Demographic Study
Phase 1 Results

Cleveland Metropolitan School District

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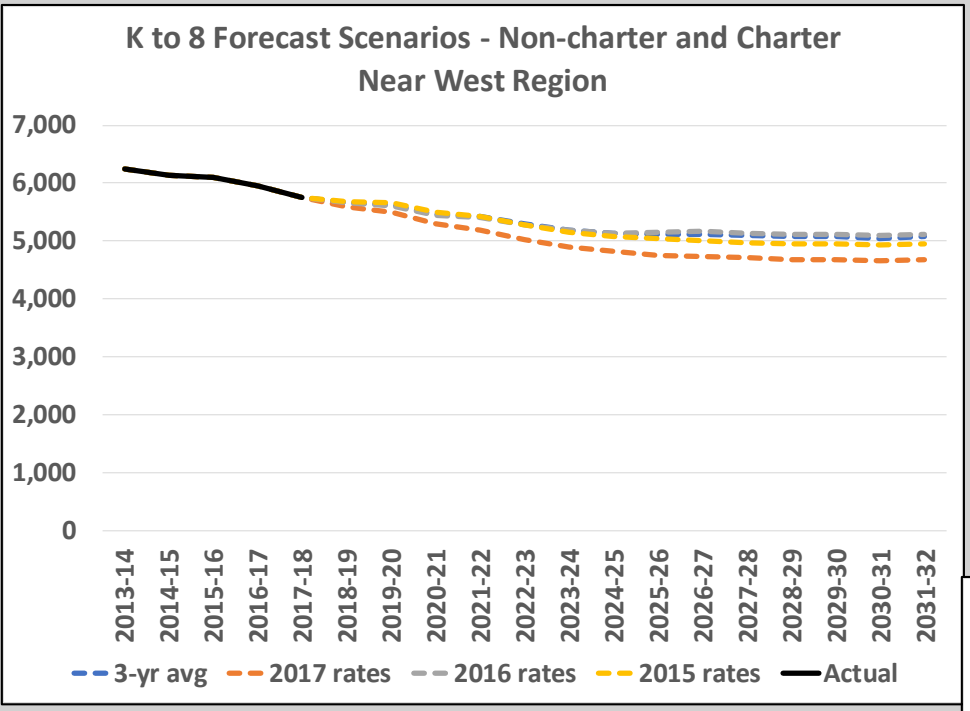
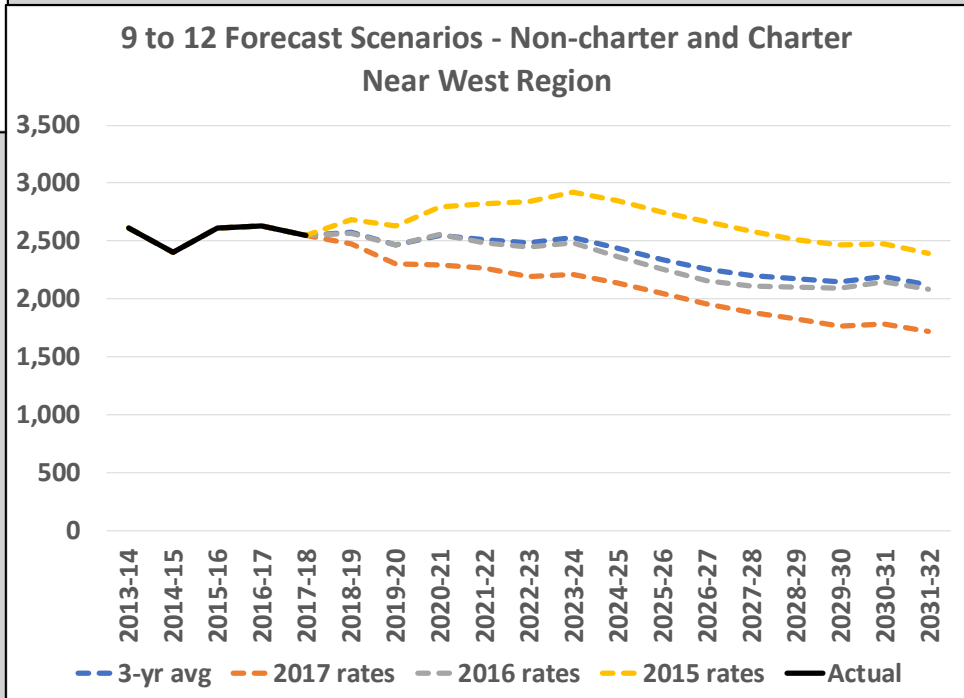
Overview

- **Forecasts provided for each Region (in Excel workbooks). District-wide forecasts are the aggregate of all regions.**
  - **Four forecasts provided for each region, using:**
    - **2015 rates**
    - **2016 rates**
    - **2017 rates**
    - **Average of the 2015, 2016, 2017 rates, which is used in the Fact Base**
- **Forecast Method: Cohort Survival**
  - **Start with current grade distribution of students and advance them them one grade for each forecast year.**
  - **Charter and non-charter students were combined and a joint forecast made. Then we divided the forecast between charter and non-charter enrollments based on typical shares of charter and non-charter enrollments.**
- **Assumptions needed in model:**
  - **Grade progressions – how cohort sizes change as students progress to the next grade**
  - **Kindergarten enrollment – based on births and the relationship between births and kindergarten enrollment five years later**
  - **Pace of residential housing development (assumed to resemble 2015-17)**

