and those with little or no dispatch service directly provided.

Industry stakeholders report that in the mid-2000s, taxis were routinely operated both day and night shifts, seven days a week. The situation today is dramatically different. Virtually no cabs are operated both day and night shifts, seven days a week. Industry stakeholders report that the industry has lost the previously vibrant night business due to TNCs. The resulting profile of industry operations and medallion ownership has changed in important ways:

- **Underutilization of taxi medallions.** In contrast to a decade ago, when taxis were routinely operated 14 shifts a week, most medallions are not even operated one shift per day on a regular basis. Based on trip data from August 2016 to April 2017, only 17 percent of medallions brought in at least $65,000 in annual fare revenue, approximately equivalent to 1.2 shift per day at $200 per shift. By this measure, more than three quarters of medallions are underutilized.[29]
- **Driver shortage.** Color schemes report struggling to get drivers to work available shifts, resulting in reduced gate fees for color schemes.
- **Aging profile of medallion holders**. The lack of buyers in the medallion sales program has reduced turnover among medallion holders. The majority of Purchased and Prop-K Earned medallion holders are now approaching or over age 60. In the next five years, about 88 percent of Prop-K Earned medallion holders will be over 60.

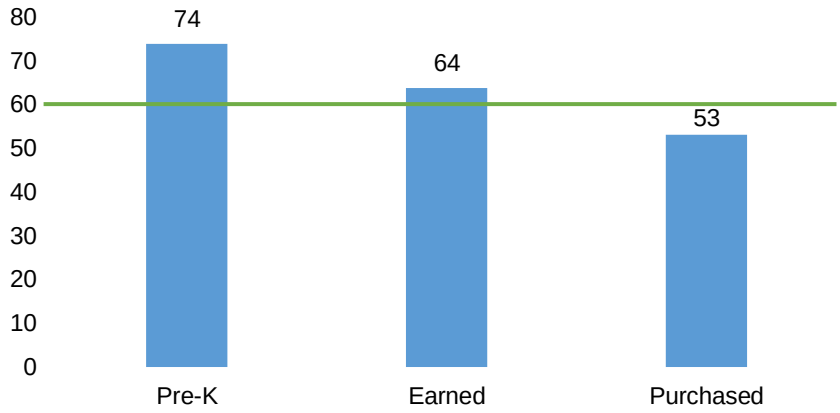
**Figure 7: Distribution of Earned Medallion Holders by Age**




[29] Based on MTA trip data from August 2016-April 2017.

The average age of Pre-K and earned medallions is higher than the overall average of 61. Pre-K medallion holders have a current average age of 74.[30]

**Figure 8: Average Age by Medallion Type**

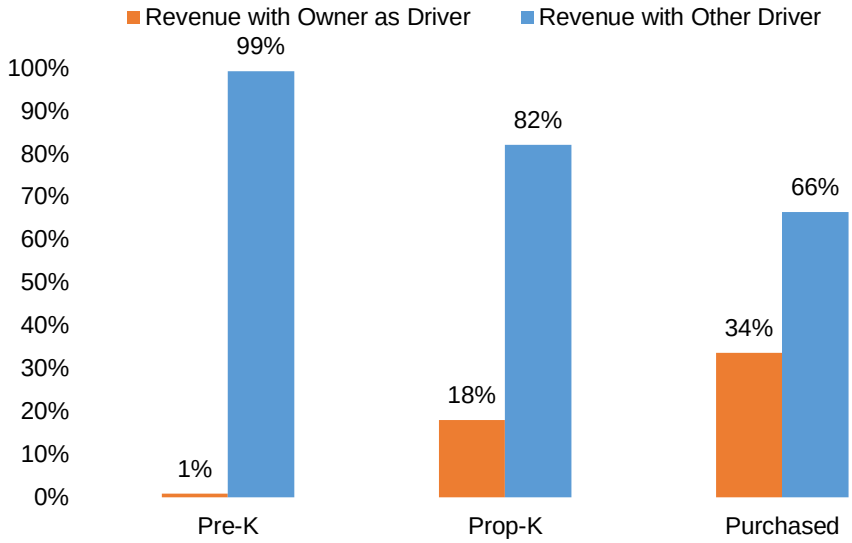



- **Widespread leasing of Purchased and Prop-K Earned medallions.** Based on fare revenue[31] a large majority of both Prop-K Earned and Purchased Medallions are driven primarily by lessees, despite the driving requirement. Almost no revenue is generated by owner-drivers of Pre-K medallions who do not have a driving requirement. The following chart shows 99 percent of Pre-K Medallion fares, 82 percent of Prop-K Earned Medallion fares and 66 percent of Purchased Medallion fares are generated by drivers other than the medallion owner.

  For the Pre-K Medallion holders, this is directly due to the fact that there is no driving requirement. For the Prop-K Earned and Purchased Medallions, it can be partially explained because the SFMTA has not been enforcing the driving requirement.

[30] Medallion holder age information provided by SFMTA, as of May 2017.
[31] Based on MTA trip data from August 2016-April 2017.

**Figure 9: Percent of Fares by Medallion and Driver Type, August 2016 through April 2017**




- **Purchased Medallion holders are under severe financial pressure**, as demonstrated by the significant increase in medallion foreclosures over the past two years (detailed further below), the Project Team's pro forma analysis (see detailed further below and in **Appendix C**), and an evaluation of the loan requirements and amounts[32]. Without a change in the operation of the industry, medallion loans may continue to be foreclosed.
- **The Purchased Medallion program is stalled**. Because of factors outside of SFMTA's control, most notably the rise of TNCs and decline in taxi passengers and fare revenues, there has been no re-transfer of a medallion since April of 2016. In addition, 102 foreclosed medallions are not in use. The medallion sales program is currently not functioning as intended. One of the original goals of the medallion sales program was to provide an exit path for aging Pre-K and Prop-K Earned medallion holders. The taxi industry is now in a similar position as prior to the 2010 medallion sales program, with aging medallion holders lacking an appealing path out of the industry.
- **The SFFCU, and participating credit unions, have not had requests for medallion loans except for refinancing of existing or maturing loans**. SFFCU continues to refinance the loans for their existing clientele as balloon (or "bullet") loans come due. Approximately 68.5 percent of outstanding medallion loans have a bullet maturity, a large number of which come due in 2018. One participating credit union declined to refinance two balloon loans that it controls,

