

Social Security Actuaries' Use of Vital Records

NCVHS Hearing on Next Generation Vital Statistics
Panel 2. Current Status of Vital Records: Federal Perspective

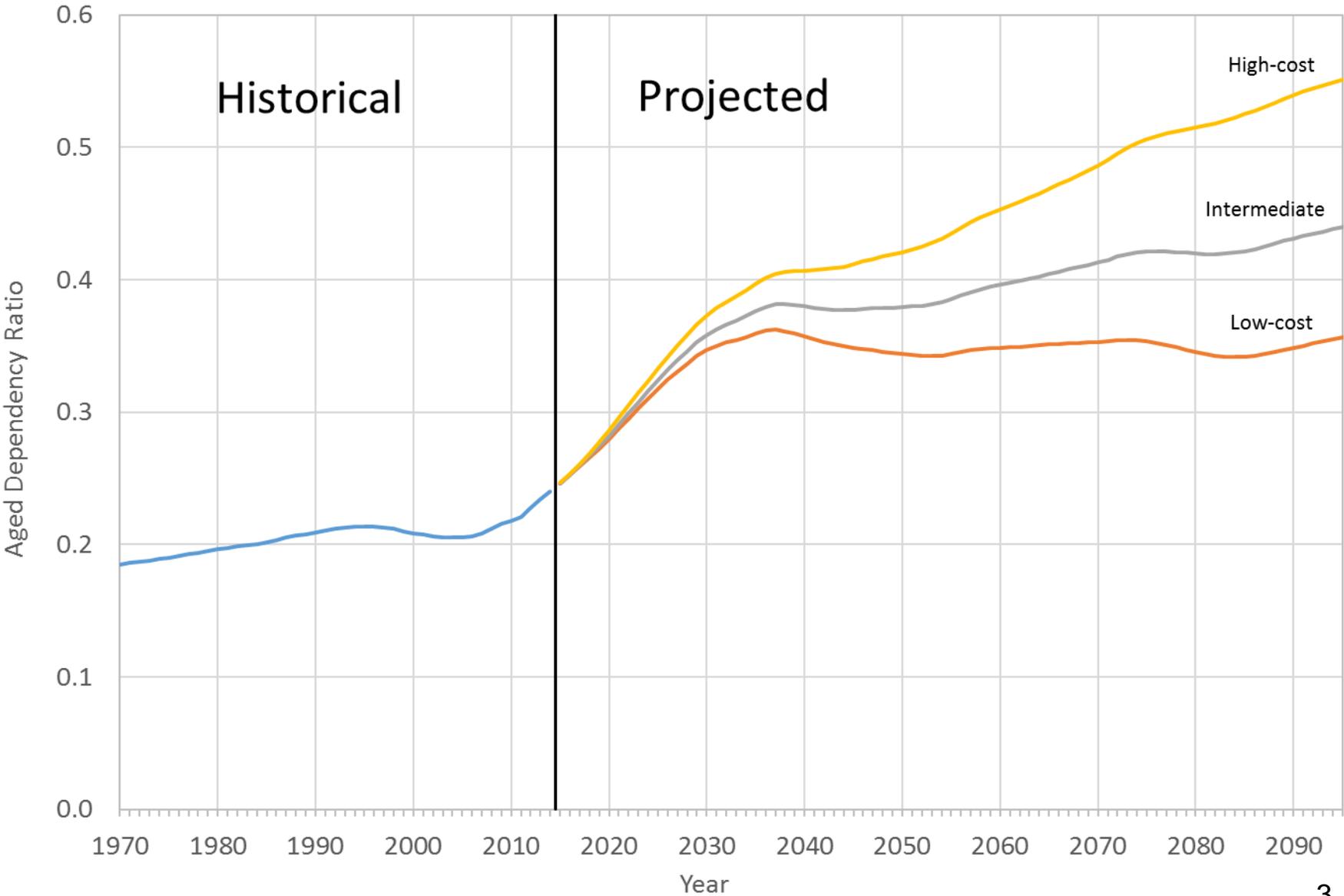
Steve Goss, Chief Actuary
Office of the Chief Actuary, Social Security Administration

September 11, 2017

Vital Statistics (Events)