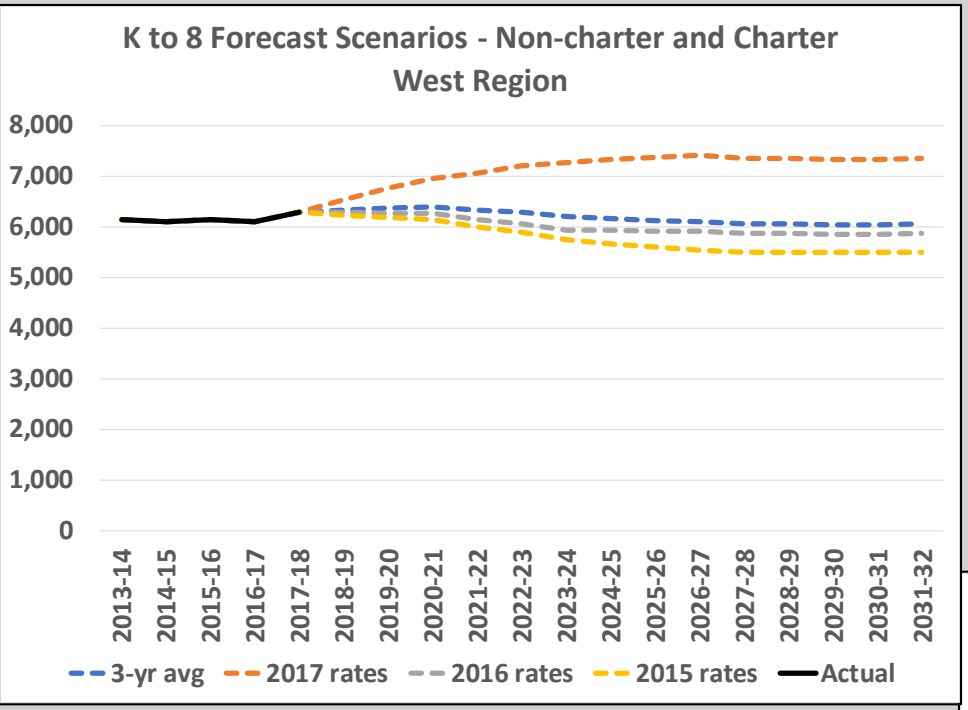
Near West Region



Grade detail and separate forecasts for non-charter and charter students provided in Excel workbooks



West Region



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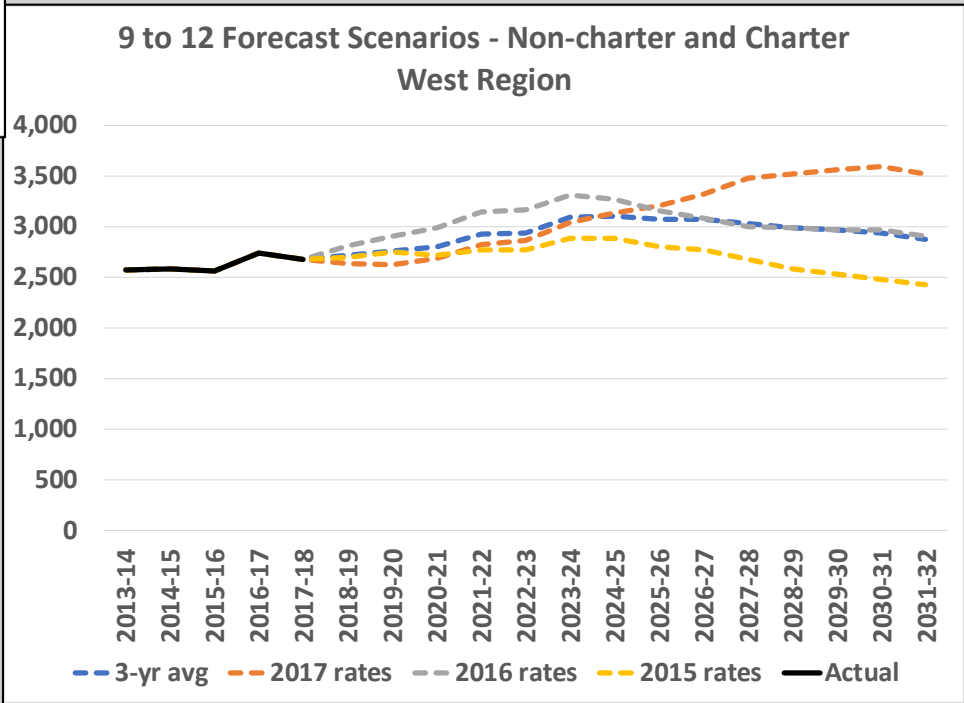
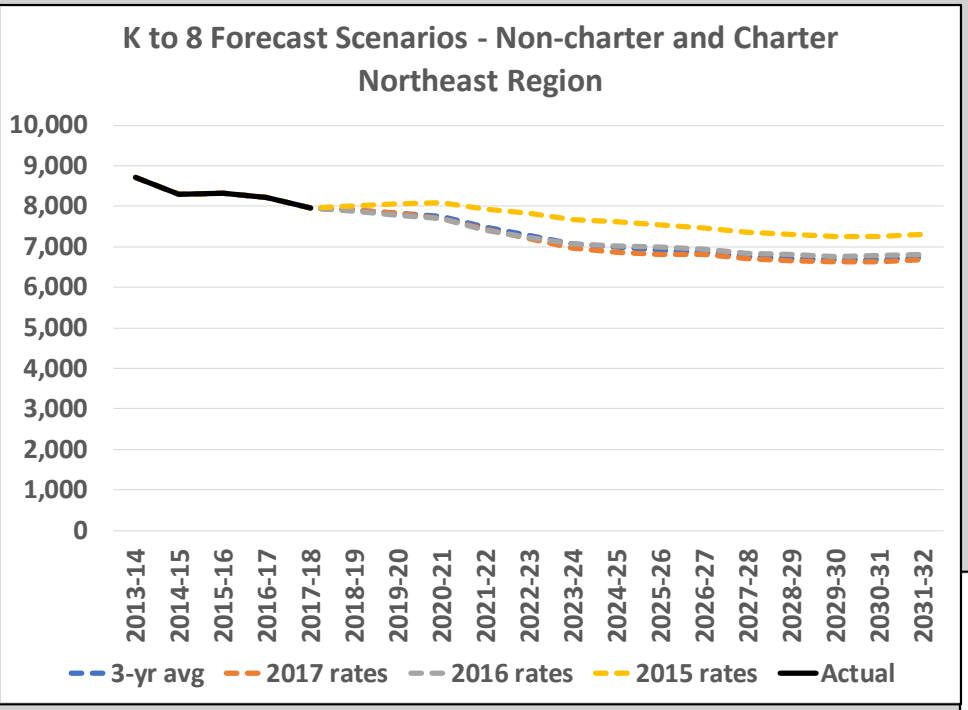


