



**Massachusetts Bay
Transportation Authority**

Quarterly Ridership Update

Second Quarter FY19

February 25, 2019



Overview:

Quarterly ridership data

- Subway and bus ridership continues with slight decline on weekdays
- 2018 Commuter Rail counts indicate a 21% increase since 2012

Ridership research-initial results

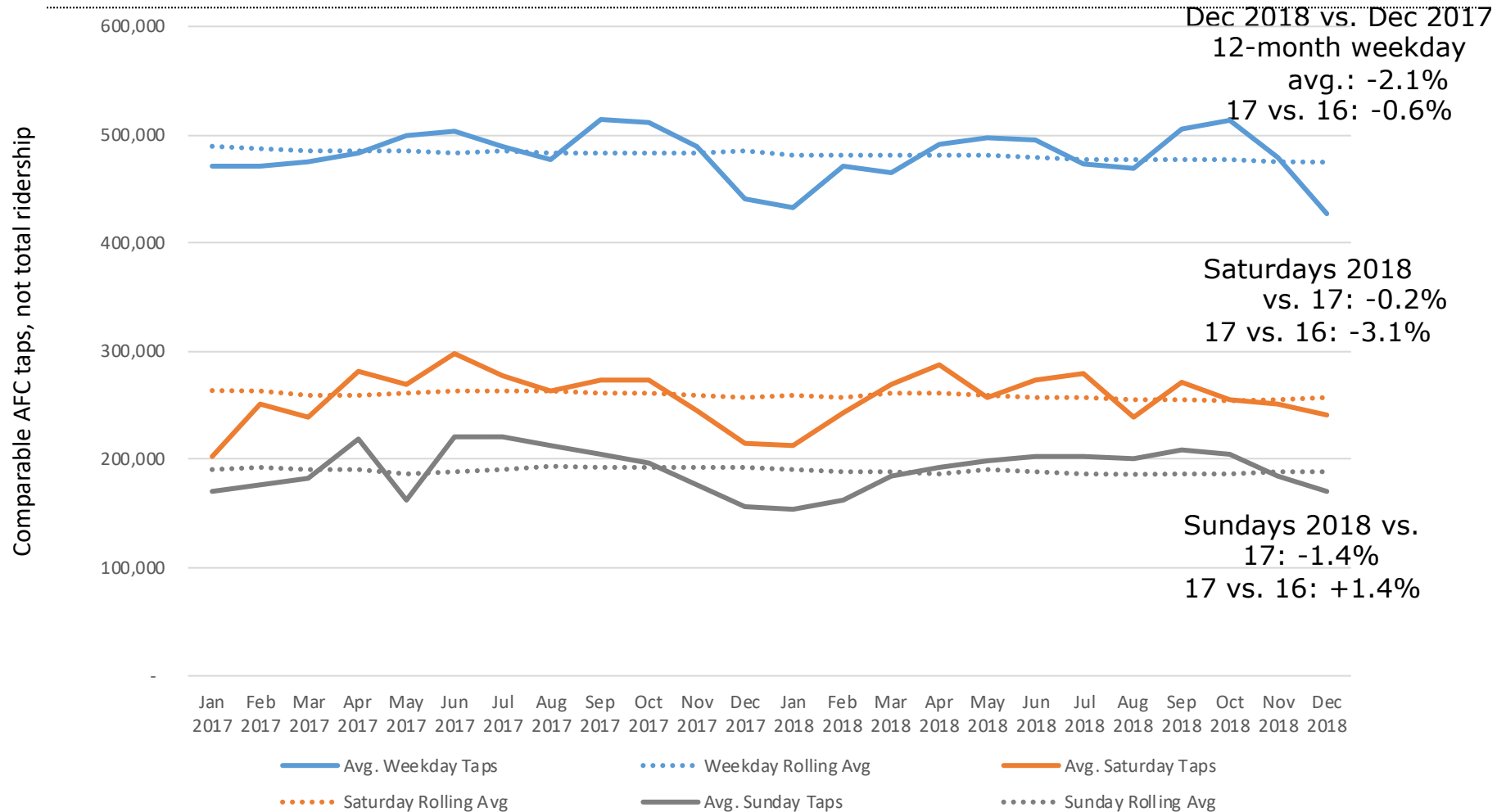
- Spatial factors impact bus ridership and service quality is important