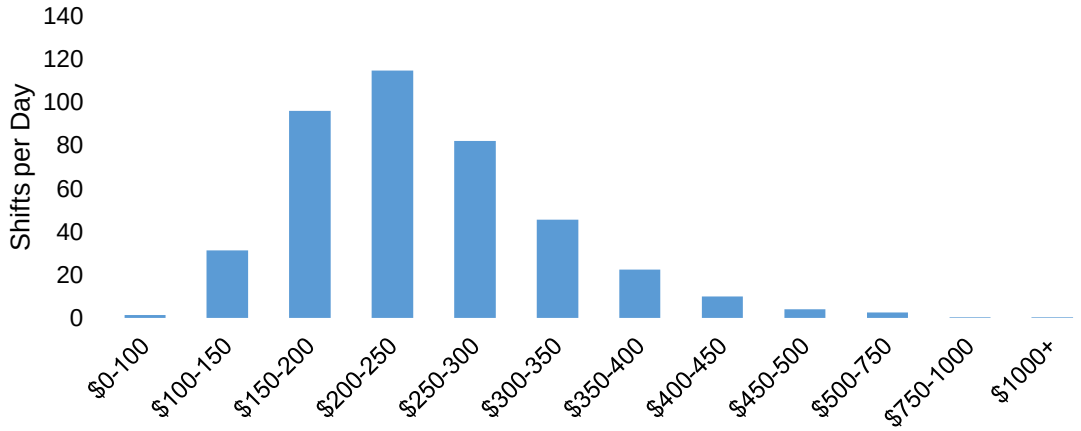
[32] Purchased Medallions have loan payments of $1,500-$2,500 per month in addition to the regular vehicle, insurance, etc. costs borne by the rest of the industry.

but otherwise, loan holders who keep up with monthly payments are able to obtain refinancing. Were this to change, the number of foreclosures would rise sharply given that few medallion holders could pay off the remaining principal in one large payment.

## Industry Financial Condition

The Project Team analyzed data provided by SFMTA covering over 4 million taxi trips from August 2016 through April 2017. Based on this data, the team was able to estimate the range of fare revenue per shift earned over this period.[33] The analysis focuses on shifts of 8 to 12 hours in order to examine earnings of full-time drivers.[34] The results of the analysis are shown in **Figure 10**.

**Figure 10: Fare Revenue per 8 to 12 Hour "Shift"**
**August 2016 through April 2017[35]**



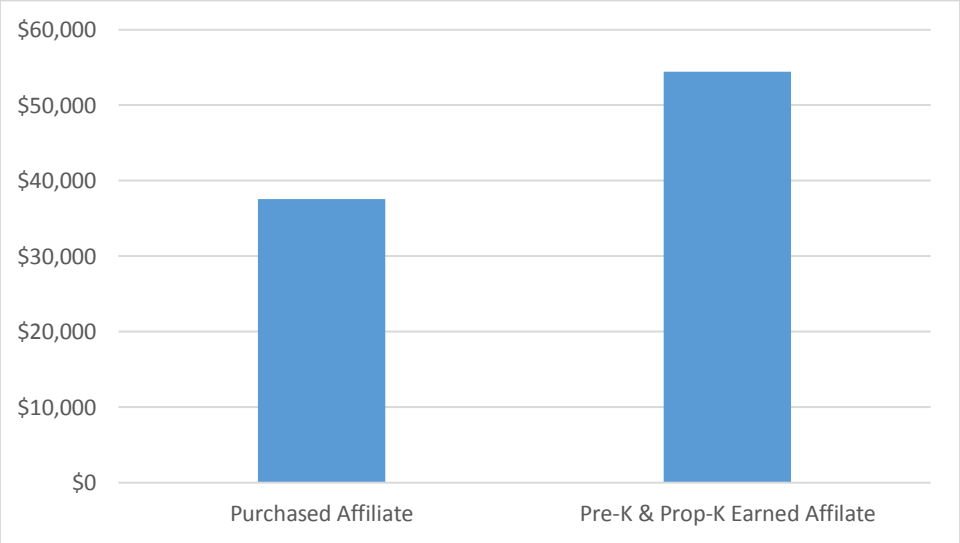

Based on fare revenues and expense information gathered from interviews with industry stakeholders, the Project Team was able to construct a pro forma financial analysis (pro forma[36]) for drivers and medallion owners. This analysis is a useful tool in understanding how drivers and medallion owners generate income and how different medallion ownership modes, and ways of extracting revenue from those medallions, can impact annual net income.

The analysis revealed that medallion holders' net incomes vary widely depending on whether the medallion was purchased or earned. As noted previously, Purchased Medallion holders incur the expense of monthly loan payments, in addition to a medallion owner's typical operating expenses.[37] This is illustrated in the chart below showing the annual net operating income for a Purchased medallion and a Prop-K

[33] For more detail on data analysis methodology, see Appendix B
[34] Only about 28% of shifts were found to fall into the 8 to 12 hour range
[35] A "shift" is defined as fares in 8-12 consecutive hours in a given 24-hour period, based on data provided by the MTA.
[36] Detailed further in Appendix C, the pro forma is a model of industry participants finances based on operational and market factors. Revenues and operation assumptions used are intended to represent a range of conditions based on industry stakeholder feedback.
[37] Typical operating expenses include gas, vehicle loans, repairs, and charges for color scheme services

Earned medallion, both operating as affiliates[38]. The analysis assumes that both have the same operating conditions: six shifts worked and two shifts leased per week, $250 in fares per shift, 20 percent additional in tips, and $900 per month affiliate charge paid to a color scheme.[39]

**Figure 11: Pro Forma Operating Results, Equal Operating Assumptions**
**Annual Net Operating Income for Medallion Holder**