Northeast Region



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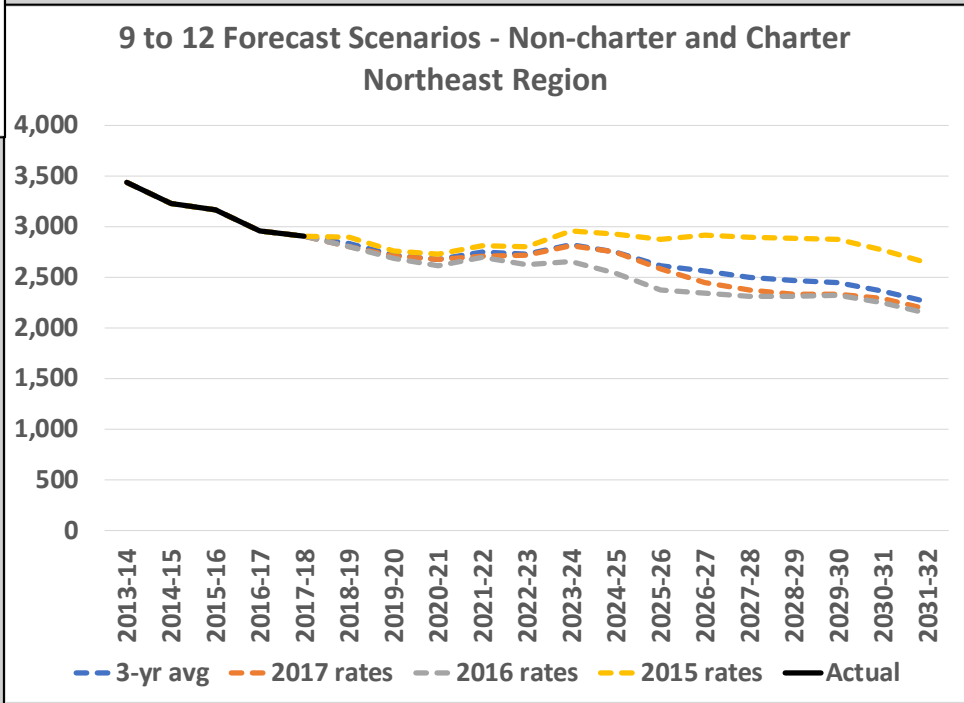
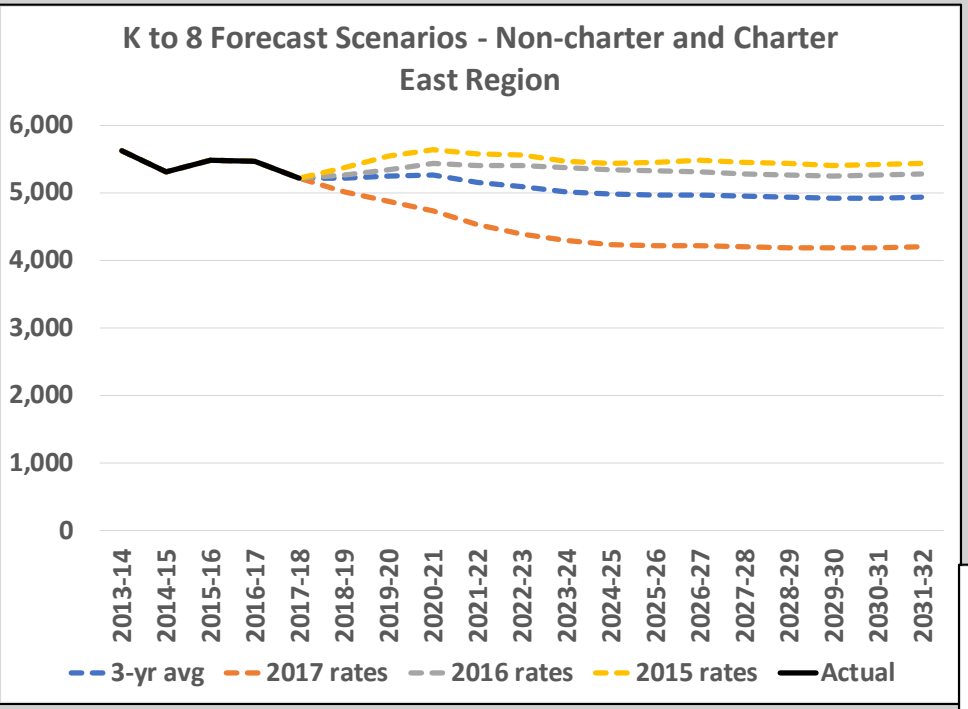
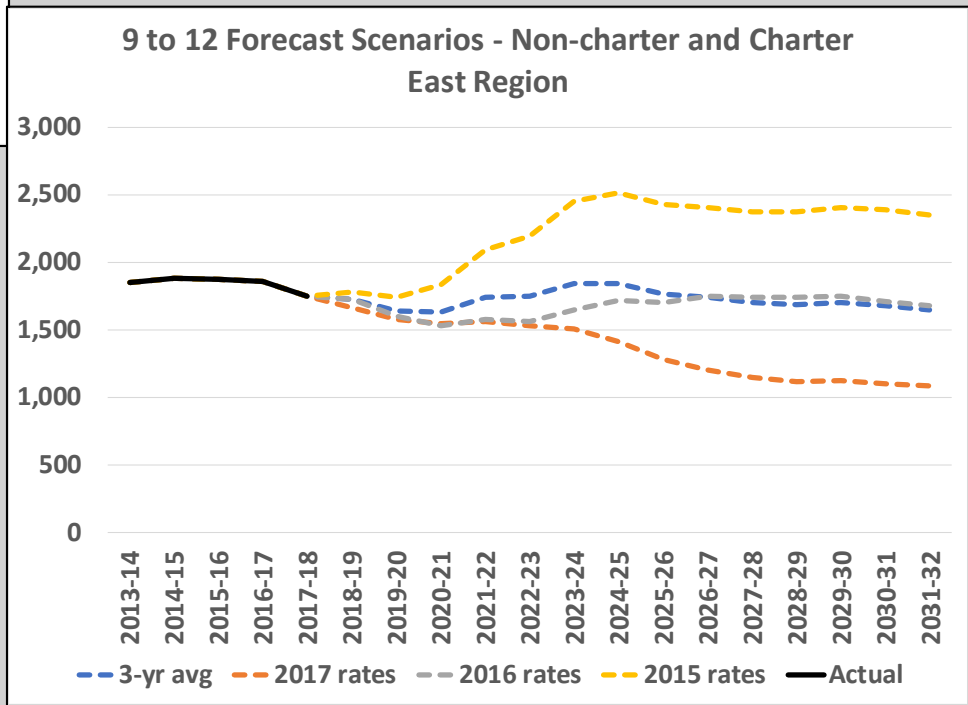