Customer Satisfaction research

- Communication and reliability are key drivers of satisfaction



Gated Station Trend Detail CY17-18



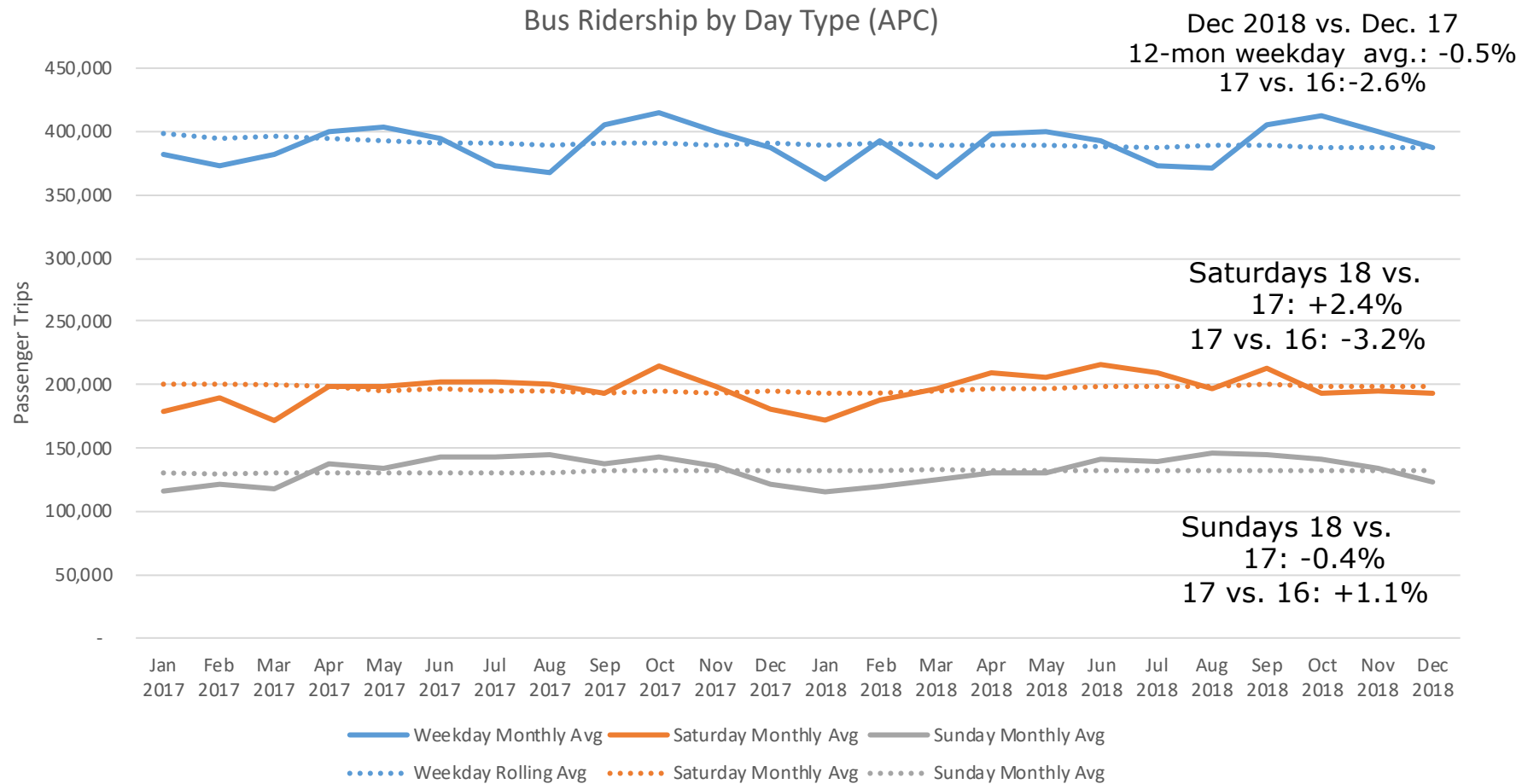
Source: AFC data

Draft for Discussion & Policy Purposes Only



Bus Trend Detail CY17-18

Comparable AFC taps, not total ridership



Source: APC data

Draft for Discussion & Policy Purposes Only



Ridership Research

- Models that only look at regional variables miss factors impacting ridership that are local in nature.
- The MBTA built a spatial regression model to analyze impacts of our bus ridership between 2013 and 2017.
