

# MARTA RIDERSHIP AND PASSENGER REVENUE TRENDS, MODELS, & POLICY

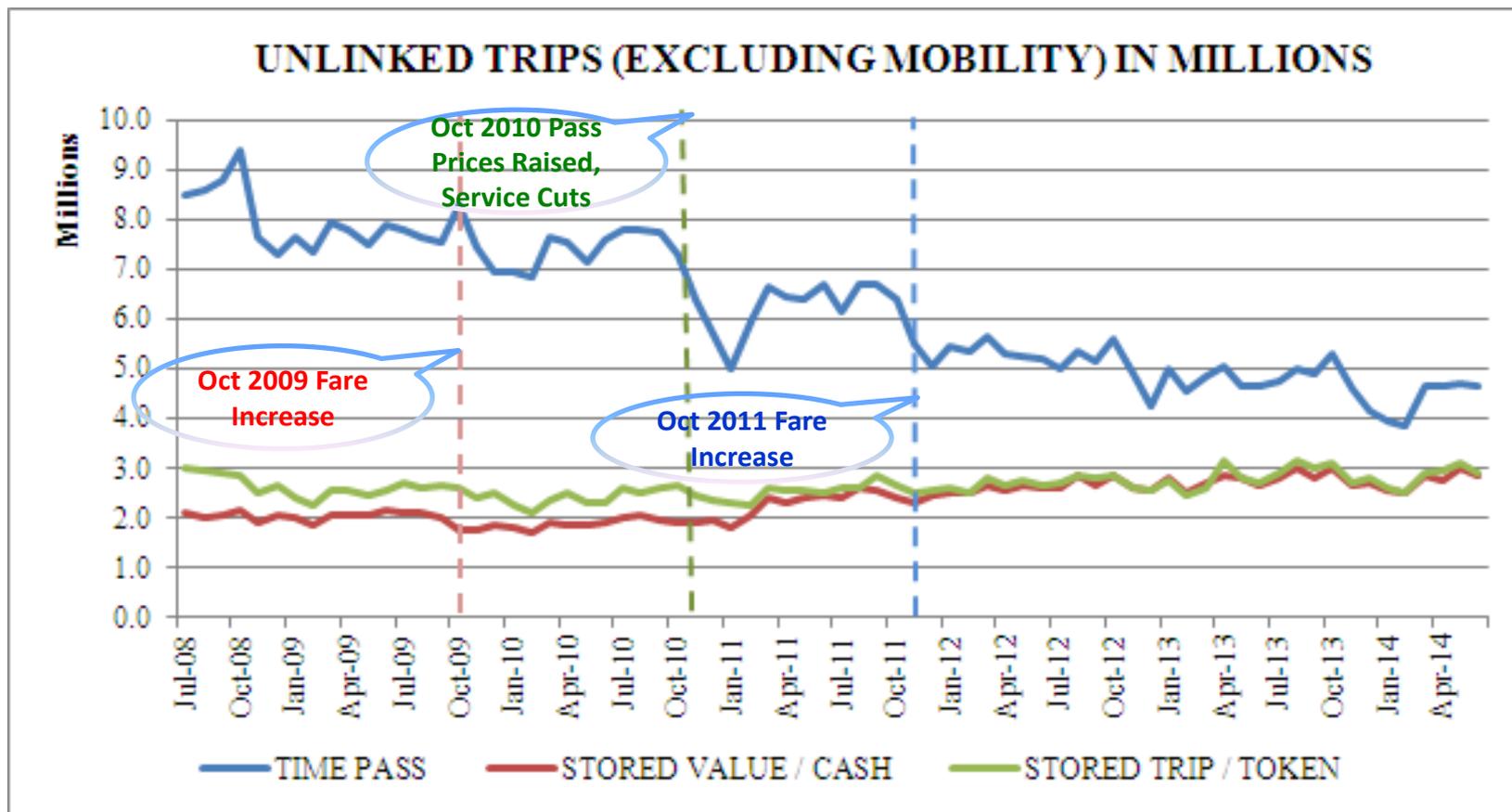


L.A. METRO APTA PEER REVIEW

January 2015

# Ridership Trends by Fare Payment Method

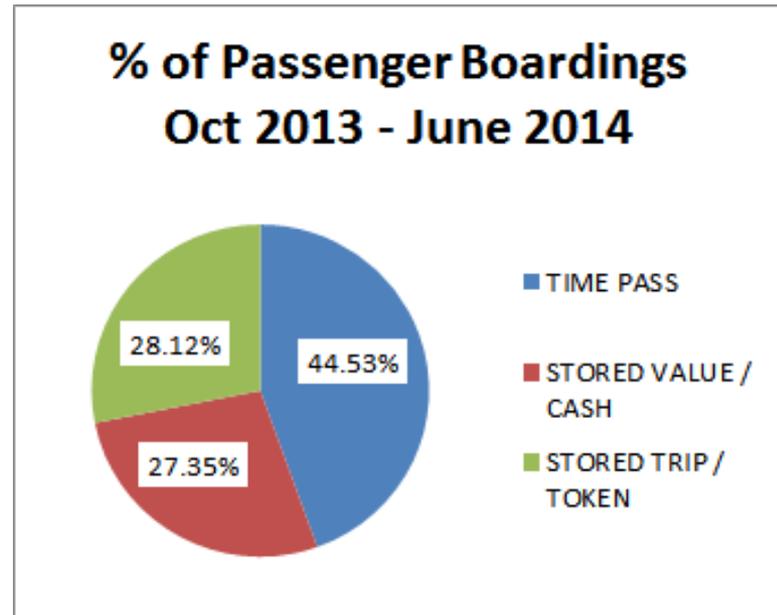
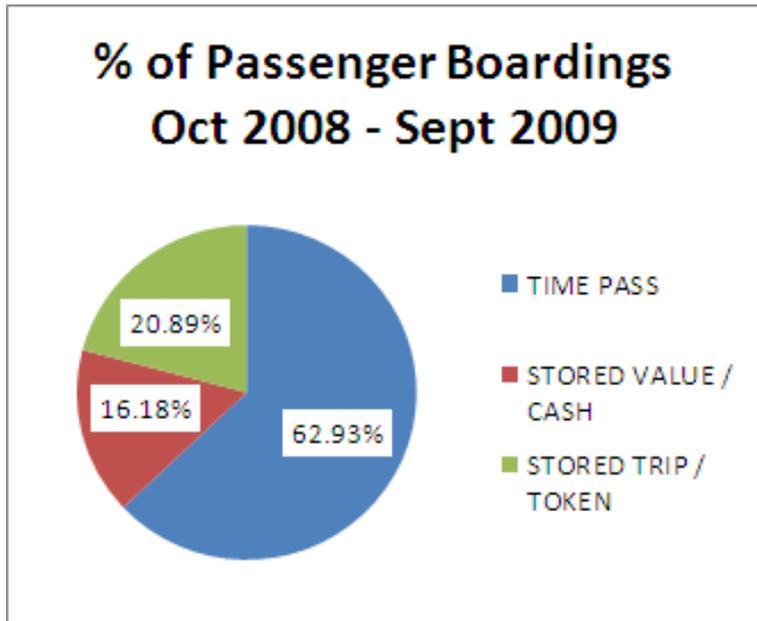
## July 2008 through June 2014



- **Fare Increase to \$2.00 effective October 1st, 2009 -- Great Recession**
- **Bus and Rail Service Reduced and Monthly/Weekly Pass Prices Raised ~ Oct. 1st 2010**
- **Fare increase to \$2.50 ~ October 1st, 2011 w/ increase in pass multiplier to 9.5X base (weekly) and 38X base (monthly)**

# Ridership Trends by Fare Payment Method

## FY 2009 versus FY 2014



- Time Pass prices were raised relative to other fare prices during Fall 2010 and Fall 2011.
- Time Pass sales allow MARTA to book revenue up front, and allow customers unlimited use.

# Fare Elasticity Model

- **Updated annually -- Uses previous fiscal year average fares by fare payment method (each method's net revenue divided by unlinked trips). These are based on classified revenue and Breeze system "taps", and are calculated by our in-house Passenger-Revenue Model.**
- **New elasticity indices by fare payment method are calculated by an external consultant about one year after each fare increase.**
- **Current and proposed fare payment method prices are generated internally.**
- **Predicted changes in passenger revenue and ridership are not used explicitly. Instead, the predicted change in average fare is used as input in the Patronage Forecasting Model.**

# Patronage Forecasting Model I

- **Uses multiple regression formula of internal and external independent variables on ridership (unlinked trips). This is done to create context around the Fare Elasticity Model output.**
- **Uses 60-month database of all variables, updated quarterly.**
- **Independent variables include:**
  - A. Average Fare, as adjusted by Consumer Price Index.**
  - B. Service Hours: Bus + Train, weighted heavily to Train by average load.**
  - C. Seasonality Factor: Historical relationship between month and ridership (affected by weather, special events, school sessions, etc.).**