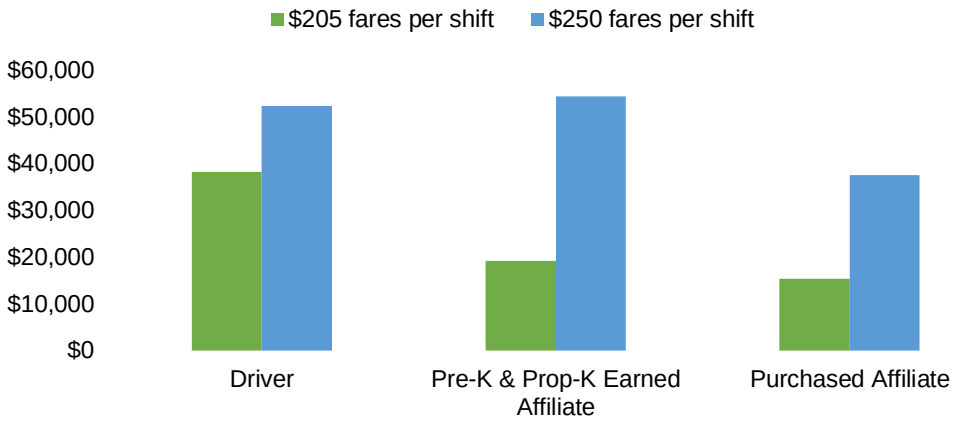

The results show that even with above-average revenue per shift ($250), a Purchased Medallion holder operating as an affiliate nets less than $40,000 per year, while a Pre-K or Prop-K Earned Medallion holder operating as an affiliate, nets over $54,000 annually.[40] The difference is the loan payments made by the Purchased Medallion holder.

The project team also conducted an analysis using varying assumptions by medallion type. The analysis is meant to better reflect current market conditions and operation methods. The results of the analysis are shown in the following chart.

Two levels of fares per shift, $205 and $250, are used to show a range of fare revenue. This analysis assumes: earned medallion affiliates do not lease shifts to other drivers, reflecting market conditions; Purchased Medallion affiliates lease two shifts when revenue per shift is high and zero shifts when it is low, and earned medallion affiliates drive two fewer shifts when revenue per shift is low. The analysis also includes drivers who do not own a medallion but, like Purchased Medallion holders, work six shifts.

[38] Taxi operated as small, independent business who contract with a color scheme for dispatch, colors, and sometimes, insurance
[39] Full assumptions shown in Appendix C
[40] Based on a general consensus from industry stakeholders that $250 in fares per shift was a reasonable high-end earnings scenario for analysis.

**Figure 12: Pro Forma Operating Results - Annual Net Income**
**Taxi Drivers and Medallion Holders**

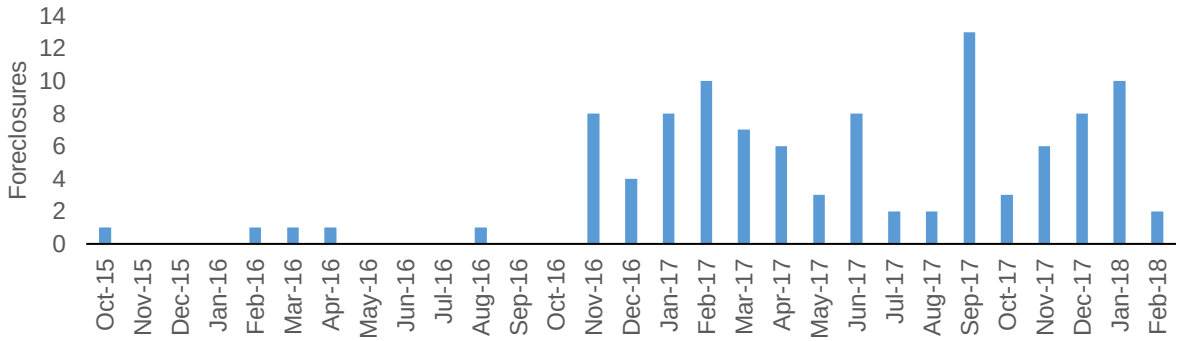



The results show that net operating income for Purchased Medallion holders operating as affiliates[41] is lower than both Pre-K and Prop-K Earned Medallion holders and drivers who do not own a medallion, but work the same number of shifts. Practically, this means that the cost of maintaining the payment on a Purchased Medallion puts the medallion holder in a precarious financial position with the current health of the taxi industry.

## Increasing Foreclosures

Under these market conditions, Purchased Medallion loans are being foreclosed. Since October 2015, a total of 105 medallions went into foreclosure, including 12 in first two months of 2018.[42] Three foreclosed medallions were re-transferred in April 2016, leaving 102 foreclosed medallions outstanding as February 2018.

**Figure 13: Foreclosures by Month, October 2015 through February 2018**




[41] Assumes affiliate medallion holders lease out an average of two shifts per week. The SFFCU assumed 8 leased shifts per week when constructing the pro forma used in approving a medallion loan.
[42] The spike in foreclosures in September of 2017 was the result of the SFFCU foreclosing on loans that should have been foreclosed upon earlier. The delay was due, in part to a change in the SFFCU staff who worked with these loans.

## CORE ISSUES TO ADDRESS

For a number of years, the San Francisco taxi industry had more potential customers than it could service. Cabs were fully utilized, revenue streams from fares were high, and being a medallion holder was profitable. But this was coupled with complaints about customer service, a major undersupply of taxis and a closed market. That very situation helped lead to the rise of a new service that filled these service gaps. Uber and Lyft filled gaps in service and came to be preferred by many former taxi users. San Francisco was "ground zero" for this shift, but the same dynamic has taken hold across the country.

In meetings with the Project Team, industry stakeholders passionately articulated their deep distress at these developments and desire that government intervene to restore their former consumer market. Given the current divided regulatory authority, with California Public Utilities Commission (CPUC) generally regulating TNCs and SFMTA generally regulating taxicabs, SFMTA actions to address the health of the taxi industry need to be focused on changes in taxi regulation. Recommendations in this report are thus focused on taxi regulatory actions that SFMTA can take to address current industry conditions.

Underpinning the recommendations is the recognition that the taxi industry's financial distress is not simply a matter of the locus of regulatory authority. TNCs are winning the battle for consumer dollars based on the attractiveness of their ride services combined with branding, marketing and pricing strategies. The taxi industry is right to point out that in some respects, this competition may be "unfair," for example, in that Uber has a deep well of venture capital that can underwrite relatively low fares. TNCs also have advantages in driver recruitment since CPUC does not have the same driver screening and training requirements that SFMTA currently applies to taxis. It is also likely that TNC auto insurance costs are lower overall, although that may be as much a matter of very high insurance premiums for taxicabs.

All that said, the root cause of the taxi industry's current difficulties are competitive in nature. New York City provides a useful point of reference. For several years, TNC fares were comparable to taxi fares in New York City. TNC fares are now somewhat lower than taxi fares in New York City, and taxis continue to see ridership declines of over 10 percent annually.