- For ridership during peak periods, we found socioeconomic status, service quality (frequency, speed, and reliability), and transfer rate variables significant in at least some part of our service area.
- We found that there is spatial variation across the region for a number of factors impacting ridership.
- *Take-aways:*
 - *Service quality has different impacts on ridership within the region*
 - *We need to do ridership analysis and planning at the local level*



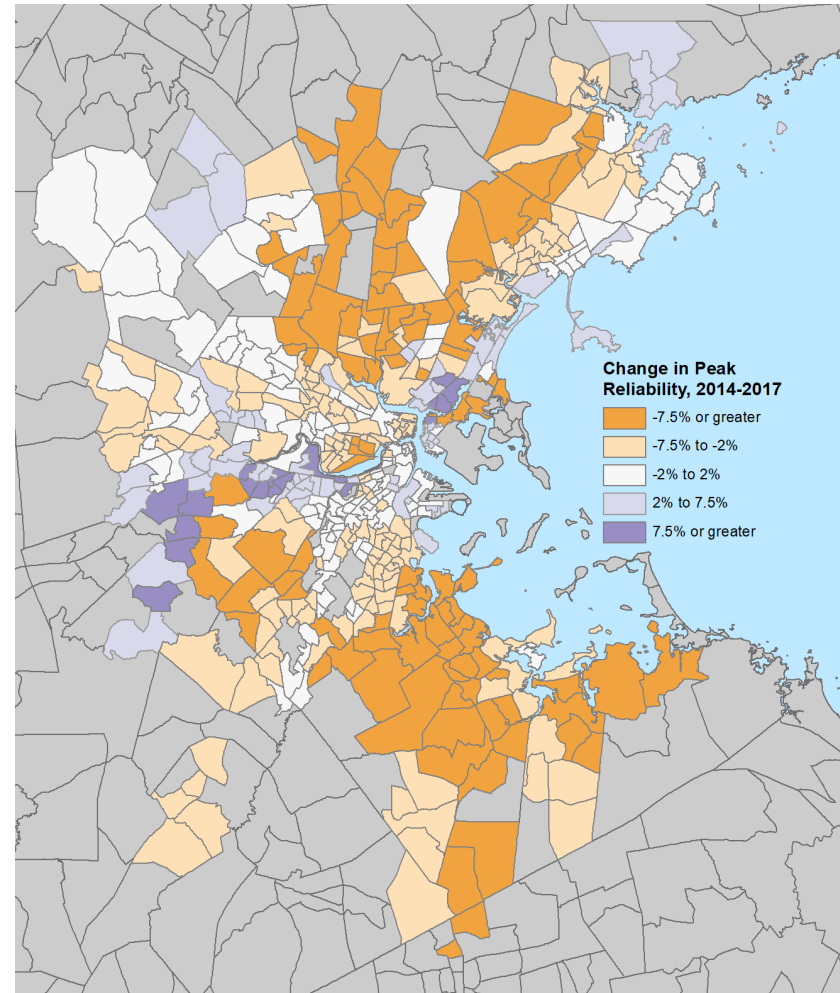
Ridership Research: service quality isn't uniform

Most of our service area experienced a decrease in bus reliability from 2014 to 2017.

However, the decrease wasn't geographically uniform.