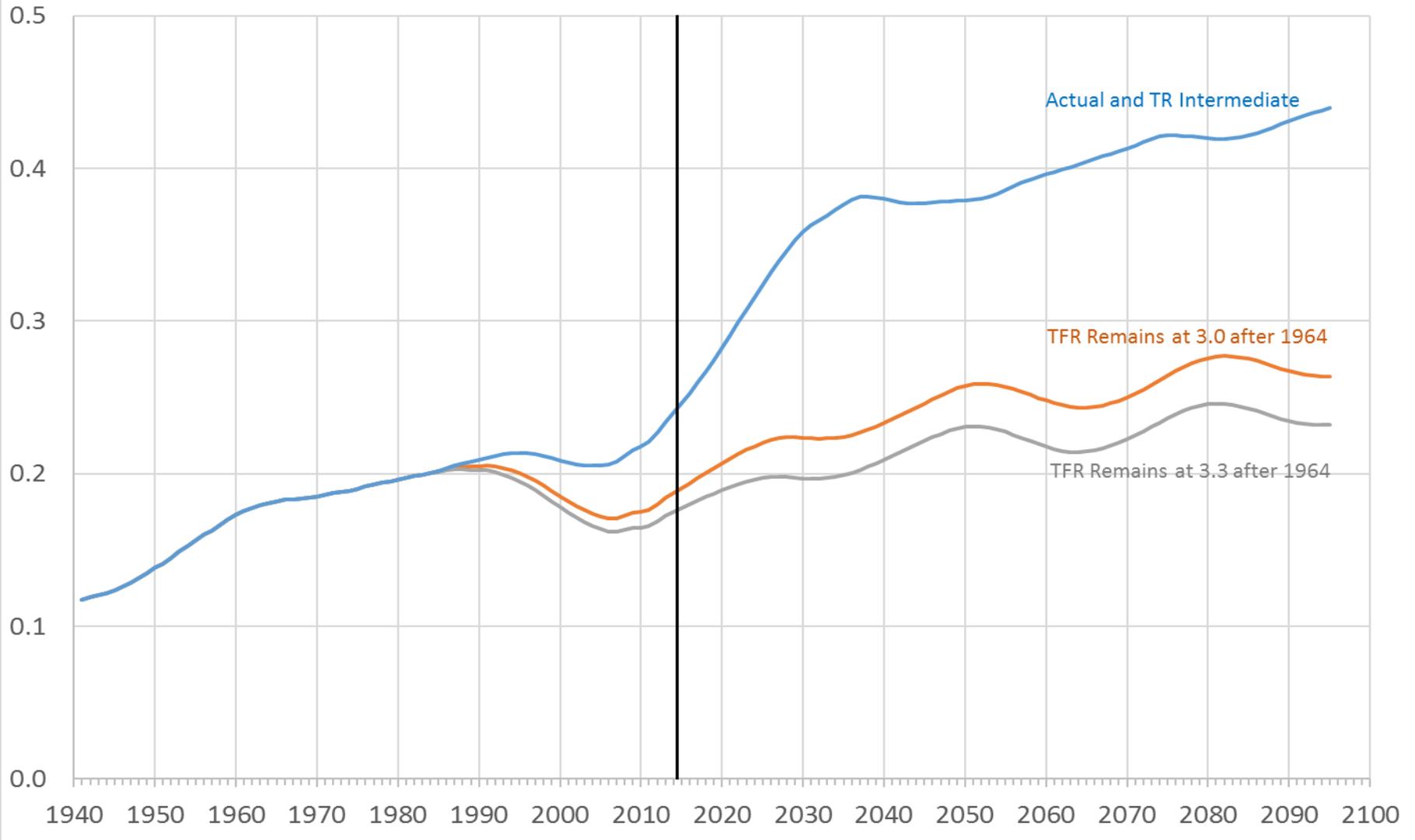
- Levels and trends determine the size and composition of the future population
 - Our projections for Social Security, Medicare, SSI, Medicaid, plus OMB long-term projections
- Future costs and revenues flow directly or indirectly from population dynamics
 - Average earnings and benefits rise similarly
 - So changes in population distribution (by age, sex, etc) determine cost relative to financing sources
 - For entitlements and all economic units

Aged Dependency Ratios, 2017 Trustees Report
Population 65+ / (20 to 64)