Industry competitiveness is thus the core issue to address in considering what actions SFMTA should take. If the industry is to recover from its current financial distress, it has to attract customers in a market which offers a variety of choices.

"Competitiveness" means several things. In part, it means attracting back users who have switched from taxis to TNCs, or at a minimum, retaining current taxi customers. It may also mean finding market niches which may include contracts with government or private agencies that need ride services. The paratransit program is a good example of

this, and there are other specialty transportation needs that taxis might serve, such as nonemergency medical transportation and employer-based transportation.

Addressing industry competitiveness will directly address the industry's current financial distress. The first recommendation is designed to create the opportunity for the industry to package branding, marketing, service and price in an effective way to compete with TNCs and attract business.

A second means to address the industry's financial situation is to "right size" the industry in light of ridership volumes. Currently, the majority of taxis are underutilized. Bringing industry size in line with ridership levels is an important means of improving the industry's financial condition—that may include a smaller fleet but one with higher per taxi revenues. The second recommendation is designed to address this need.

The final recommendation addresses the loss of wheelchair accessible vehicles as a result of the aging of the existing accessible fleet and current industry financial conditions. The goal of this recommendation is to ensure that San Francisco has sustainable and effective accessible taxi service.

These recommendations are focus on actions that can be implemented in the near-term. Additional steps that may require significant additional resources and more extensive time to implement should be taken up after a new administration takes office this summer.

## POTENTIAL SFMTA ACTIONS

The recommendations discussed below encompass changes to the taxicab regulatory structure, which is set by SFMTA through its regulatory authority. The overall objective of these changes is to set the right regulatory context for the taxi industry to stem its financial losses, regain ridership and become healthy financially and in the attractiveness and quality of its services.

The recommendations recognize that regulatory changes can create the tools to grow the taxi industry business based on branding, marketing, service and pricing. The regulatory changes are specifically intended to create opportunities in the areas of smartphone apps and dispatch, training drivers on how to work dispatch and flag trips, minimizing wait times at SFO, and letting drivers efficiently combine SFO, flag and dispatch trips in a day's work.

At the same time, the recommendations recognize that regulatory changes can only create a path for color schemes, drivers and medallion holders to turn around their own fortunes. The SFMTA alone cannot solve the financial stressors brought on by technological changes and evolving consumer demands.

Finally, recommendations seek to ensure that SFMTA regulations continue to protect public safety and ensure equitable access to taxi service, particularly for disabled and senior San Franciscans.

The following recommended steps are designed to serve these goals in a way that is intended to be equitable across the industry.

### Recommendation #1: Adjust Regulations to promote Enhanced Management, Marketing and Service through Creation of Full-Service Color Schemes

Meetings with stakeholders revealed a broad consensus that regardless of issues with TNCs, the taxi industry needs to improve cab service and market effectively to traditional and new consumer segments. Color schemes are the logical group to undertake a combination of marketing and service improvements since they manage all components of taxi operations – vehicles, drivers and dispatch. Their capability to do so varies considerably. Several of the large color schemes have dispatch systems that provide a substantial level of pre-arranged service (Luxor, Flywheel, Yellow and to a lesser extent several others). Flywheel Taxi Company has adopted the Flywheel app, which is the only extensively-used smartphone app currently in use in San Francisco. Color schemes also vary in the extent of their marketing, branding, and driver supervision – all of which are important to industry competitiveness and financial health.

While color schemes can currently can take steps to grow ridership, certain regulatory changes could put them into a stronger position to address service and competitive challenges. The first and central recommendation of this report is to create a new color scheme category—Full-Service Color Scheme—that will create an opportunity for color schemes to package branding, marketing, service improvements and pricing into an effective strategy to regain the industry's competitive position. Regulatory changes can create this opportunity for color schemes (including both current color schemes and potentially new entrants); it should be noted again that it is up to color schemes themselves to take advantage of the opportunity.

Under this recommendation, to be considered Full-Service, a color scheme would require the following:

- Offer the public a smartphone app for requesting trips **and** paying the fare
- Operate a dispatch system for trips requested through the app, on-line and through telephone order
- Manage trip dispatching at SFO, most likely through the app (replacing long waits in the taxi hold)
- Operate wheelchair accessible taxicabs (see recommendation #3).
- Set the rate of fare for all taxis operated out of that color scheme (subject to SFMTA maximum fare)
- Train drivers, including classroom training, ride-alongs and mentor programs (replacing current SFMTA training requirements)

While some of these requirements are current SFMTA regulatory requirements, others create major new opportunities for branding and marketing taxi services and ensuring adequate driver incomes. In the latter respect, Full Service Color Schemes would take over trip dispatching at SFO for their drivers, thus dramatically reducing wait times and allowing drivers to effectively combine SFO, dispatch and flag trips to generate adequate per-shift revenues.

Color schemes would be designated as Full-Service Color Schemes in two stages. First, a color scheme would need to demonstrate that it has a functioning smartphone app that is utilized by all gas and gate and affiliated drivers, operates a dispatch system that takes and dispatches telephone orders, and conducts its own driver training program. Color schemes that do so would be designated by SFMTA as Full-Service Color Schemes. Once the first step is in place they would then be authorized to manage SFO trip dispatching and set a rate of fare for all cabs operated from their color scheme. The rate of fare would be at or below the current SFMTA-regulated rates. Once fully operational, Full-Service Color Schemes would have the tools to brand their fleet, market the app and telephone order system and compete on price as well as service.

Drivers working for Full-Service Color Schemes would be able to get in and out of SFO quickly and would have multiple ways to get business in the city (app, flag and dispatch for telephone orders), with a faster flow of business and less time between trips. Improved attractiveness to drivers is critical since color schemes currently state that lack of drivers is their biggest problem.

**Management of SFO pick-ups** is a particularly important part of this picture. Currently, drivers wait excessive lengths of time – often two or three hours or more – in the SFO taxi holding lot. These wait times reduce driver hourly revenues, and prevent them from supplementing SFO trips with flag and dispatch trips since they spend so much time in the SFO taxi hold. In fact, taxi trip data show that many dispatch-oriented drivers actually avoid serving SFO because of the long wait times.