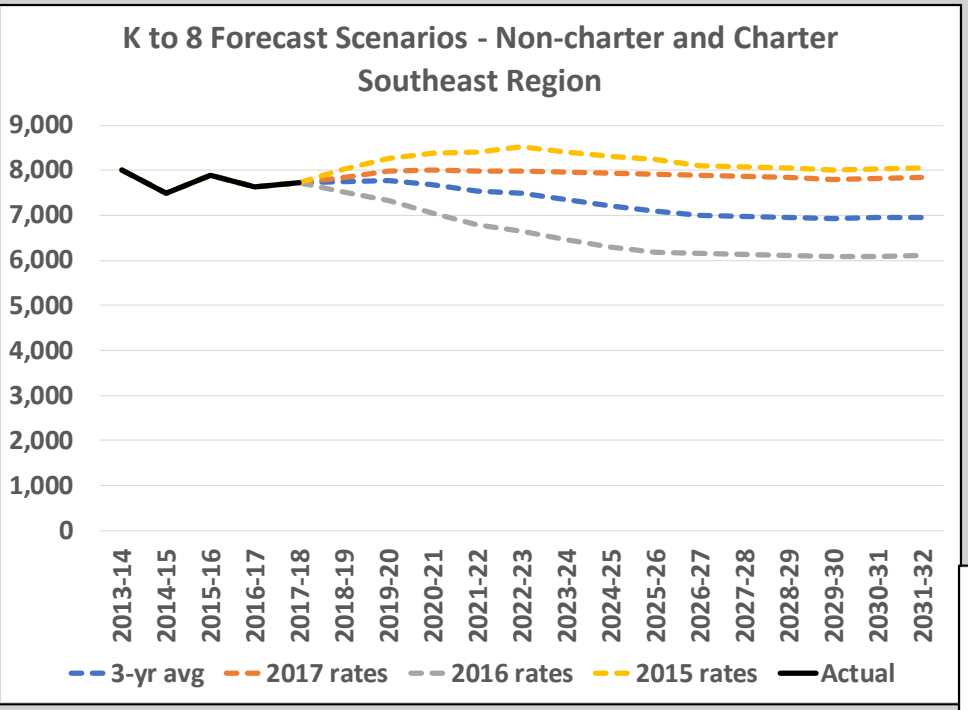
East Region



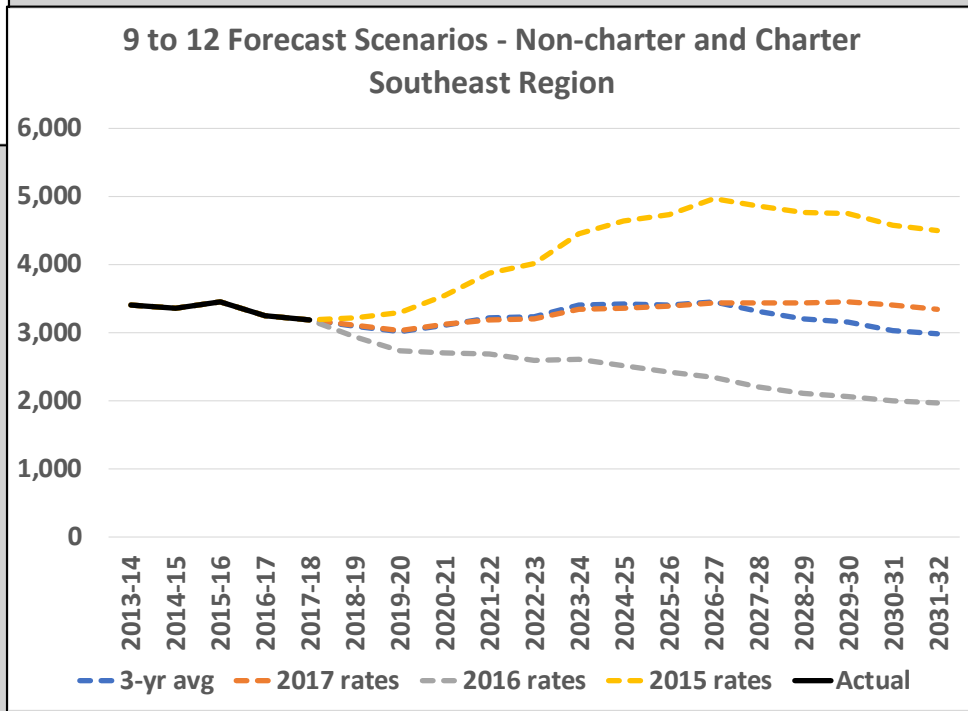
Grade detail and separate forecasts for non-charter and charter students provided in Excel workbooks