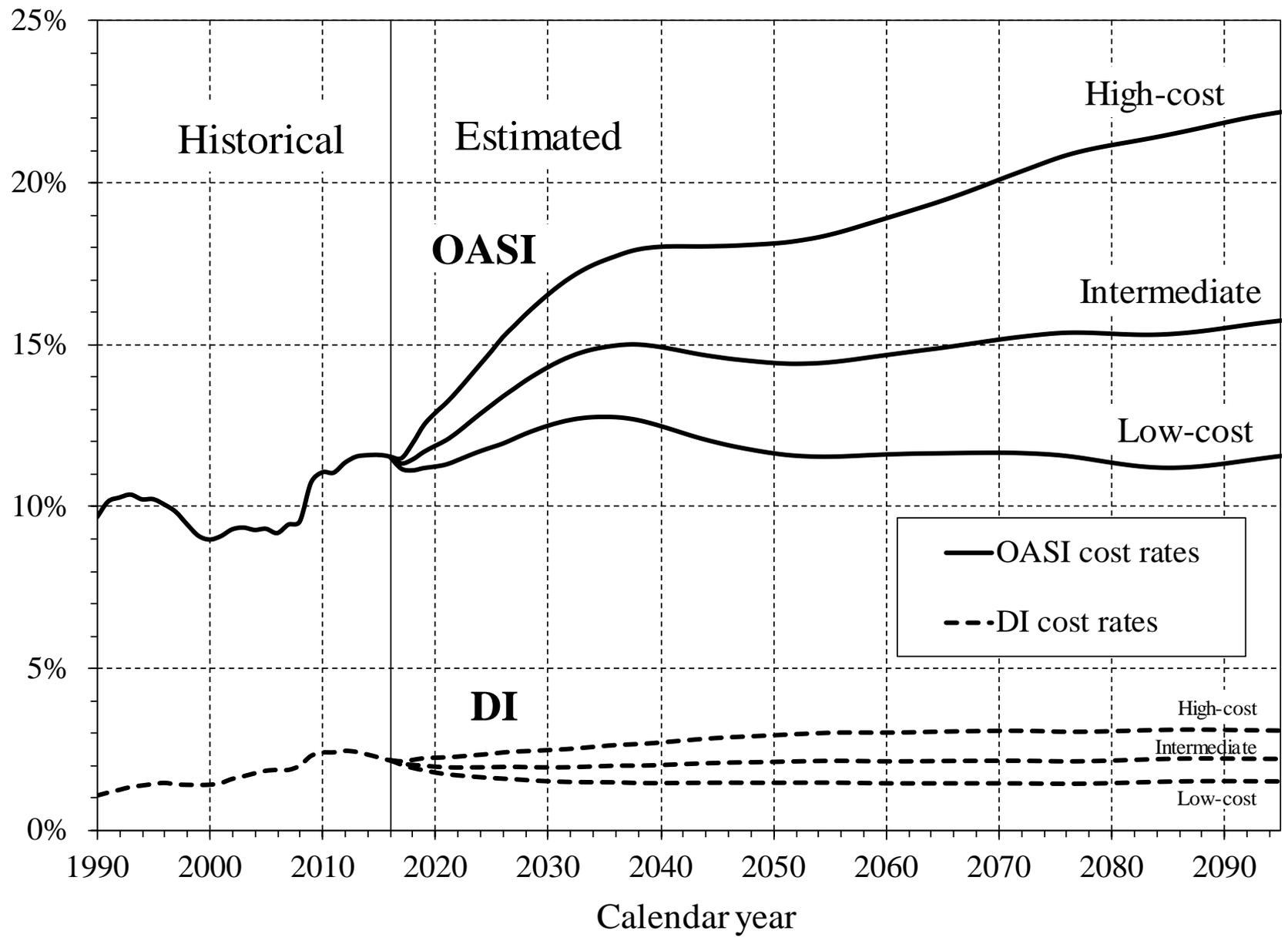


Aged Dependency Ratios, 2017 Trustees Report

Population 65+ / (20 to 64)