Under this recommendation, SFO would issue a permit to Full-Service Color Schemes to operate at SFO. Under the permit with SFO, Full-Service Color Schemes would be responsible for managing their cabs at SFO, as various ground transportation providers including TNCs already do at SFO. Full-Service Color Schemes would be responsible for ensuring that they have drivers ready to be dispatched, but no more than necessary so as to minimize driver wait times.

Under the permit with SFO, it would be the responsibility of Full-Service Color Schemes, in conjunction with SFO transportation staff, to design effective operating methods to minimize driver wait times, ensure sufficient cabs for customers, and ensure equity among drivers. The method for doing this would be comparable with current dispatch methods for app and telephone orders.

The long-term vision is that all drivers have access to SFO through Full-Service Color Schemes. However, SFO would phase in the Full Service Color Scheme permit

program, potentially using the current short line for the first few Full Service Color Schemes that meet requirements.

**Driver training** is another central part of the Full-Service Color Scheme program. Color scheme managers said in the course of interviews that many drivers have never learned how to effectively work the streets to keep busy with flag and dispatch trips. It takes considerable time – one driver said two or three years – to learn where to go for the best flow of business. A key to success for new drivers is to learn how to serve not just SFO but the entire city. It is critical that color schemes provide appropriate training. This can include classroom training, ride-alongs with experienced drivers, mentoring programs for a driver's first several months, and feedback based on driver trip patterns and revenue levels.

Full-Service Color Schemes under this program will also be expected to **brand and market their vehicles and service.** These have proven to be key elements to the success of cab companies around the country, as well as Uber and Lyft.

**Full-Service Color Schemes will also set the rate of fare for taxis** in their fleets (not to exceed current regulatory fare rates). This is also comparable to practices of TNCs. San Francisco taxis are currently in a poor position to be competitive due simply to the current fare, which is the product of decisions made before the advent of TNCs. However, the industry is currently not in a position to cut fares given the generally low level of cab utilization and resulting low revenue stream. With drivers kept busy with app, dispatch, flag and SFO trips, it may become financially feasible for Full-Service Color Schemes to reduce fares. **Competing on price is among the most critical steps that need to be taken for cabs to revive their currently declining fortunes.**

Under this recommendation, color schemes would have the option of applying to be Full-Service Color Schemes or not. They can continue to operate as they do now if they so choose.

This scheme allows current color schemes that have the marketing savvy, managerial wherewithal and access to capital to grow their businesses as Full-Service Color Schemes. Having the right regulatory structure in place to allow taxis to better compete and innovate may have the added benefit of attracting outside owners and managers. The scheme also opens the door to outside entrants that would bring capital, technical and managerial expertise, and in some cases, a track record of packaging branding, marketing, service improvements and pricing into an effective strategy to compete in the market.

In meeting with stakeholders, the consultant team discussed at length various approaches to branding and dispatching cabs. One approach to branding would include painting all San Francisco cabs with the same color. This would be similar to New York City cabs, which were painted yellow in the mid-1960s (previously, each fleet had its own color scheme, as currently the case in San Francisco). As the experience of New York shows, a uniform color for cabs can make the vehicles highly visible and distinctive

on the street and create an iconic brand identity. In the mid-1960s, it helped the public distinguish medallion cabs from "bandit" cabs that were illegally picking up street hails.

This strategy may have limited benefit to the San Francisco cab industry under current conditions, however. The central challenge facing the taxi industry is competition from TNC companies that operate by pre-arrangement. The rationale behind structuring the cab industry around Full-Service Color Schemes is to create the opportunity for professional managers at Full-Service Color Schemes to bundle service and pricing strategies with branding and marketing and thus compete effectively with TNCs. Separating branding from service, pricing and marketing of cabs has the risk of diluting efforts by Full-Service Color Schemes to market service improvements and lower fares. A level playing field with TNCs would allow Full-Service Color Schemes to brand and market their company's services along with upgrading service quality and setting the fare.

Another widely-discussed idea is for the taxi industry to have one smartphone app and a central dispatch system. As with the painting cabs in uniform color(s), the reason for not recommending a unified app/dispatch approach is the need for color schemes to combine dispatch functions with branding, marketing, service improvements and pricing. Service availability, whether by app or telephone order, can be correctly viewed as the central issue for the industry in pre-TNC days, but this is no longer the case. Cabs are already readily available at SFO and downtown taxi stands, yet many customers have nevertheless switched to TNCs. To revive, taxis need to compete on service quality and price. The Full-Service Color Scheme approach enables the industry to package branding, marketing, service and price in an effective way.

**Impact on taxi industry stakeholders:**

- **Drivers:** Increased fare revenues for drivers affiliated with Full-Service Color Schemes. Additional app and dispatch trips and reduced wait times at SFO. (Other drivers are expected to see revenues increase, although to a lesser extent, based on implementation of recommendations discussed below.)

- **Color schemes:** Full-Service Color Schemes will see higher driver fare revenue and improved ability to fill shifts. (Other color schemes are also expected to see improved ability to fill shifts due to recommendations discussed below, although likely with fewer cabs operated.)

- **Customers**: Should improve service at SFO with more engagement from Color Schemes to maintain full service designation. Likely to increase taxi availability for hail and dispatch trips.

**Regulatory changes required:** Changes to the Transportation Code provisions to allow for a Full-Service Color Scheme designation and the ability to set rates. Changes to requirements regarding dispatch affiliation with an app provider that also provides an

ability for the customer to pay through the app. SFO would issue permits, under their current operating responsibilities, for SFO operations.

### Recommendation #2: "Right-Size" the Industry Commensurate with Trip Volumes

The taxi industry currently suffers from an unbalanced cost and revenue structure. A large portion of the cost of taxi operations are fixed, in particular, payments for auto insurance, vehicle loans and (for Purchased medallions) medallion loans. These payments must be made every month or every year regardless of revenues. When fare revenues are diluted by the downward trend in ridership, it is difficult for the industry to make ends meet. This is especially difficult for Purchased Medallions which have to pay off medallion loans as well as operating costs.

One solution to this imbalance is to increase trip volumes – the objective of the first recommendation. While Full-Service Color Schemes work to grow cab ridership, the industry's financial straits can be addressed by shedding unnecessary operational costs that arise from this structure of high fixed vehicle expenditures for underutilized vehicles.