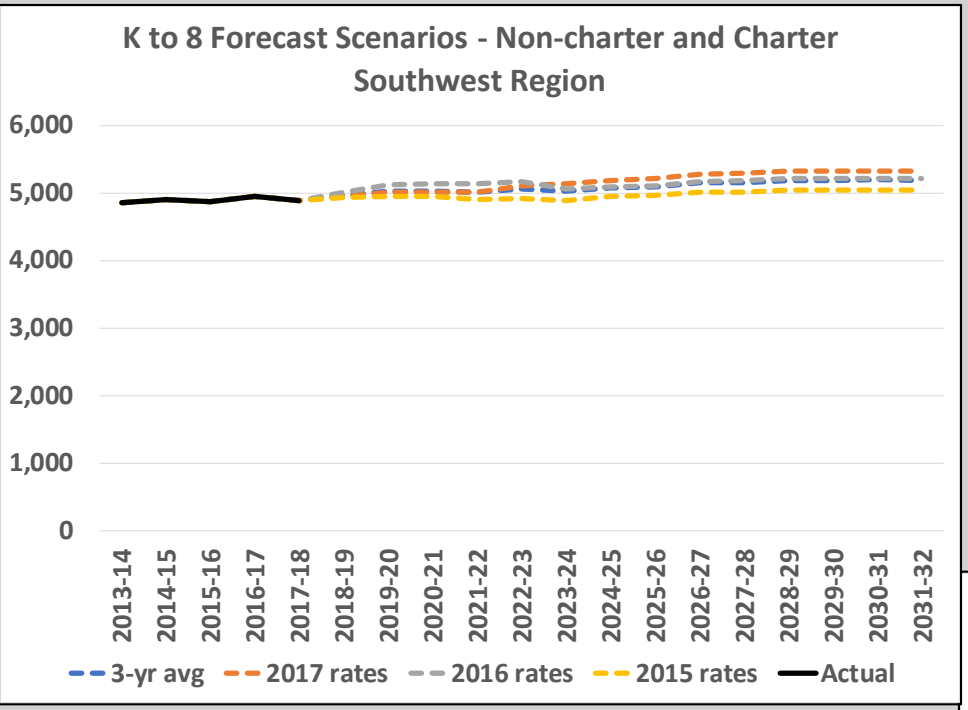
Southeast Region



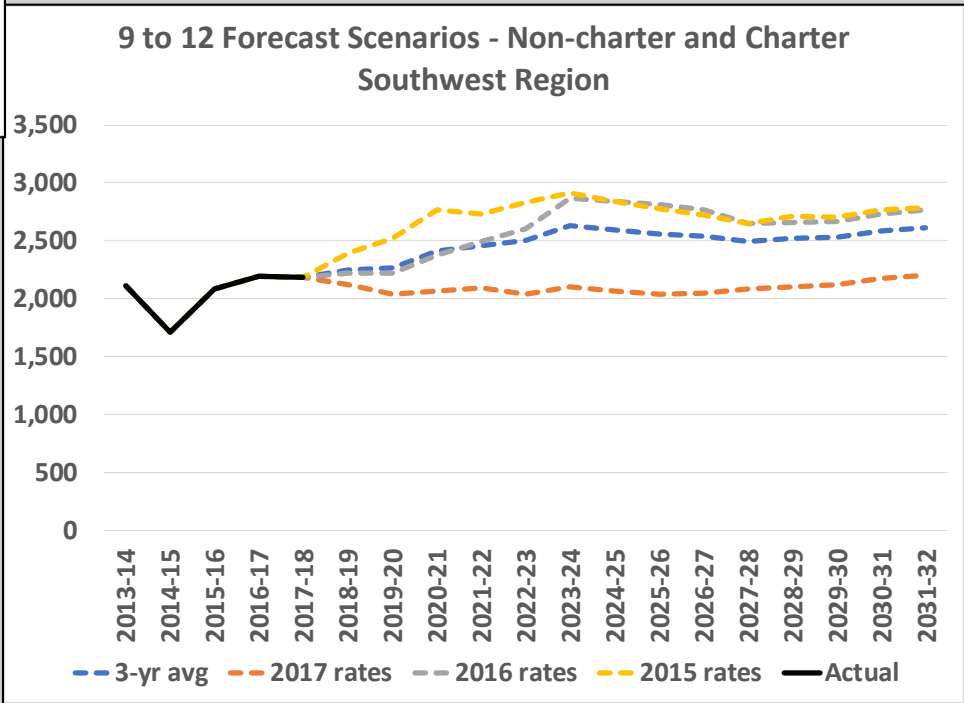
Grade detail and separate forecasts for non-charter and charter students provided in Excel workbooks



