The Impact of Rising Longevity on Medicare Spending: Perspectives from the Economists, Demographers and Actuaries

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Presentation Outline

- Demographic adjustment in the current Medicare spending projection
- Objective and data for this analysis
- Projection by the economists
- Projection by the demographers
- Projection by the actuaries
- Conclusion & Discussion

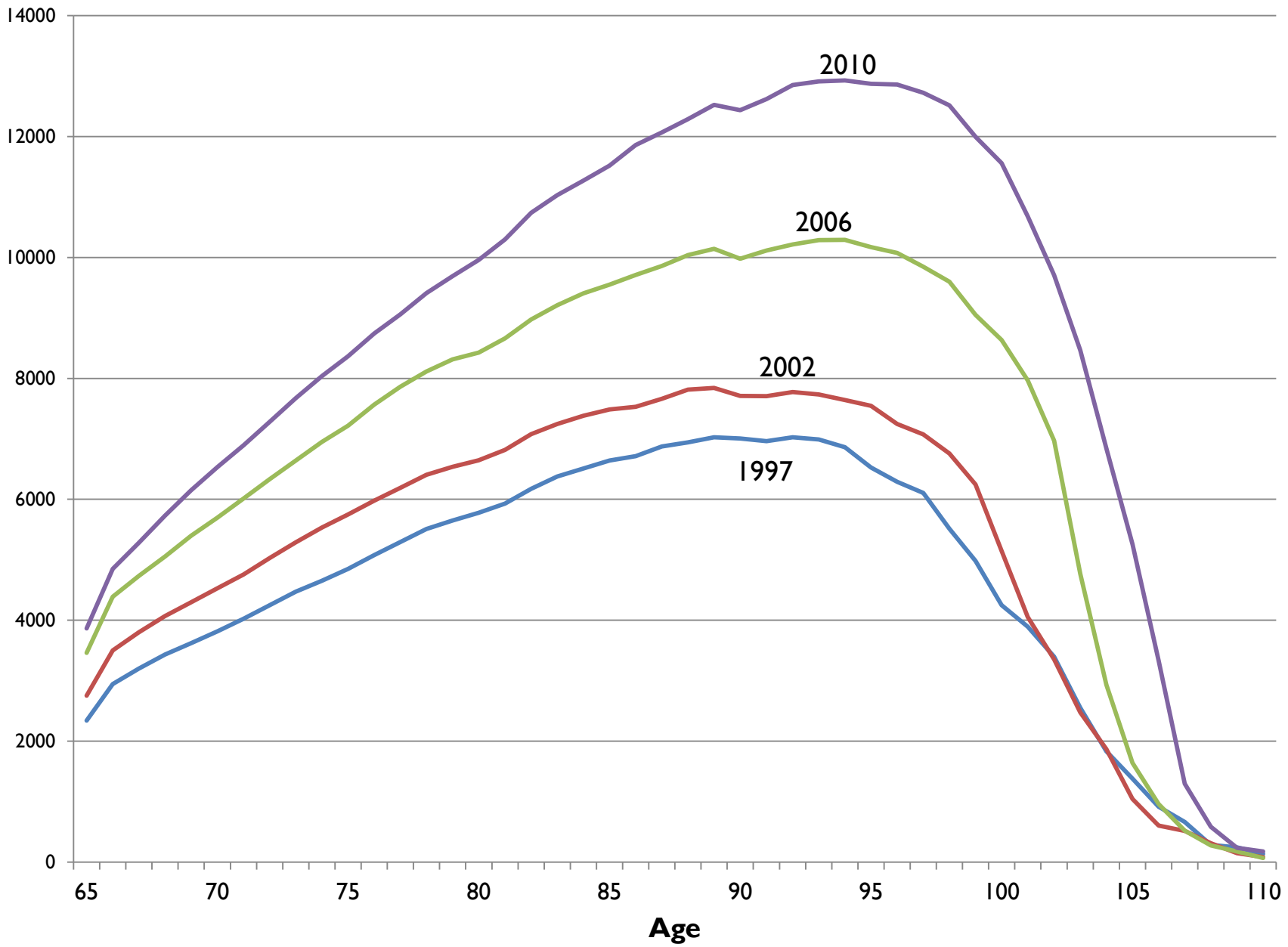
Medicare Parts A & B Spending Projections

- Medicare is a health insurance program for the elderly and disabled Americans
  - 2012 - 50 million enrollees, $536 billion spending, 16% federal budget

- The four parts of Medicare
  - A: Hospital, home health, skilled nursing, hospice
  - B: Physician, outpatient, durable medical equipment
  - C: Medicare Advantage
  - D: Prescription drugs

- Parts AB spending projections
  - Remove from nominal spending growth
    1. Demographic trends
    2. Price updates
  - Apply projected trend in excess cost growth (i.e., growth in Medicare spending in excess of GDP) to the residual (i.e., real spending growth)
  - Add back in projected price and demographic trends

Average AB Spending by Age



Source: CMS 100% claims file. FFS AB spending on aged-in benes only.