  - D. May also include Employment of service area residents, if it is significant in the multiple regression run.**

# Ridership/Revenue Forecasting Model II

- **Agency must be able to forecast values of independent variables:**
  - A. MARTA partners with Georgia State University for data on CPI and employment projections.**
  - B. Future service changes are modeled in Service Hours.**
  - C. Future average fares come from the Fare Elasticity Model (or stay the same).**
- **Trend adjustment may be needed, which can be assessed by comparing current FY Model projections with actual figures, as the year progresses.**
- **Model output = ridership, which, when multiplied by average fare, yields trip-making passenger revenue.**

# Fare Policy Principles

- **Maintenance of flat fare with free transfers until regional fare studies are completed.**
- **Maximization of ridership through maintaining the satisfaction of current riders, plus through attracting new riders.**
- **Maximization of revenue through encouragement of stored time period pass purchases.**
- **Provision of rewards for frequent ridership through discounted fare media for multi-trip purchases.**
- **Satisfaction of Title VI principles governing the equitable application of fares (no disproportionate burden or disparate impact).**
- **Meaningful public engagement in the decision-making process for fare policy development and future fare changes.**

# Fare Policy Practices

- **Base fare is to be tied to the consumer price index (CPI) recalculated every other year (if CPI decreases, MARTA's base fare will not decrease).**
- **All other fare payment method prices are to be tied to base fare prices by formula. The multiplier for the 7-Day Pass will be lowered from 9.5 to 9.0.**
- **Title VI testing process will be as follows.**
  - A. Demographics for each major fare payment method are to be collected by the annual Quality of Service survey.**
  - B. If a fare payment method price change varies from the general change by more than 5 percentage points, Title VI analysis is done.**
  - C. The existence of a statistical difference between a fare payment method's protected vs non-protected population usage will be determined by difference-of-proportions testing.**