One might expect that the cab industry would adjust fleet sizes to better reflect current trip volumes. If UPS has fewer packages to ship, they presumably send out fewer vans and drivers to make the deliveries. In San Francisco, there are in fact fewer taxis regularly operated than a few years ago. However, the adjustment has not been complete. The majority of taxicabs are operated less than full-time, even when "full-time" is defined as only one shift a day, six days a week. The predominance of underperforming medallions dilutes fare revenues across the entire industry.

Toward the goal of balancing industry size and trip volumes, it is recommended that:

1. The SFMTA recall all Pre-K and Corporate medallions. This would reduce total medallions by 268. This is one step toward addressing supply issues. In addition, the 61 “S” medallions will be fully phased out by September 2018.

2. The SFMTA should recall all medallions that are not being utilized for taxi service. Based on the data provided by the SFMTA, this is approximately another 200 medallions. Combined, this reduced outstanding medallions to 1,046.

As these steps are completed, SFMTA should assess market conditions and the need for further steps. It should also assess future needs of Full Service Color Schemes for expansion and means to incentivize growth through allowing Full Service Color Schemes to expand their fleets.

**Impact on taxi industry stakeholders:** This recommendation will affect stakeholders in the taxi industry in different ways:

- **Medallion holders**: Pre-K and Corporate medallions are eliminated, as are Prop-K Earned medallion holders who are not operating their cabs. This will have a positive impact on Purchased Medallion holders.
- **Color schemes**: Will lose a source of low-cost medallion leases and likely operate a smaller number of cabs. Per-cab revenues will increase, however, thus increasing the availability of drivers and creating operating efficiencies as cabs are utilized more intensively. Color schemes that qualify as Full-Service Color Schemes should in the future have the opportunity to expand their businesses based on success in attracting increased ridership.
- **Customer:** By incentivizing Full-Service Color Schemes to offer effective telephone order and app-based trips, availability of taxis will improve. As industry size adjusts to current trip volumes and the financial condition of the industry improves, Full-Service Color Schemes will have the ability to reduce fares, saving customers money.

**Regulatory changes required:** This requirement will require elimination of Pre-K, Corporate and un-used medallions.

### Recommendation #3: Create a Sustainable Accessible Taxi Program

The SFMTA has for many years provided financial incentives to color schemes and drivers to operate accessible taxicabs. These include allowing color schemes to operate ramp medallions free of charge, providing a $10 per trip subsidy for paratransit wheelchair trips, and "rewarding" the provision of wheelchair trips in outlying areas by giving drivers one airport “short pass,” which allows them to jump in the front of the queue at SFO, for each two wheelchair pickups in outer S.F. neighborhoods.

As existing accessible taxicabs age and as the industry experiences financial distress, however, the number of accessible vehicles has shrunk. There are currently 40 accessible cabs in operation in San Francisco. The reduction in ramp taxis has compromised the availability of accessible taxis under the SF Paratransit Taxi and Paratransit Plus programs, which subsidize part of the taxi fare for eligible users, as well as for the general public.

An important part of the recommendations in this report is to rectify this situation. The most promising way to do so is to create an incentive structure for the purchase and operation of accessible vehicles. Incentives could be financed through a surcharge on taxi trips.

Incentive programs, financed through fare surcharges, have been set up in a few cities including Seattle, Chicago, Austin, Minneapolis, Chicago and New York. These programs generally involve a surcharge on taxi fares paid by all customers and direct subsidies to taxi owners and drivers for vehicle purchase, vehicle maintenance and for the extra time involved with picking up passengers who use wheelchairs.

The recommendation is for San Francisco to create a similar program. Participation should be focused on Full-Service Color Schemes so that users can easily obtain a cab by telephone order, smartphone app or flag. Color schemes, or drivers affiliated with a Full-Service Color Scheme, should be responsible for vehicle purchase and maintenance. The color scheme should be responsible for driver training and daily operations including dispatching and ensuring that drivers accept requests for accessible trips.

Color schemes and drivers who participate in the accessible program should receive the following incentives: a monthly subsidy for vehicle purchase equivalent to the differential cost of an accessible vehicle versus the cost of a non-accessible vehicle, amortized over the four year life of the vehicle; a monthly subsidy for vehicle maintenance for the four year life of the vehicle; funding for wheelchair securement training; and a per-trip subsidy for each wheelchair user served. For vehicle owners to be eligible for the vehicle purchase, maintenance and securement training subsidies, they should be required to provide a minimum number of certified SF Paratransit trips per month with the vehicle, including both ambulatory and wheelchair trips. In addition to the per trip subsidies paid to drivers for SF Paratransit wheelchair trips, drivers should receive the same subsidy for general public wheelchair trips. Monitoring should be put in place to verify that trips provided were actually for passengers using wheelchairs. Ramp taxis should be required to prioritize SF Paratransit trips, and trips for wheelchair users in the general public.

Preliminary estimates place the cost of full implementation of this program at $750,000 to $1.36 million per year, depending on the level of incentives and number of vehicles and wheelchair trips. These estimates assume a range of 80-100 subsidized ramped vehicles in service and a range of 1,500-3,000 subsidized wheelchair trips per month.

**Impact on taxi industry stakeholders:** This recommendation will have a major impact on people using wheelchairs by improving the availability of taxicabs for their use.

**Regulatory changes required:** No regulatory changes required; the existing ramp taxi incentive program can be expanded programmatically to include additional incentives.

## Implementation Plan

The recommendations provide a path and incentives for the industry to establish multiple Full-Service Color Schemes that will better serve the public than the existing structure, and creates much greater opportunity for the industry to regain financial health.

The next step toward implementation is to review these recommendations in detail with industry and other stakeholders including SFO and the SFFCU. Key issues for discussion during these feedback sessions are:

1. **Operational requirements for color schemes to qualify as Full-Service Color Schemes**. These include setting a minimum volume of dispatch calls; features that must be included in a smartphone app; and minimum requirements for driver training.
2. **Management of SFO pick-ups by Full-Service Color Schemes**. The congestion management mechanism needs to be determined.
3. **Reduction of medallions to adjust taxi fleet size.**
4. **Determine subsidies for the accessible taxi program**. Subsidy levels should be determined based on discussions with color schemes likely to operate these cabs. Use of funds should be monitored and adjusted based on experience.
5. **Determine what resources are needed within SFMTA to implement the recommendations provided above**.