Why Spending Rises With Age?

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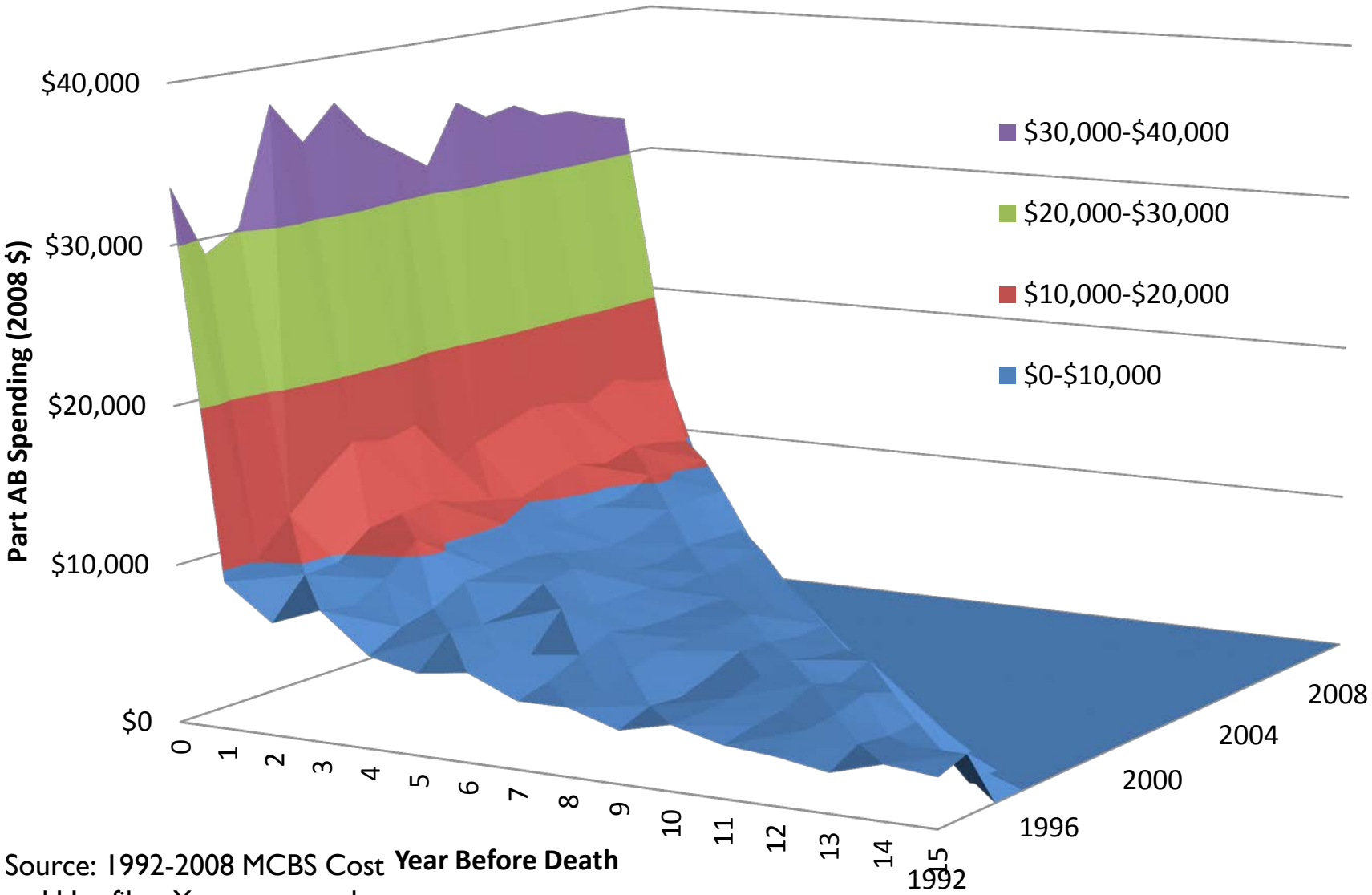


Source: 1992-2008 MCBS Cost and Use files. Year measured as 12-mont intervals.