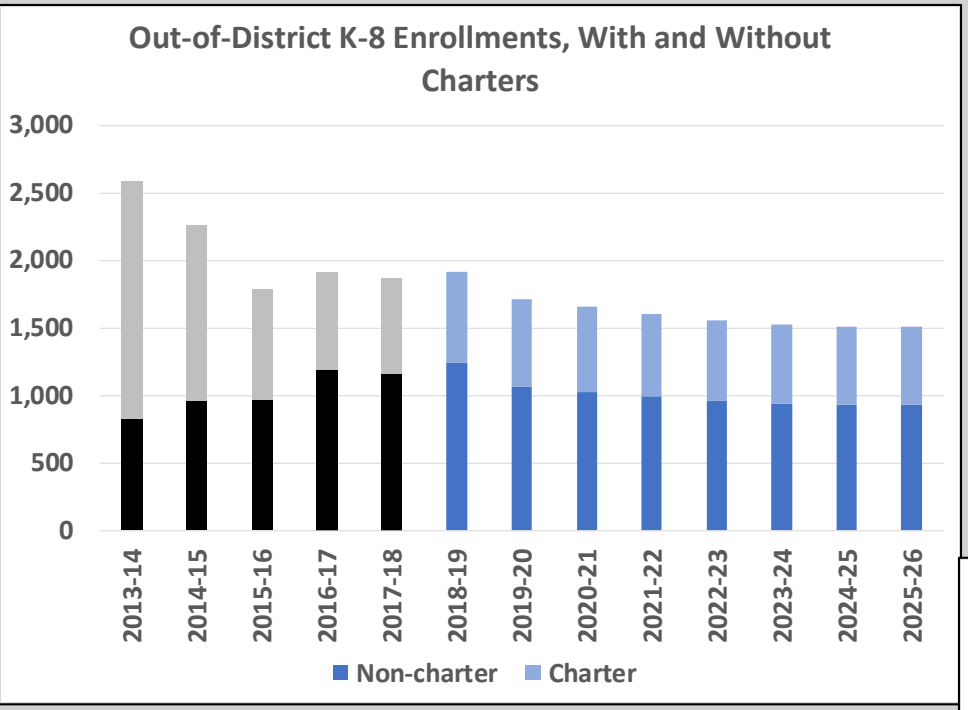
Southwest Region



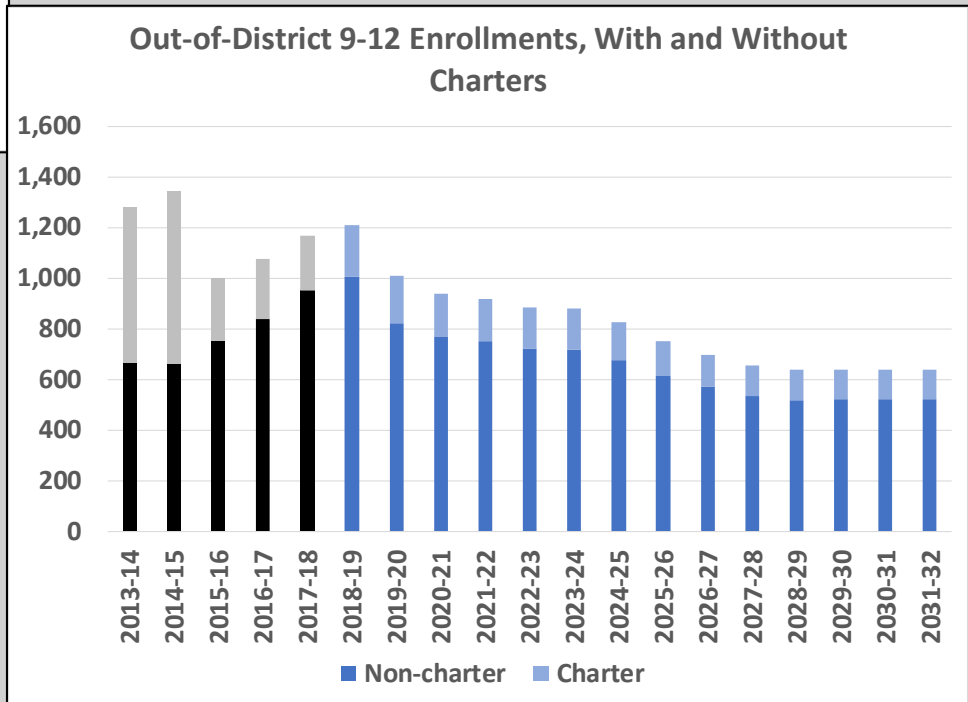
Grade detail and separate forecasts for non-charter and charter students provided in Excel workbooks