There are patterns by area because:

- reliability is measured at the route level
- Factors impacting reliability can be spatial in nature



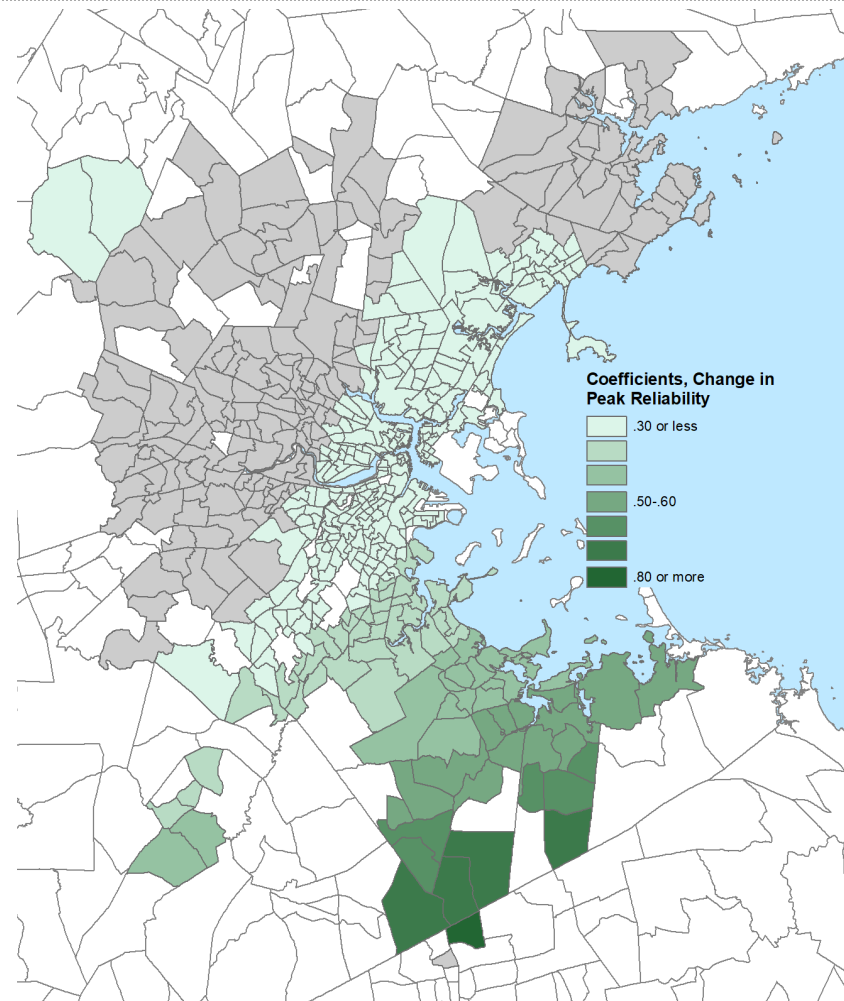


Ridership Research: service quality is important

In a large portion of our system, an increase in bus reliability is significantly associated with an increase in ridership.

This relationship is stronger in the southern part of our service area (represented by a darker green).

This is likely because north of the harbor the alternatives for traveling to the core are much less appealing, and so riders are less sensitive to decreased service quality.





Ridership Research: customer satisfaction

OPMI conducts a monthly panel survey and a biennial intercept customer satisfaction survey.

A regression model from the 2017 intercept survey identified key drivers of customer satisfaction.