Aging and Per Capita Spending

- The "Red Herring" debate
  - If higher spending is driven by older age, then population aging will lead to rapid spending growth
  - If higher spending is driven by the imminence of death, then population aging will NOT lead to rapid spending growth

- Empirical results vary by country, service, age, etc. (Zweifel et al. 1999, 2004; Spillman & Lubitz 2000; McGrail et al. 2000; Yang et al. 2003; Shiu & Chiu 2008)

- If time to death (TTD) is more important, then projected Medicare spending will be substantially lower (Miller 2001; CBO 2004)

Objective and Data

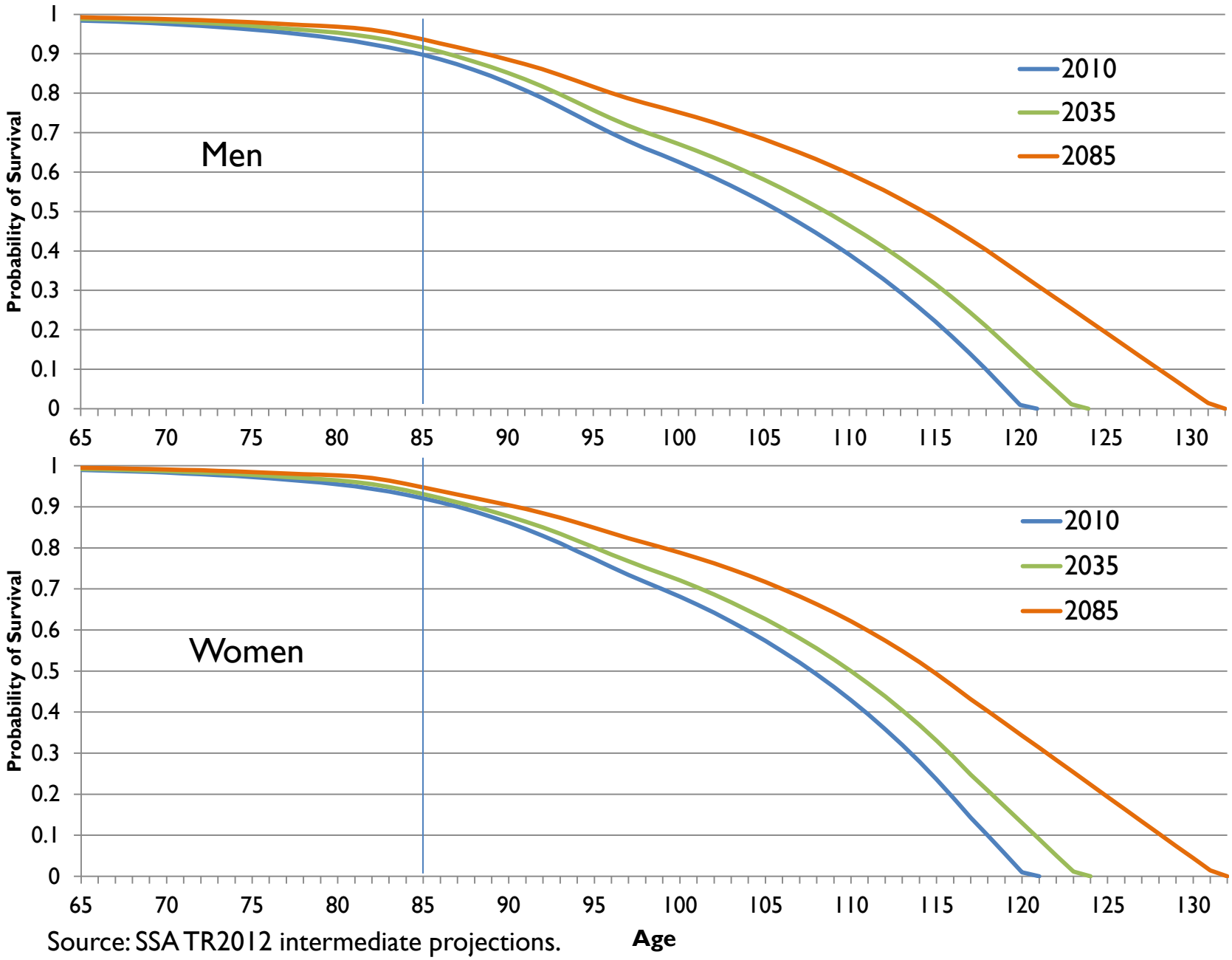
- Objective: Evaluate different approaches to demographic adjustment in AB spending projections for the 65+ FFS population

- Data
  - Medicare administrative claims data (1992-2010)
    - Average spending is weighted by member months, and inflation adjusted to 2010 dollars using Medicare price updates.
  - Trends in enrollment and mortality projected by Social Security Administration (SSA)
    - Mortality reduction for 65+ averages 0.77% in 2011-2085
  - Assumes excess cost growth (ECG) declines from 1.4% in 2011 to 0 in 2085.