Social Security Cost as Percent of Taxable Payroll, 2017 TR



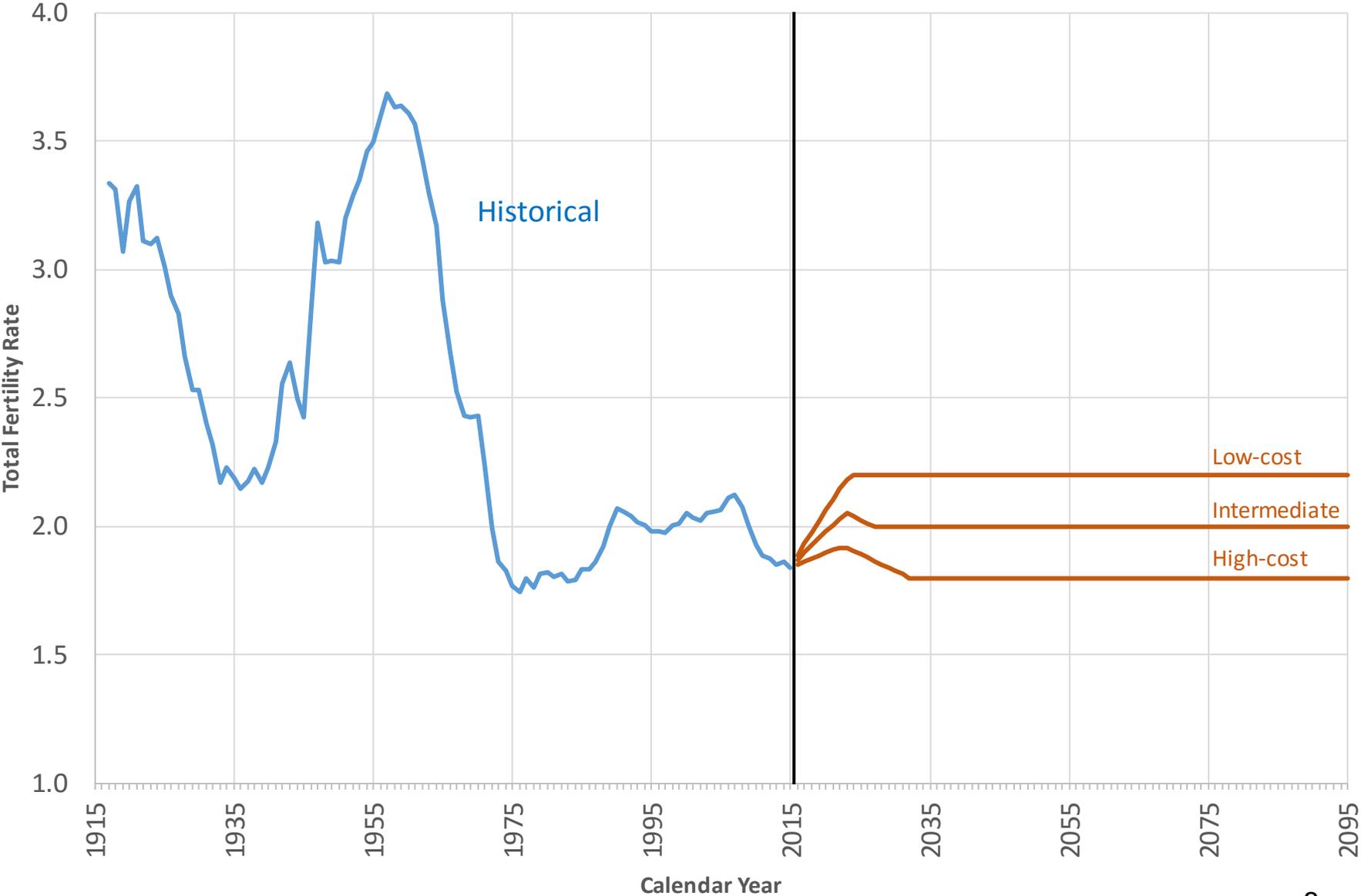
Vital Events that Matter

- 1) Births
- 2) Deaths
- 3) Marriage and Divorce
- 4) Immigration and Emigration
- 5) Disability

1) Births

- Compute age-specific birth rates
 - Births from NCHS by age of mother
 - Reported by 50 States plus DC
 - Numbers of women from Census Bureau
 - Estimated for 50 States plus DC