## APPENDICES

# Appendix A: Medallion Information

| Medallion Type and Count as of September 27, 2017 | Definition | Total In Service |
|---|---|---|
| Corporate | • Prior to Prop-K (1978)<br>• Held by a corporation<br>• Cannot be surrendered for consideration or transferred | 84 |
| Pre-K | • Prior to Prop-K (1978)<br>• Could be held by anyone and could be held by more than one person<br>• No driving requirement by the owner<br>• Eligible for surrender* if the medallion holder is at least 60 years old or has a permanent disability | 184 |
| Prop-K Earned | • Offered after 1978<br>• Limited to one per taxi driver<br>• Driving requirement (800 hours or 156 4-hour shifts) per year<br>• Eligible for surrender* if the medallion holder is at least 60 years old or has a permanent disability | 579 |
| Purchased<br>(Transferable Discount) - $125K<br>(Transferable Full Price) - $250K | • Transferred (purchased) under the Medallion Sales Pilot Program (2010) and the Medallion Transfer Program that replaced it (2012)<br>• May transfer medallion for re-sale at any time with no restriction on age or disability<br>• Driving requirement (800 hours or 156 4-hour shifts) per year | 620 |
| Ramp | • Accessible services medallions; operate in ramp vehicle only<br>• Operated by taxi drivers and color schemes under a use agreement<br>• Cannot be surrendered for consideration or transferred | 40 |
| 8000-Series | • Leased to the taxi companies for set fee<br>• Cannot be surrendered for consideration | 7 |

| | | |
|---|---|---|
| S-Series | • Issued to individuals that weren't on the waitlist, never owned a medallion<br>• Based on taxi driver seniority<br>• Issued for 4 years<br>• Restricted to no more than 90 hours per week<br>• This program is phasing out. All “S” medallions will be termed out by September 2018. | 61 |

| Status | Definition |
|---|---|
| Surrender | • A Pre-K or Prop-K Earned medallion holder may relinquish their medallion back to MTA (“surrender”) for consideration if they are at least 60 years old or have a permanent disability<br>• Surrender for consideration is conditioned on the availability of a qualified buyer able to purchase the surrendered medallion under the Transfer Program<br>• Consideration is currently $200,000, and is set by the MTA Board |
| Transfer | • A medallion holder who purchased their medallion under the Medallion Transfer program (2010 Pilot Program or 2012 Transfer Program) is eligible to transfer for sale at any time with no restriction on age or disability<br>• Transfer of these medallions is conditioned on the availability of a qualified buyer able to purchase the medallion<br>• Current Transfer price is $250,000, and is set by the MTA Board |

# Appendix B: Methodology

## Overview

PFM and Schaller Consulting were provided taxi trip data collected by SFMTA. The data covered over 4 million taxi trips from August 2016 through April 2017. In addition to basic information on the date a trip was made and the fare earned, the data contained several fields that helped identify and differentiate the trips including drivers' license number, medallion number, and unique identifiers for each trip. Using these identification fields, the project team was able to estimate driver shifts and medallion usage over the time period.

## Shifts

In order to efficiently work with the large dataset, the data was first separated by month. Next, the data was separated into 24-hour periods from 5am to 5am in order to better represent shift start and end times. The drivers' license number associated with each trip and the day of the month the trip was made were combined to create a unique identifier for each shift. All trips made by the same driver in each 24-hour period throughout each month were counted as one shift.

Fare per shift analysis focused on shifts in which drivers worked 8 to 12 hours. This range was selected in order to represent full-time shifts. The number of hours in which a trip occurred per shift was used to estimate the number of hours worked.

## Medallion Activity

A similar method was used to determine the average active hours of each medallion. In this analysis, medallion number was used instead of drivers' license number to create unique identifiers for trips each day a medallion was in operation. The hours in operation for each medallion were estimated by counting the number of hours within the 24-hour period in which a trip occurred.

## Limitations

The data does not identify shifts. In order to perform per-shift analysis of the trip data, the project team was required to make significant assumptions. For example, in the analysis, shifts are any trips made within a 24-hour period starting at 5am. This assumes that only one shift is driven by the driver over that period. In reality, drivers may end a shift in the early morning hours and start another shift late at night, meaning two separate shifts started and ended in that 24-hour period.

Another assumption made in this analysis deals with hours worked per shift. The project team counted hours in which a trip occurred as hours worked. However, it is possible that a driver was working but was unable to find a customer during a certain hour or hours. This limitation may have led to shifts being excluded in the 8 to 12 hour shift analysis that would have been included if more information regarding shift start and end times were available.

In addition, several fields in the data provided by MTA were inconsistently available for each trip. This is likely due to collection methods and data entry by drivers. Analysis of the data was particularly limited by the drivers' license number being inconsistently reported. 22 percent of trips are listed with invalid or missing drivers' license numbers. This creates gaps in the analysis where it is possible that trips that should be included are instead omitted because the drivers' license number is incorrectly reported in the data and cannot be attributed to a particular driver or shift.

# Appendix C: Pro Forma Assumptions and Analysis

The Project Team reviewed the SFFCU pro formas associated with the medallion loans and then assessed those assumptions against trip data from August 2016 to April 2017. The Project Team then reviewed pro forma assumptions with MTA staff and industry stakeholders, who provided feedback on the assumptions regarding loan payments, insurance premiums, repairs, and vehicle loans, as well as what is typical for drivers and medallion holders in the current market (as of September 2017) in regards to shifts worked, shifts leased, lease income, affiliate charges, and gas & gate fees. Those assumptions are shown in the tables below.

**Pro Forma Assumptions**

| Assumptions | |
|---|---|
| **Medallion Loan Terms** | |
| Medallion Price | $250,000 |
| Down Payment | $50,000 |
| Loan Amount | $200,000 |
| Sample Loan Type | 3/15 Balloon Loan |
| Interest Rate | 5.40% |
| Years | 5 |
| Down Payment Assistance Terms | |
| Amount | $37,500 |
| Interest Rate | 5.40% |
| Years | 7 |
| **Per Shift Inputs** | |
| Gate Fee/Income per shift | $85 |
| Avg Gas Expense per shift | $30 |
| **Operation** | |
| Lease Income per month | $750 |
| Color Scheme Affiliate Charge per month | $1,000 |
| Weeks worked per year | 48 |
| Annual A-Card Permit fee | $1,000 |
| **Insurance** | |
| Liability Insurance Monthly Premium | $800 |
| Workers Compensation Monthly Premium | $0 |
| **Repairs** | |
| Monthly Vehicle Repairs | $500 |
| **Vehicle Loan** | |
| Vehicle Purchase Price | $15,000 |
| Interest Rate | 7.00% |
| Years | 3 |