Current Adjustment by Age and Sex

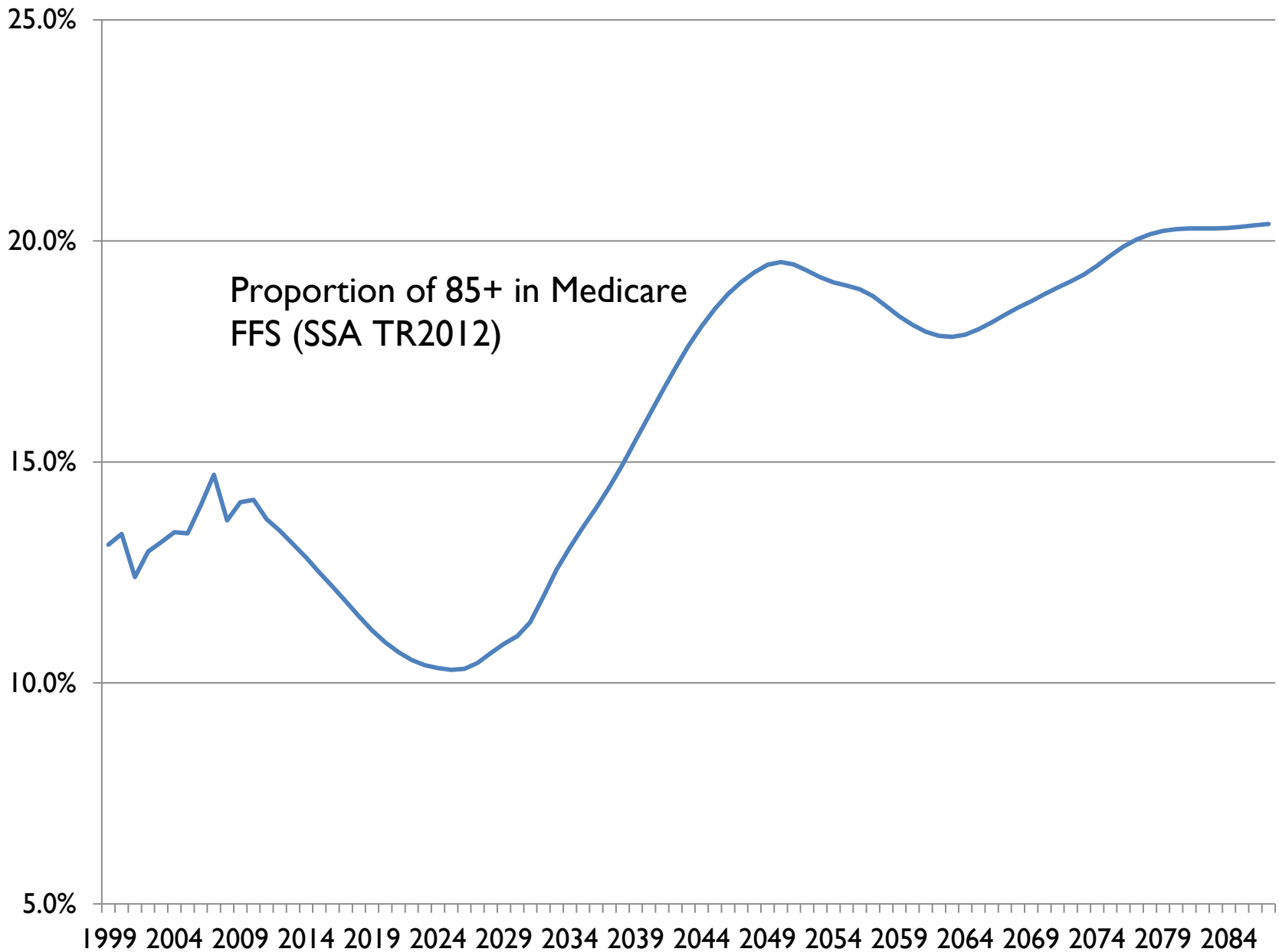
- Assume average spending by age and sex to hold constant – aging is important
- The structural relationship between age, longevity and spending is unidentifiable (Aaron 2009)
  - Illness or imminence of death triggers high spending
  - Health spending improves health and extends life
- Projected spending depends on future age-sex distribution of the elderly population only, holding other things constant
- As more elderly live to older ages, spending will rise rapidly since older age is associated with higher spending

Survival Probabilities (SSA TR2012)