2017 Top 5 Predictors

Communication satisfaction

MBTA cares about its customers

Reliability satisfaction

Price/fare satisfaction

Travel time satisfaction

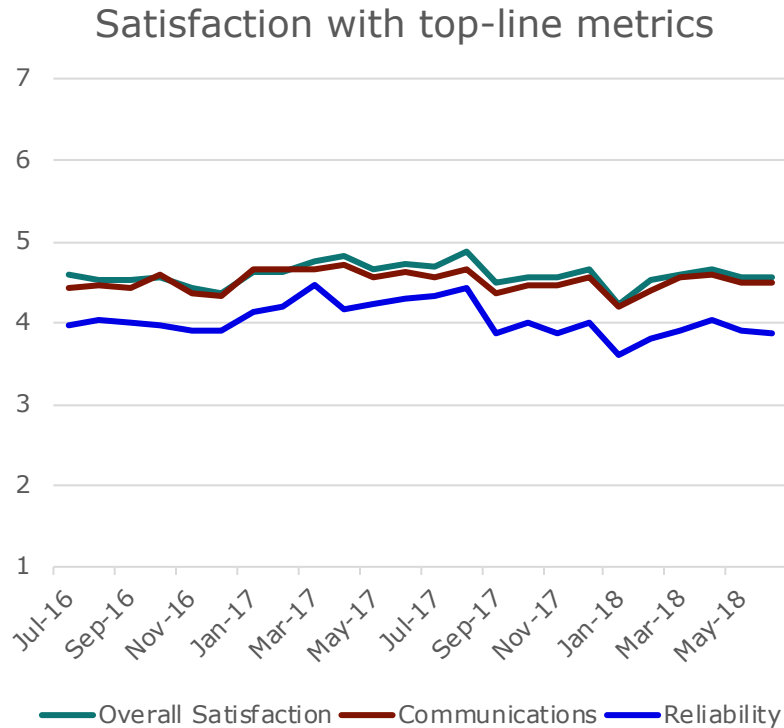
The MBTA uses monthly panel survey to:

- to identify key drivers of satisfaction with communication and reliability
- measure the impact of interventions
- track satisfaction between biennial surveys

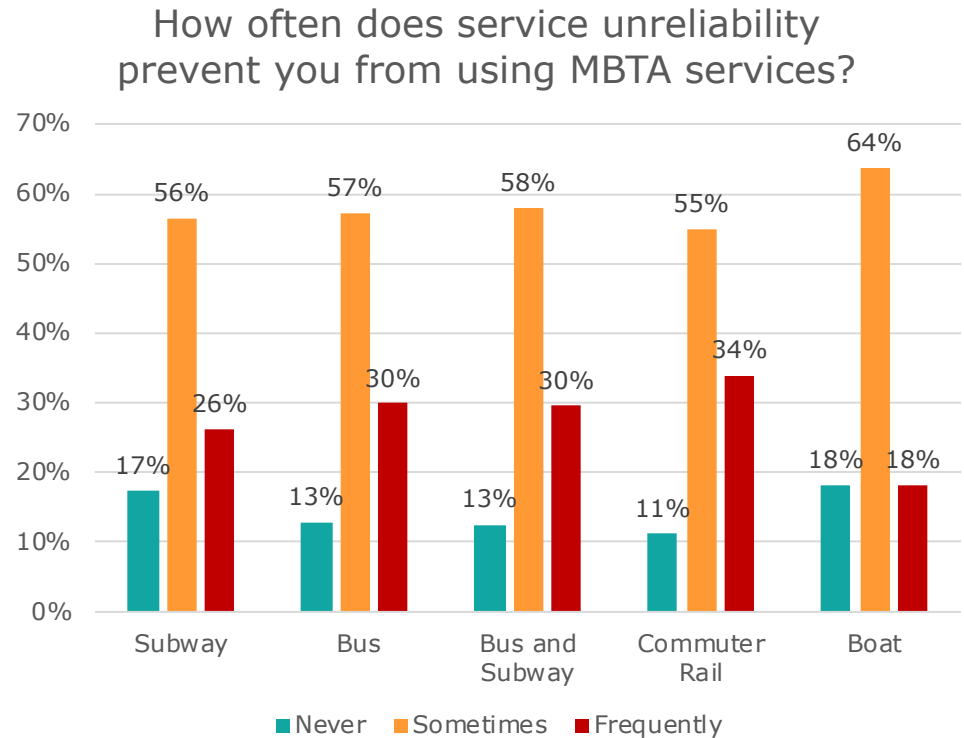


Reliability Satisfaction

Frequent MBTA riders



Infrequent MBTA riders



More than half of riders report planning an excess of 10 minutes extra time for their trips to accommodate possible delays.