## Pro Forma Analysis – Purchased Affiliate

| Scenario Inputs | High Purchased Medallion Owner Operating as an Affiliate | Low Purchased Medallion Owner Operating as an Affiliate |
|---|---|---|
| **Per Shift Inputs** | | |
| Fares Per Shift (excluding tips) | $250 | $205 |
| Average Tip Per Fare | 20% | 20% |
| Gate Fee/Income per shift | $85 | $85 |
| **Shifts per Week** | | |
| By Medallion Owner | 6 | 6 |
| Leased Shifts | 2 | 0 |
| **Operation** | | |
| Color Scheme Affiliate Charge per month | $900 | $900 |
| **Annual Income Statement** | | |
| **Revenue** | | |
| Fare Income | $72,000 | $59,040 |
| Tip Income | $14,400 | $11,808 |
| Gate Income | $8,160 | $0 |
| **Total Revenue** | **$94,560** | **$70,848** |
| **Expenses** | | |
| **Operating** | | |
| Gate Fees | $0 | $0 |
| Color Scheme Services | $10,800 | $10,800 |
| Insurance | $0 | $0 |
| Gas | $8,640 | $7,085 |
| Vehicle Loan | $5,558 | $5,558 |
| Repairs | $6,000 | $6,000 |
| Annual Fees/Licensing | $0 | $0 |
| ***Total Operating Expenses*** | **$30,998** | **$29,443** |
| **Medallion Loan** | | |
| Medallion Loan Payment | $19,546 | $19,546 |
| Down Payment Assistance | $6,456 | $6,456 |
| ***Total Medallion Loan Expense*** | **$26,002** | **$26,002** |
| **Total Expenses** | **$57,000** | **$55,445** |
| **Net Income** | **$37,560** | **$15,403** |

## Pro Forma Analysis – Pre-K and Prop-K Earned Affiliate

| Scenario Inputs | High Pre-K and Prop-K Earned Medallion Owner Operating as an Affiliate | Low Pre-K and Prop-K Earned Medallion Owner Operating as an Affiliate |
|---|---|---|
| **Per Shift Inputs** | | |
| Fares Per Shift (excluding tips) | $250 | $205 |
| Average Tip Per Fare | 20% | 20% |
| Gate Fee/Income per shift | $85 | $85 |
| **Shifts per Week** | | |
| By Medallion Owner | 6 | 4 |
| Leased Shifts | 0 | 0 |
| **Operation** | | |
| Color Scheme Affiliate Charge per month | $900 | $900 |
| **Annual Income Statement** | | |
| **Revenue** | | |
| Fare Income | $72,000 | $39,360 |
| Tip Income | $14,400 | $7,872 |
| Gate Income | $0 | $0 |
| **Total Revenue** | **$86,400** | **$47,232** |
| **Expenses** | | |
| **Operating** | | |
| Gate Fees | $0 | $0 |
| Color Scheme Services | $10,800 | $10,800 |
| Insurance | $0 | $0 |
| Gas | $8,640 | $4,723 |
| Vehicle Loan | $5,558 | $5,558 |
| Repairs | $6,000 | $6,000 |
| Annual Fees/Licensing | $1,000 | $1,000 |
| ***Total Operating Expenses*** | **$31,998** | **$28,081** |
| **Total Expenses** | **$31,998** | **$28,081** |
| **Net Income** | **$54,402** | **$19,151** |

## Pro Forma Analysis – Pre-K and Prop-K Earned Gas & Gate

| Scenario Inputs | High<br>Pre-K and Prop-K Earned Medallion Holder Operating as Gas & Gate | Low<br>Pre-K and Prop-K Earned Medallion Holder Operating as Gas & Gate |
|---|---|---|
| **Per Shift Inputs** | | |
| Fares Per Shift (excluding tips) | $250 | $205 |
| Average Tip Per Fare | 20% | 20% |
| Gate Fee/Income per shift | $85 | $85 |
| **Shifts per Week** | | |
| By Medallion Owner | 6 | 4 |
| **Operation** | | |
| Lease Income per month | $750 | $750 |
| **Annual Income Statement** | | |
| **Revenue** | | |
| Medallion lease paid by CS | $9,000 | $9,000 |
| Fare Income | $72,000 | $39,360 |
| Tip Income | $14,400 | $7,872 |
| **Total Revenue** | **$95,400** | **$56,232** |
| **Expenses** | | |
| **Operating** | | |
| Gate Fees | $24,480 | $16,320 |
| Color Scheme Services | $0 | $0 |
| Insurance | $0 | $0 |
| Gas | $8,640 | $4,723 |
| Vehicle Loan | $0 | $0 |
| Repairs | $0 | $0 |
| Annual Fees/Licensing | $1,000 | $1,000 |
| ***Total Operating Expenses*** | **$34,120** | **$22,043** |
| **Total Expenses** | **$34,120** | **$22,043** |
| **Net Income** | **$61,280** | **$34,189** |

## Pro Forma Analysis – Drivers (non-medallion owner)

| Scenario Inputs | High Driver Operating as Gas & Gate or Affiliate | Low Driver Operating as Gas & Gate or Affiliate |
|---|---|---|
| **Per Shift Inputs** | | |
| Fares Per Shift (excluding tips) | $250 | $205 |
| Average Tip Per Fare | 20% | 20% |
| Gate Fee/Income per shift | $85 | $85 |
| **Shifts per Week** | | |
| By Driver | 6 | 6 |
| **Annual Income Statement** | | |
| **Revenue** | | |
| Fare Income | $72,000 | $59,040 |
| Tip Income | $14,400 | $11,808 |
| **Total Revenue** | **$86,400** | **$70,848** |
| **Expenses** | | |
| **Operating** | | |
| Gate Fees | $24,480 | $24,480 |
| Color Scheme Services | $0 | $0 |
| Insurance | $0 | $0 |
| Gas | $8,640 | $7,085 |
| Vehicle Loan | $0 | $0 |
| Repairs | $0 | $0 |
| Annual Fees/Licensing | $1,000 | $1,000 |
| ***Total Operating Expenses*** | **$34,120** | **$32,565** |
| **Total Expenses** | **$34,120** | **$32,565** |
| **Net Income** | **$52,280** | **$38,283** |