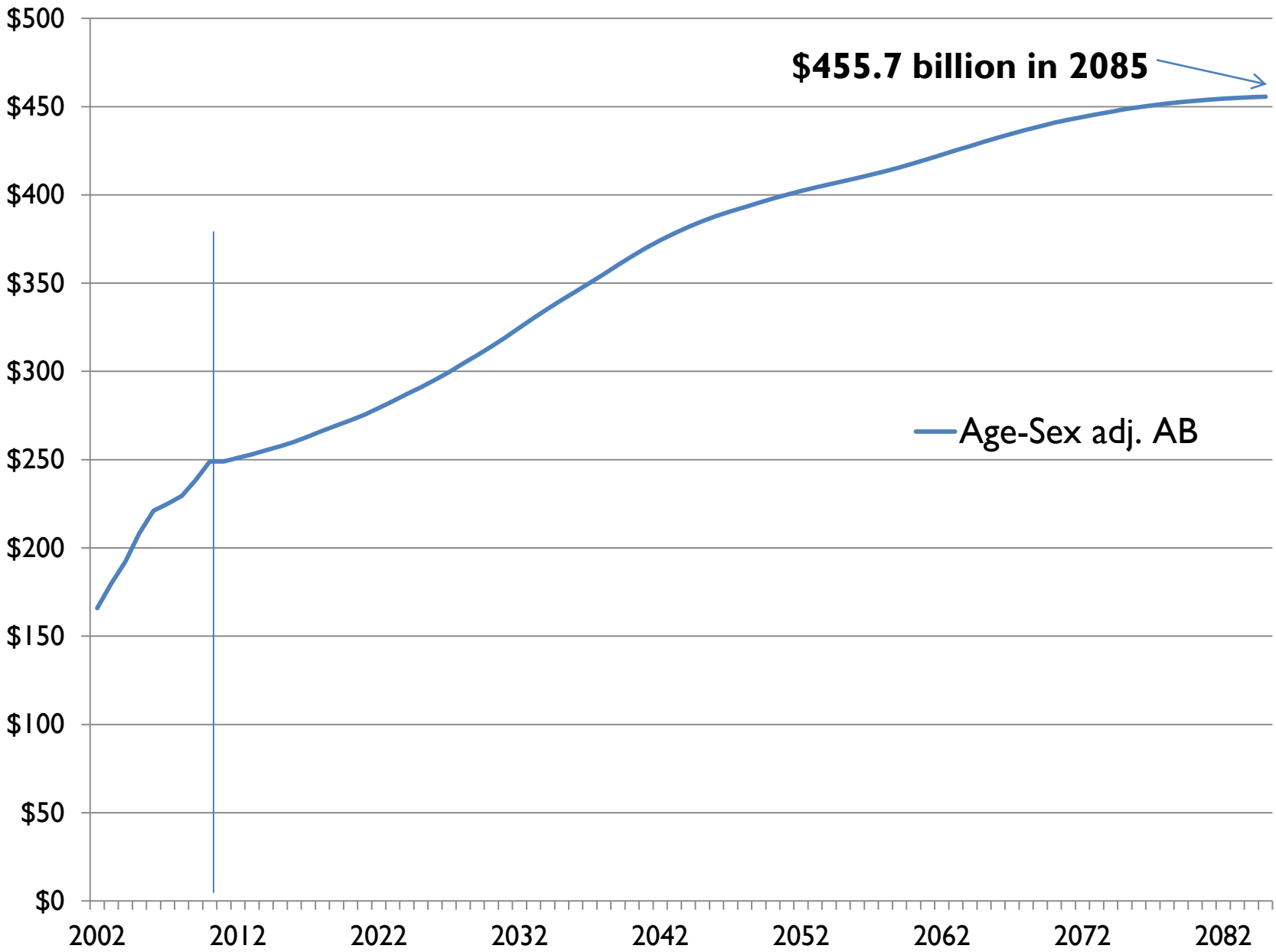


Source: SSA TR2012 intermediate projections.