Out-of-District Students

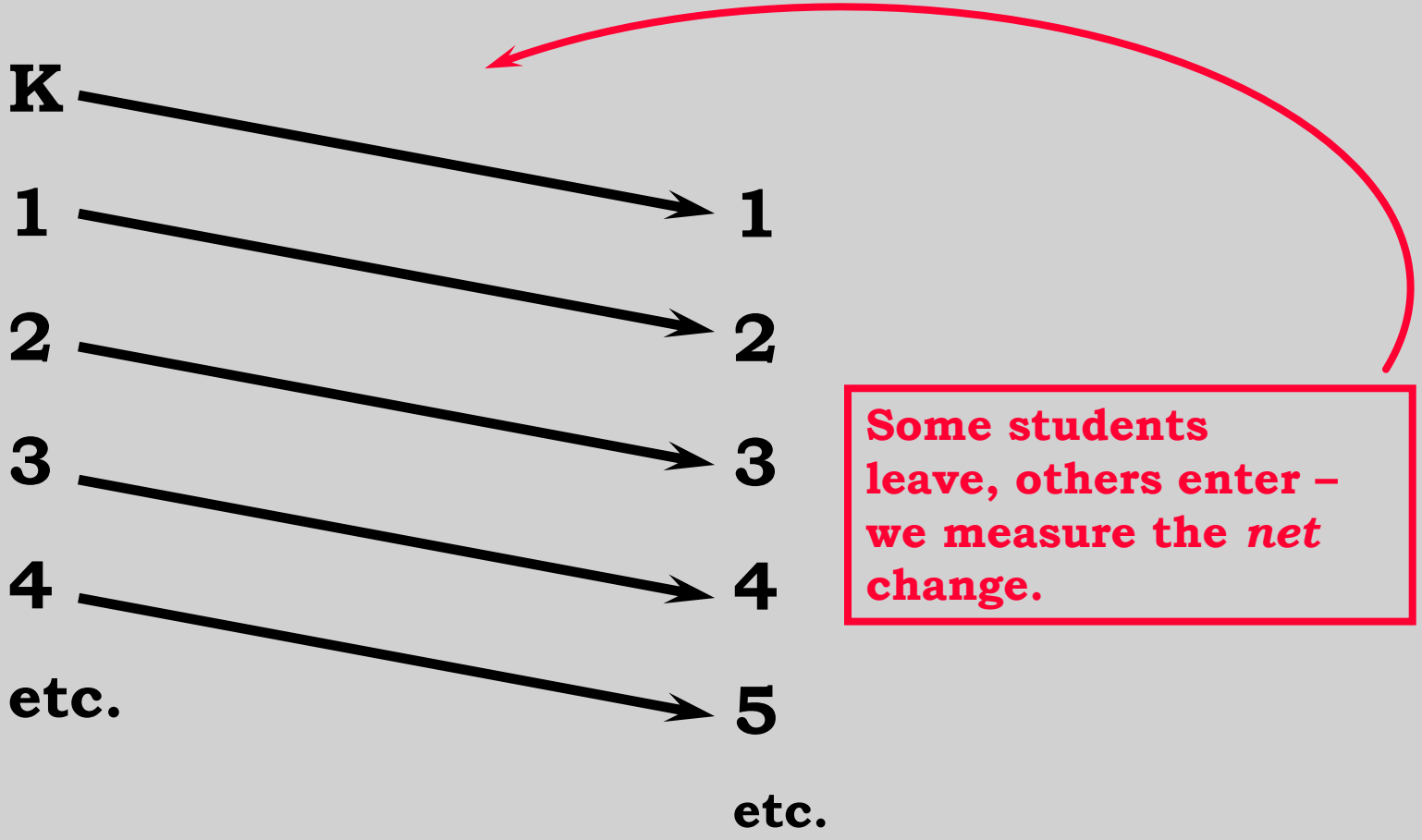


Only one forecast for out-of-district students. Grade detail is provided in Excel workbooks

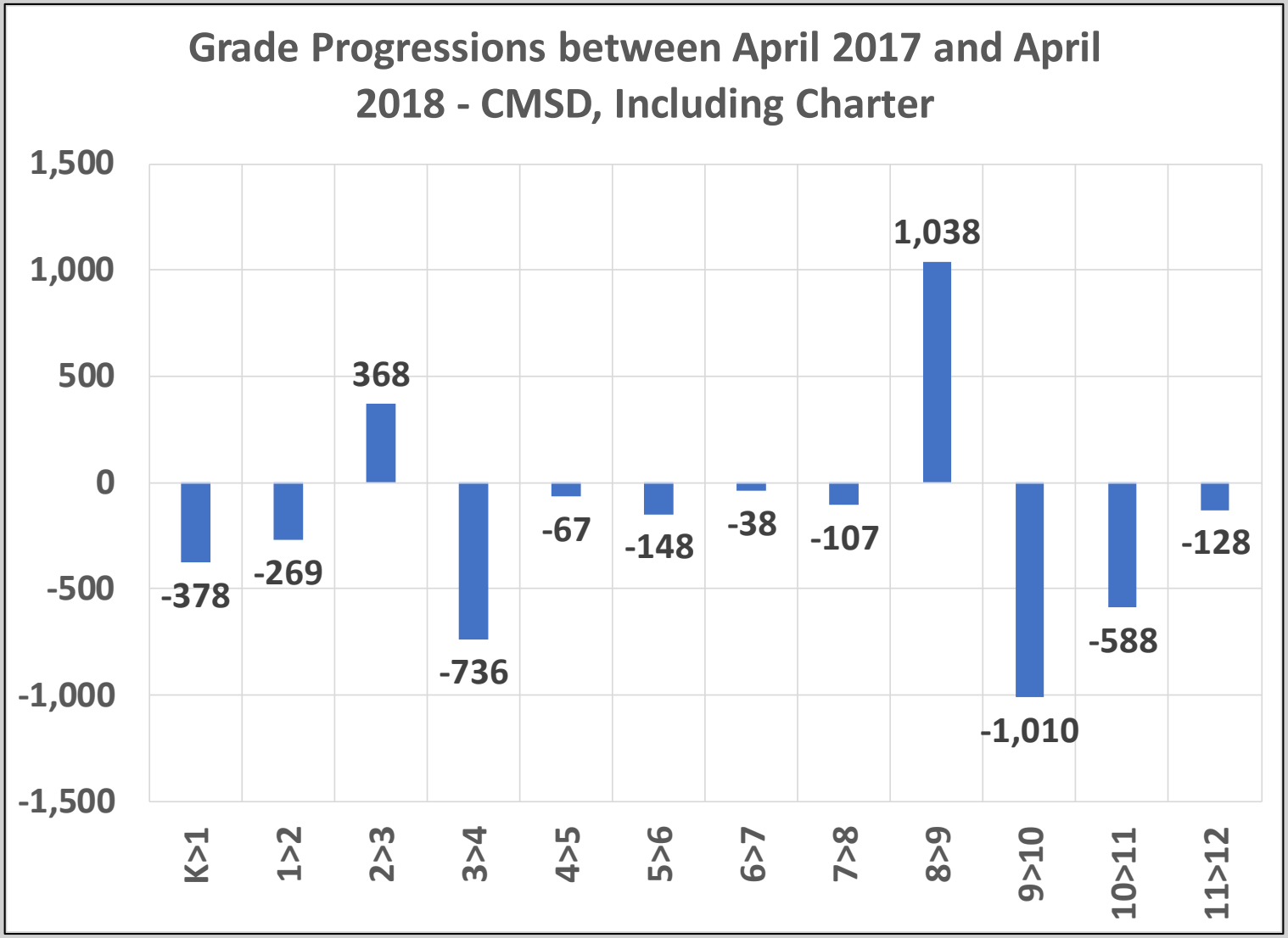


Forecast Model:

We measure the changes in numbers of students as cohorts move from one grade to the next



For example, this chart shows the district-wide change in cohort size, for each pair of grades, between April 2017 and April 2018

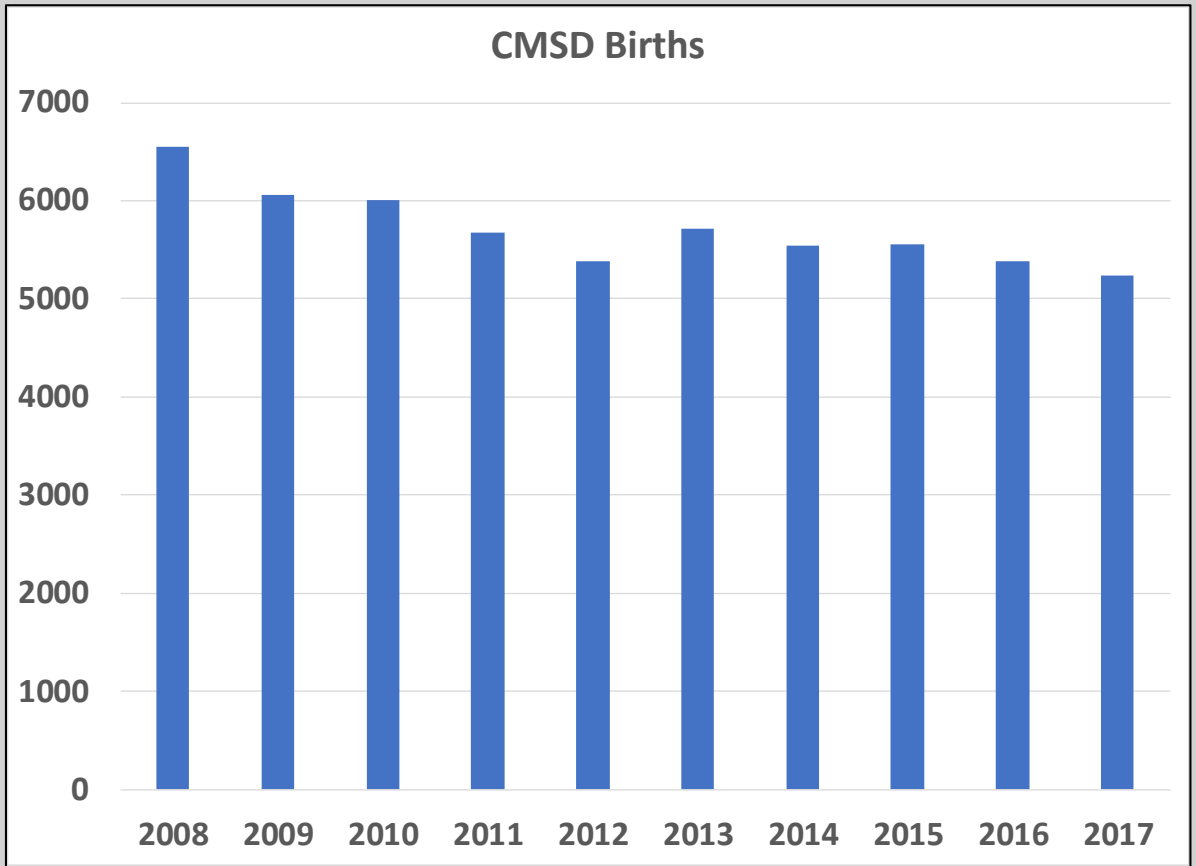


Grade Progressions

- **Grade progressions were computed for each year in which we had full data:**
  - **Between April 2014 and April 2015**
  - **Between April 2015 and April 2016**
  - **Between April 2016 and April 2017**
- **Charter and non-charter students were combined, then grade progressions calculated.**
- **Grade progressions were computed for each region.**
- **Each forecast uses a different year's experience to progress students to the next grade for each forecast year.**

Forecasting Kindergarten Enrollment: Trend in Births

There is seldom a one-to-one relationship between births and subsequent kindergarten enrollment. However, we can use the trend in births and assume that kindergarten enrollments five years later will follow a similar trend.



Kindergarten/Birth Ratio Assumption needed in each Forecast

- **Birth data were available for each region**
- **We computed the ratio of births to kindergarten enrollment five years later:**
  - **2010 births compared to 2015 kindergarten enrollment**
  - **2011 births compared to 2016 kindergarten enrollment**
  - **2012 births compared to 2017 kindergarten enrollment**
- **Each forecast used a different year's ratio to forecast kindergarten enrollment.**

Residential Development assumed to resemble recent years

- **Grade progressions already include enrollments from some residential development – between April of one year and April of the next. Enrollments are higher the second April to the extent that families have moved into new housing.**
- **Similarly, the K/B ratio already includes some amount of residential development – kindergarten enrollment will be higher to the extent that families with preschoolers moved into housing built during the five-year period.**
- **Some amount of development is already included in the grade progressions and K/B ratios. We make no special accommodation for residential development, assuming future years' levels will resemble those in the recent past.**