Historical and Projected Total Fertility Rates, 2017 TR



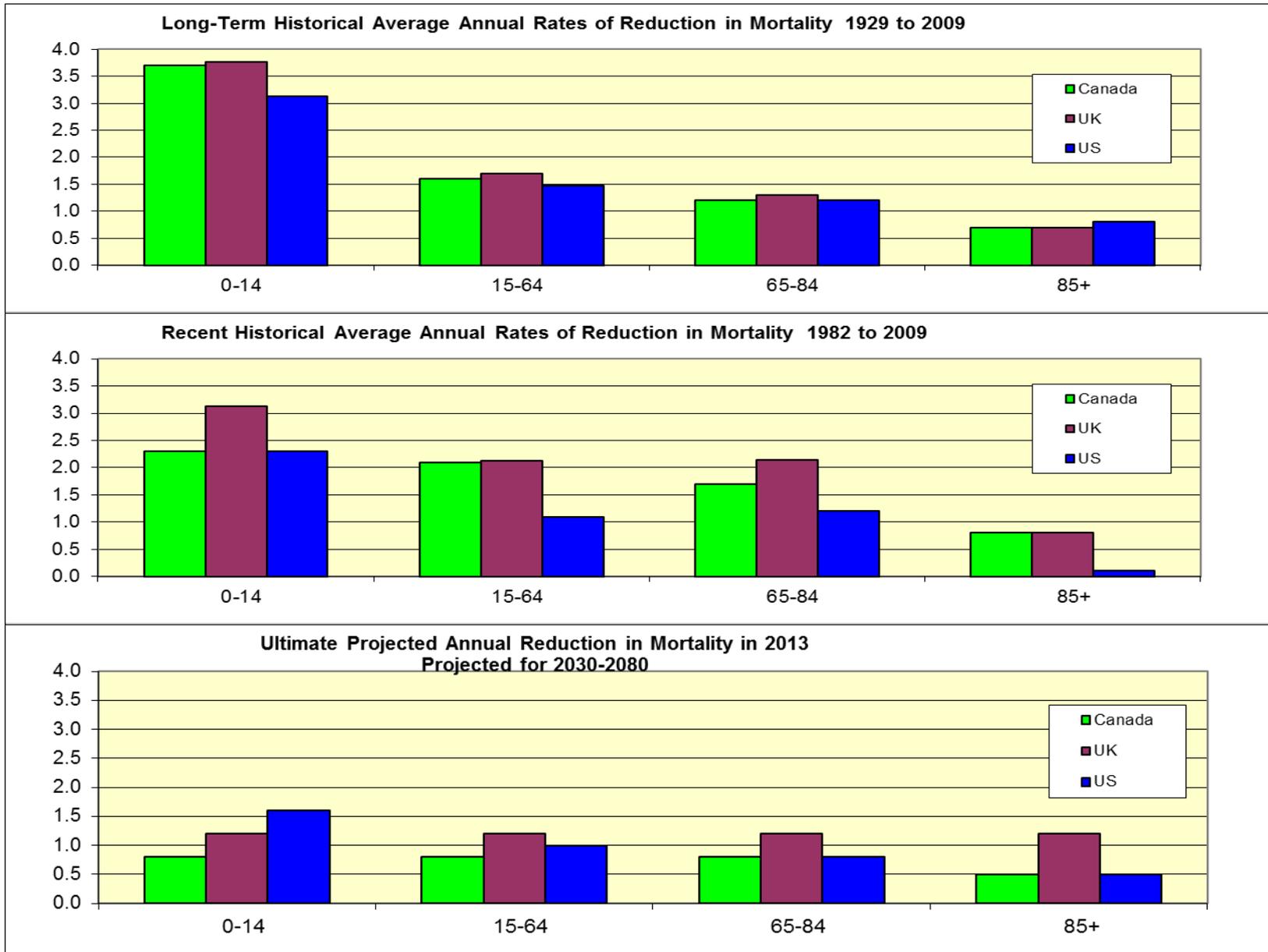
2) Deaths (Mortality)

- Data under age 65
 - NCHS deaths by cause for 50 States and DC
 - Census population for 50 States and DC
 - Relative underreporting issues
- Data age 65 and over
 - Medicare deaths and enrollments (limited to OASDI beneficiaries)
 - Consistent deaths and exposures
 - Minimized age misstatement
 - ***NCHS distribution by cause of death***

Projection of Mortality

- Assumed rates of decline by age-group, sex, and cause—closely monitor rates by age and sex
- Assume generally slower decline than past
- But for 85+ faster decline than in recent years
- Reduced “age gradient” for future mortality decline
- Very gradual deceleration is effected for all ages through use of different ultimate rates of decline by cause