Share of the Oldest Old



Projection by the Economists



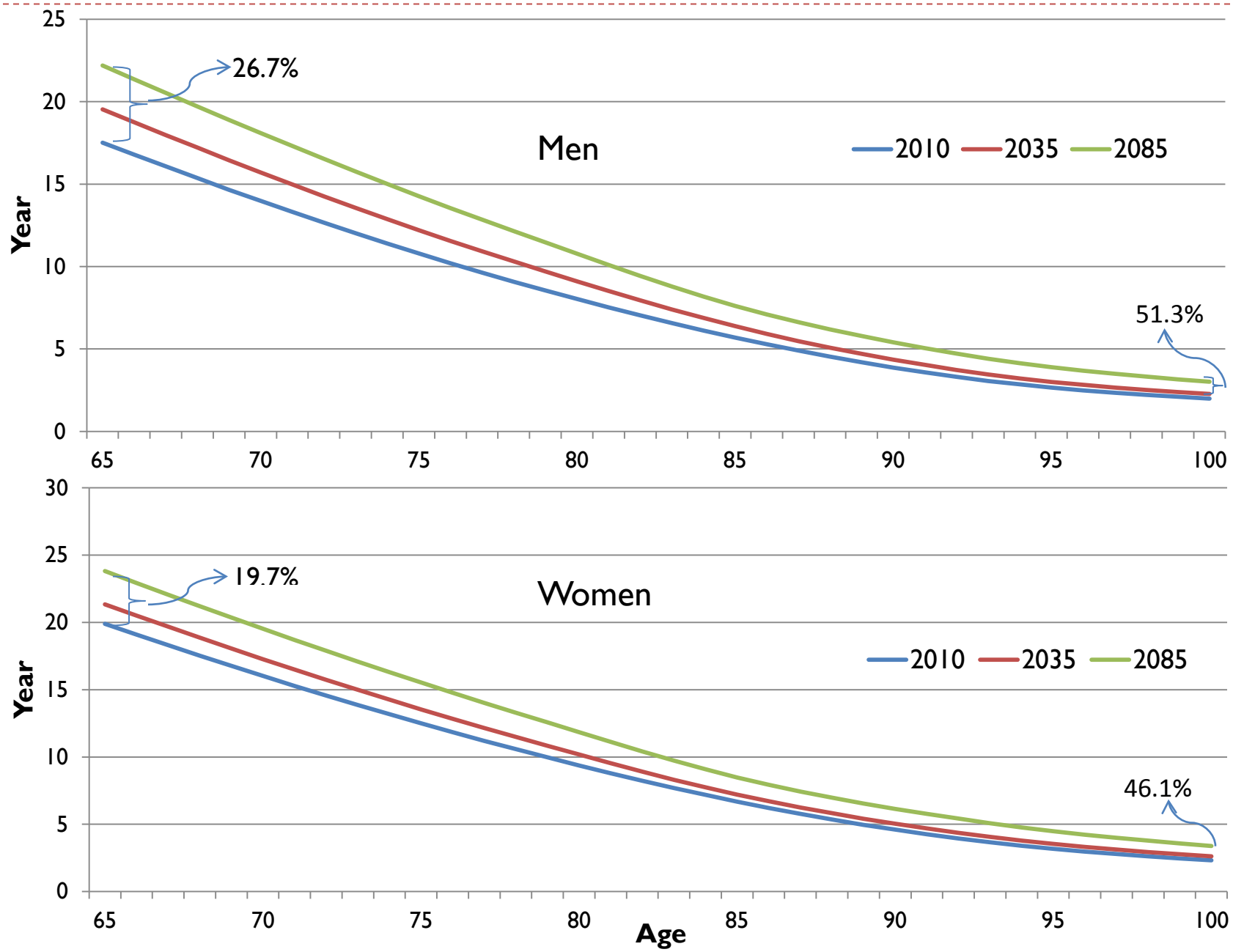
Alternative Adjustment by Age-Sex-TTD

- TTD is more important – Future elderly are not as expensive as today's elderly because high spending at the end of life are postponed

- Holding spending by TTD constant; shifting TTD distribution will reduce age-specific spending (Miller 2001)

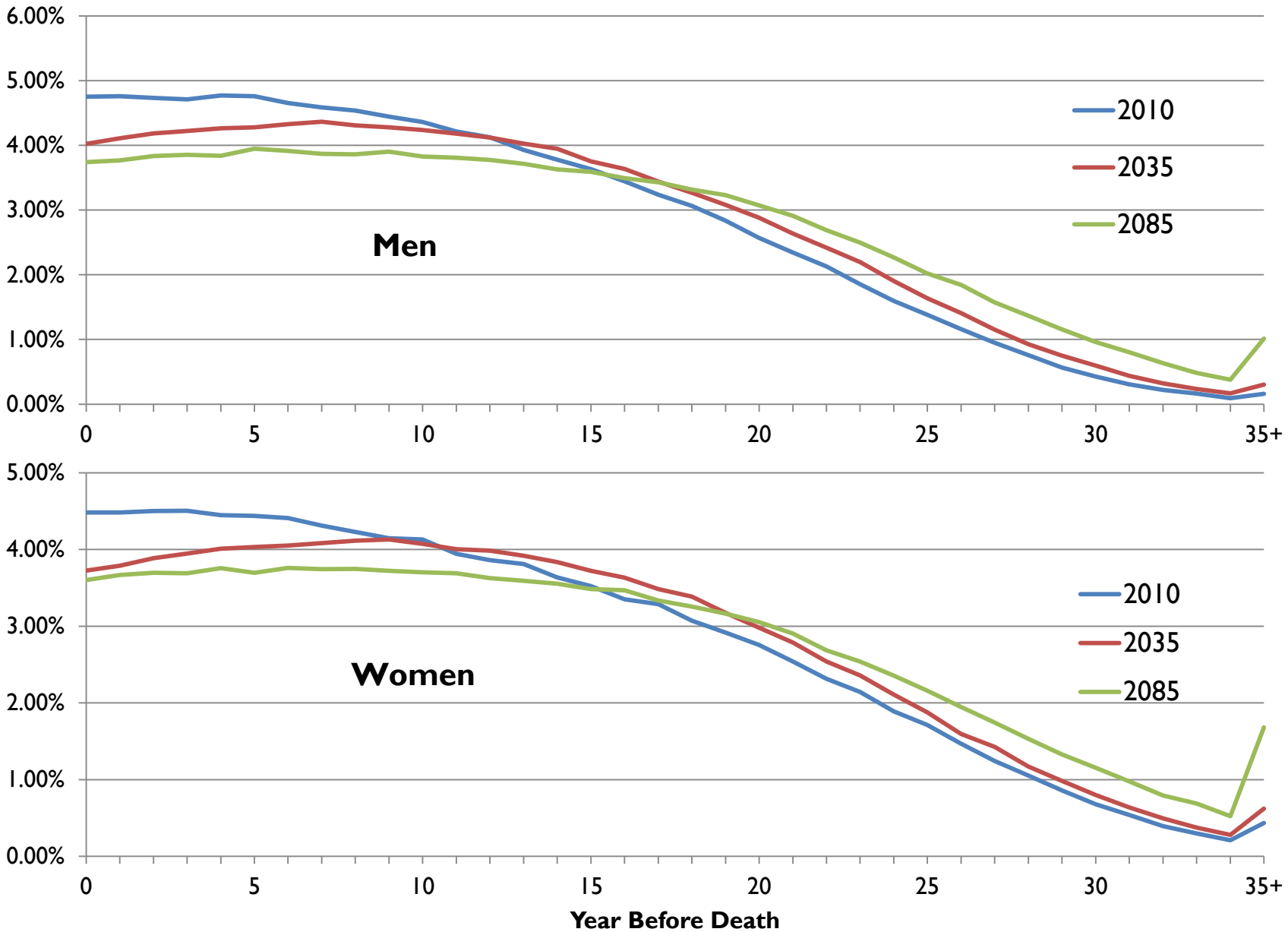
- Three components for projection
  - TTD distribution by age group, sex and year
  - Average spending by TTD, age group, sex and year
  - Number of beneficiaries by age group, sex and year