Next Steps

Research

- Final report on bus ridership to be released in March, will include external factors impact on ridership
- Next intercept customer satisfaction survey in April-May
- Continued research on subway and commuter rail ridership
- Continued research on regional and national level ridership trends

Steps to Improve Reliability

- Focus of Better Bus Project improvements
- Partnerships with cities and towns on bus priority

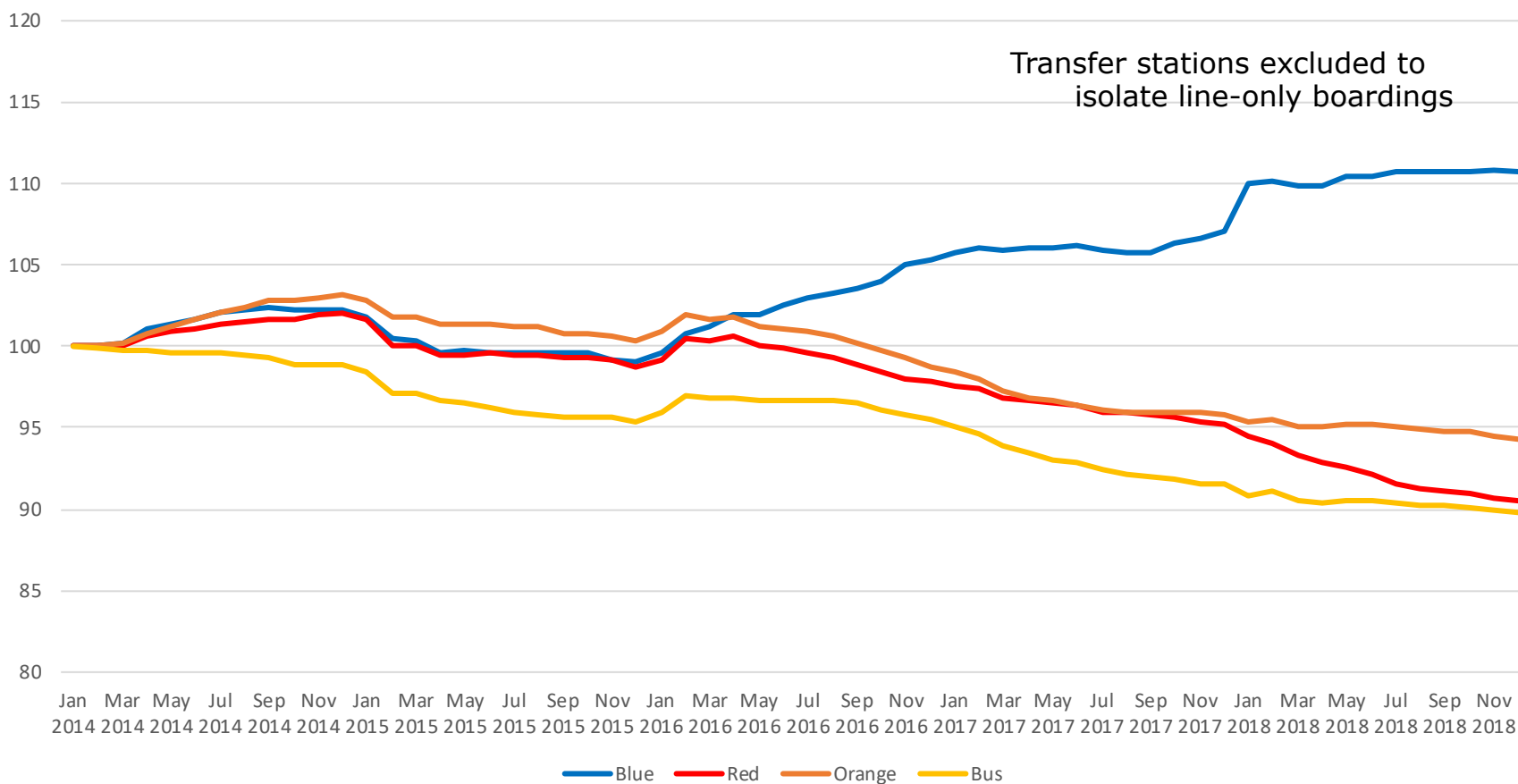


Appendix



Off peak trends by lines

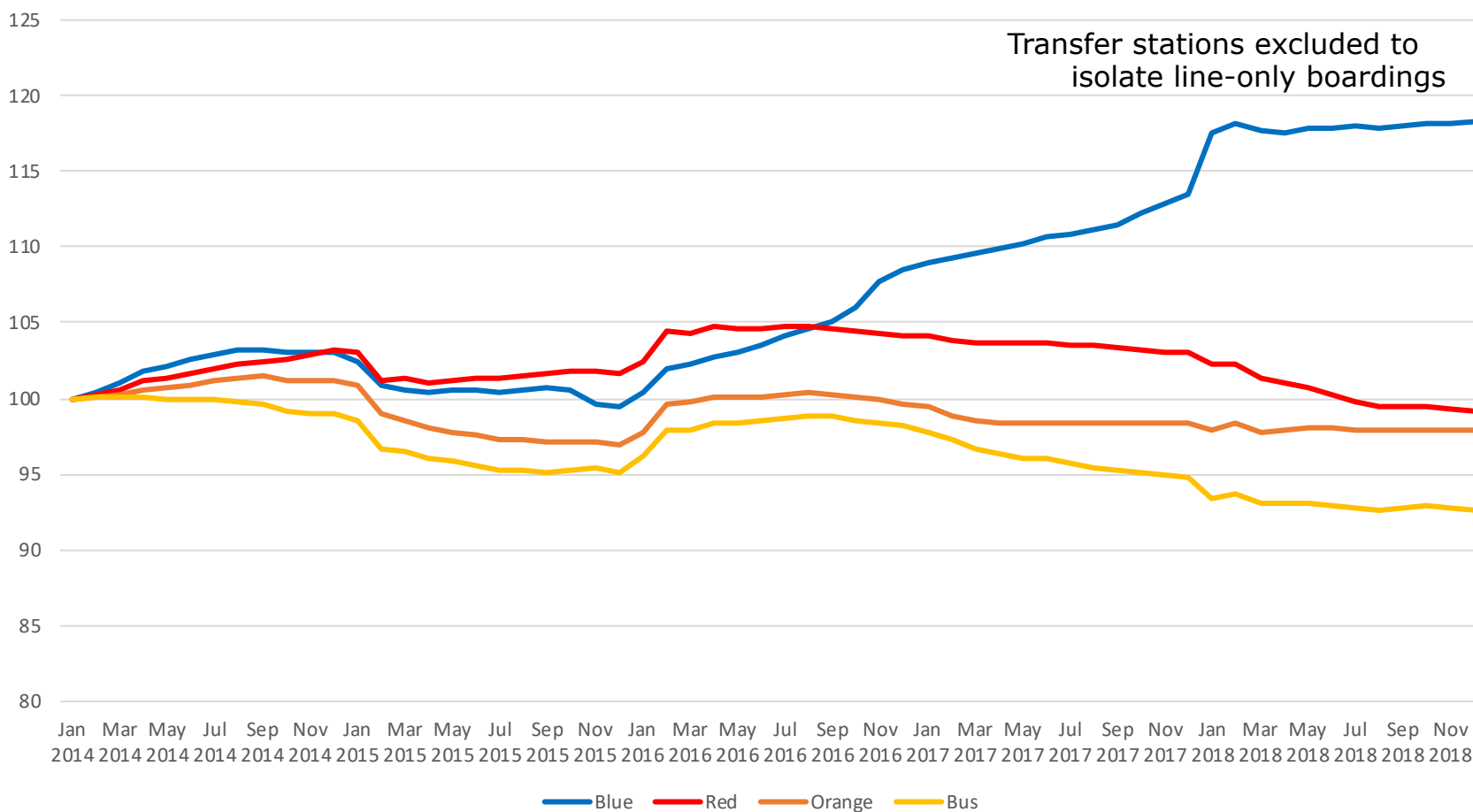
Total Taps by line Off-peak Weekdays, indexed to Jan 2014