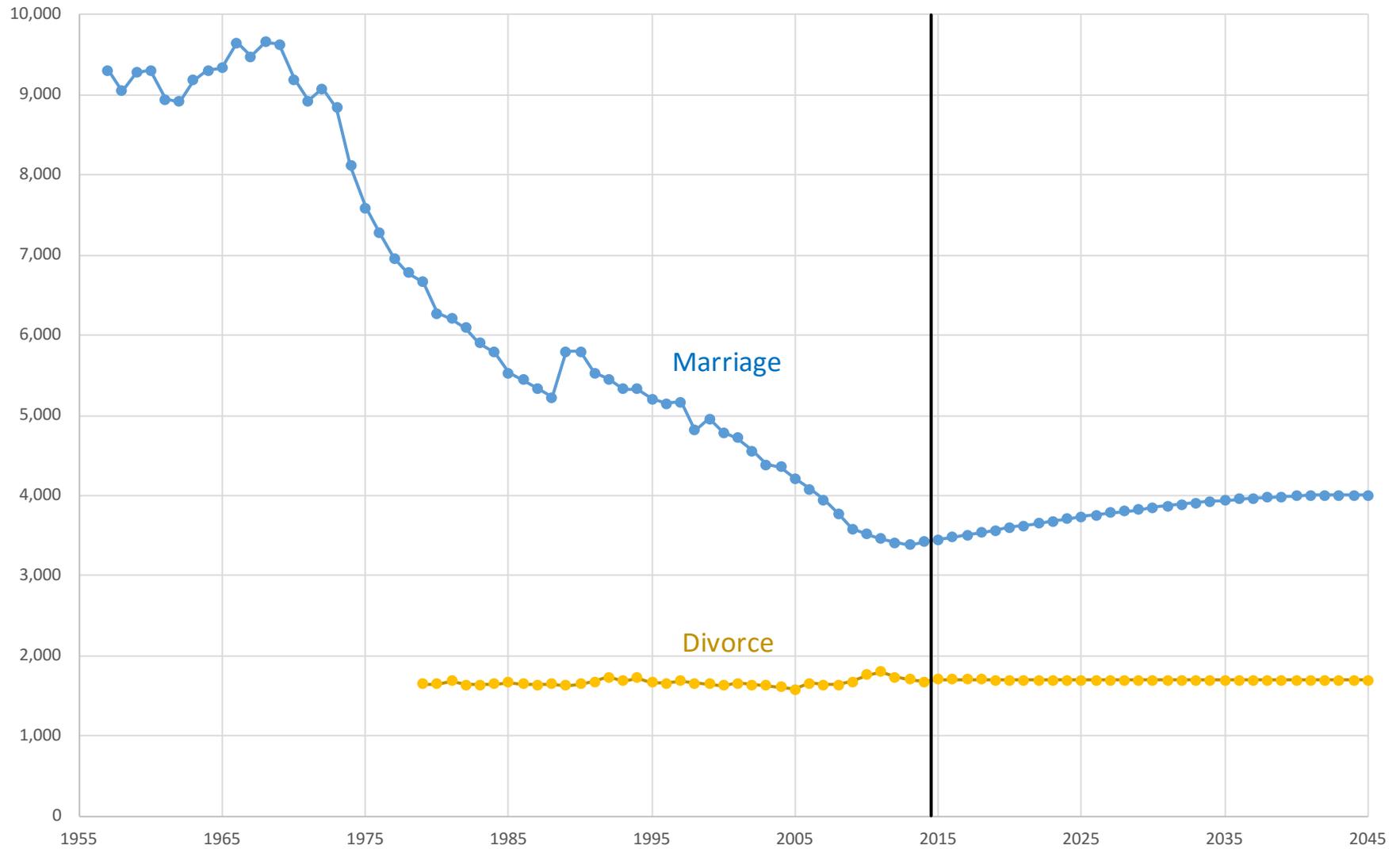
Declining Age Gradient and Rate of Decline



3) Marriage and Divorce

- Critical to benefits (and employment)
- NCHS
 - Age distribution through 1988, provisional through 1995, and totals through 2014
- ACS
 - Age distribution for marriages, beginning in 2008
- Data from various states
 - Age distribution for divorces, for some recent years

Age-Sex Adjusted Marriage and Divorce Rates Historical and Projected, 2017 TR



For More Information...

<http://www.ssa.gov/oact/>

- ◆ Annual Trustees Reports
<https://www.ssa.gov/oact/TR/index.html>
- ◆ Documentation of Trustees Report data & assumptions
https://www.ssa.gov/oact/TR/2017/2017_Long-Range_Demographic_Assumptions.pdf
- ◆ Historical and projected mortality rates
<https://www.ssa.gov/oact/HistEst/DeathHome.html>
- ◆ Actuarial Notes on population flows and characteristics
<https://www.ssa.gov/oact/NOTES/actnote.html>