Life Expectancy (SSA TR2012)



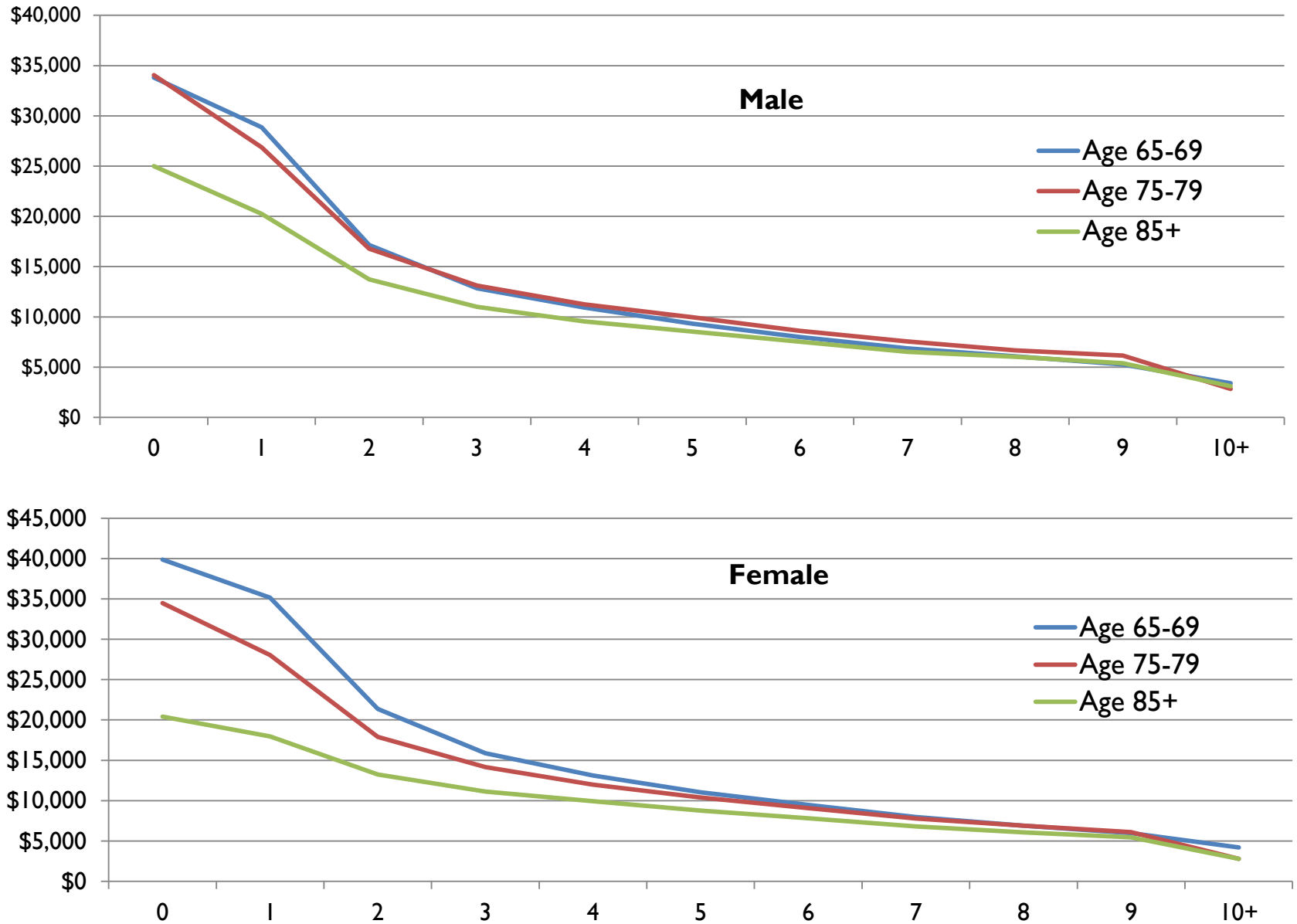
Source: SSA TR2012 intermediate projections.