Peak trends by line

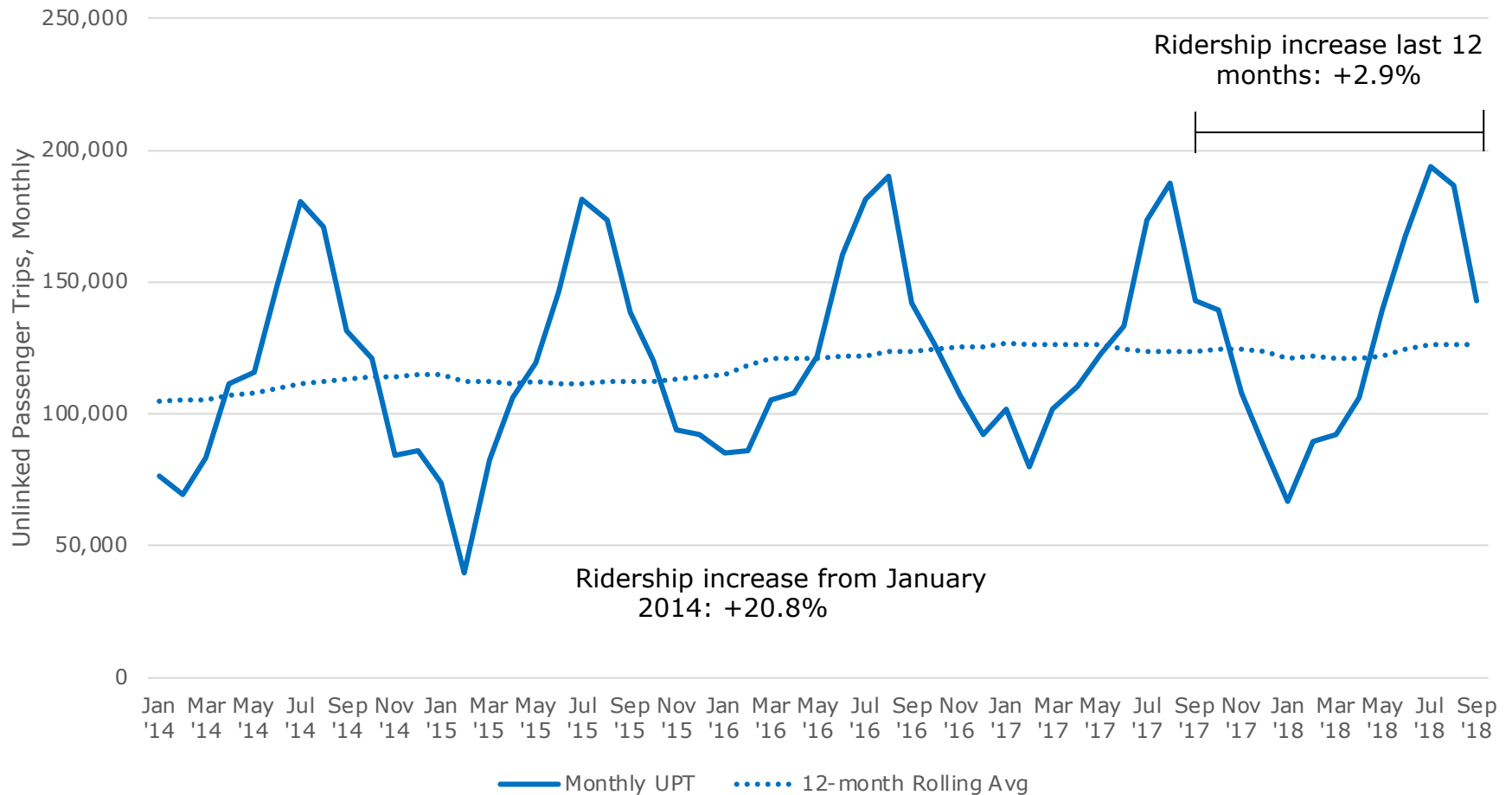
Total Taps by line Peak Weekdays, indexed to Jan 2014





Ferry trend

MBTA Ferry Ridership



Source: NTD Monthly Module

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