Time to Death (SSA TR2012)



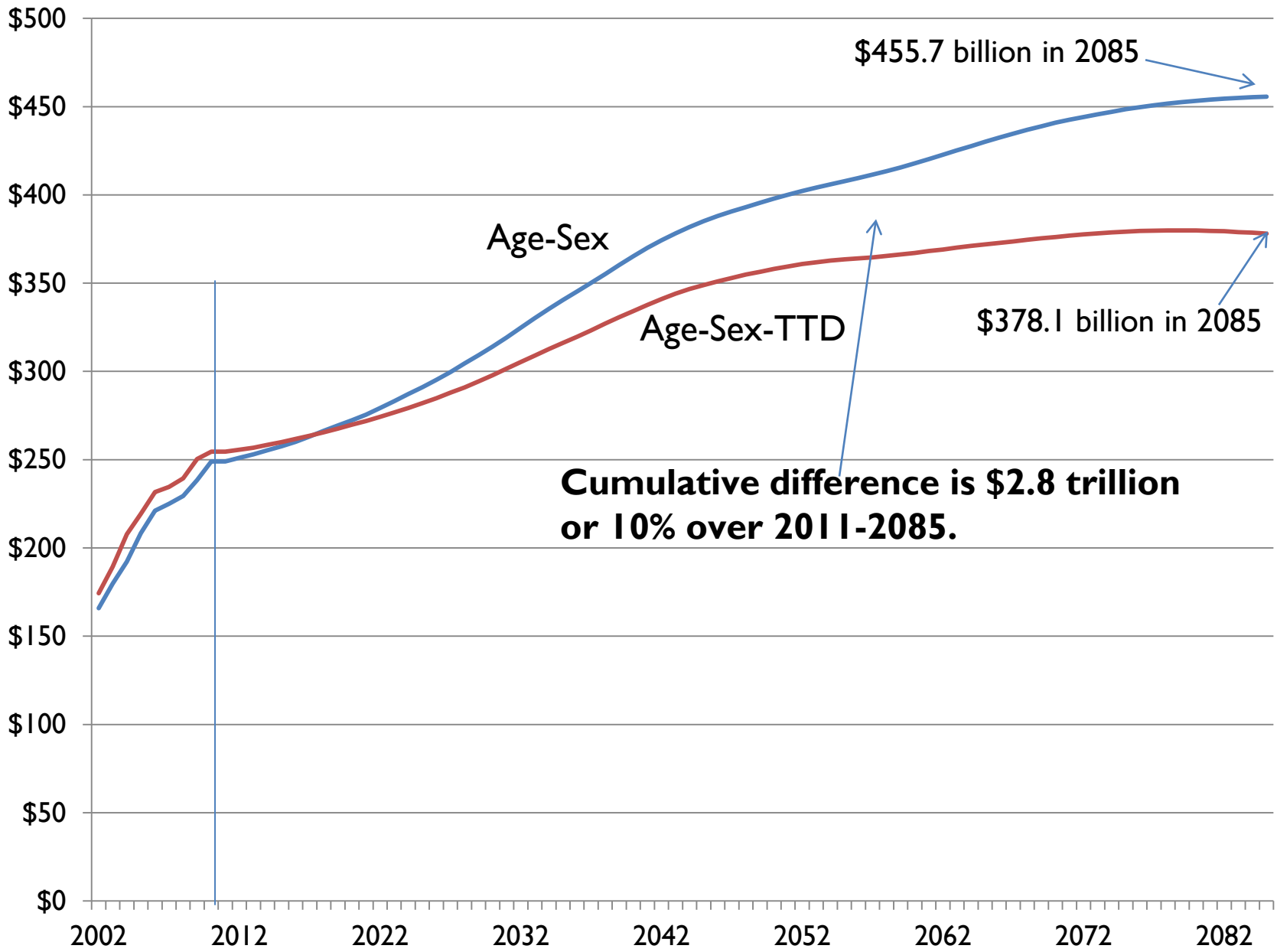
Source: SSA TR2012 intermediate projections.

Average AB Spending by Time To Death for 2010 FFS Decedents



Source: Medicare 100% claims file.

Projection by Demographers



Issues With the Economist's and Demographer's Approaches

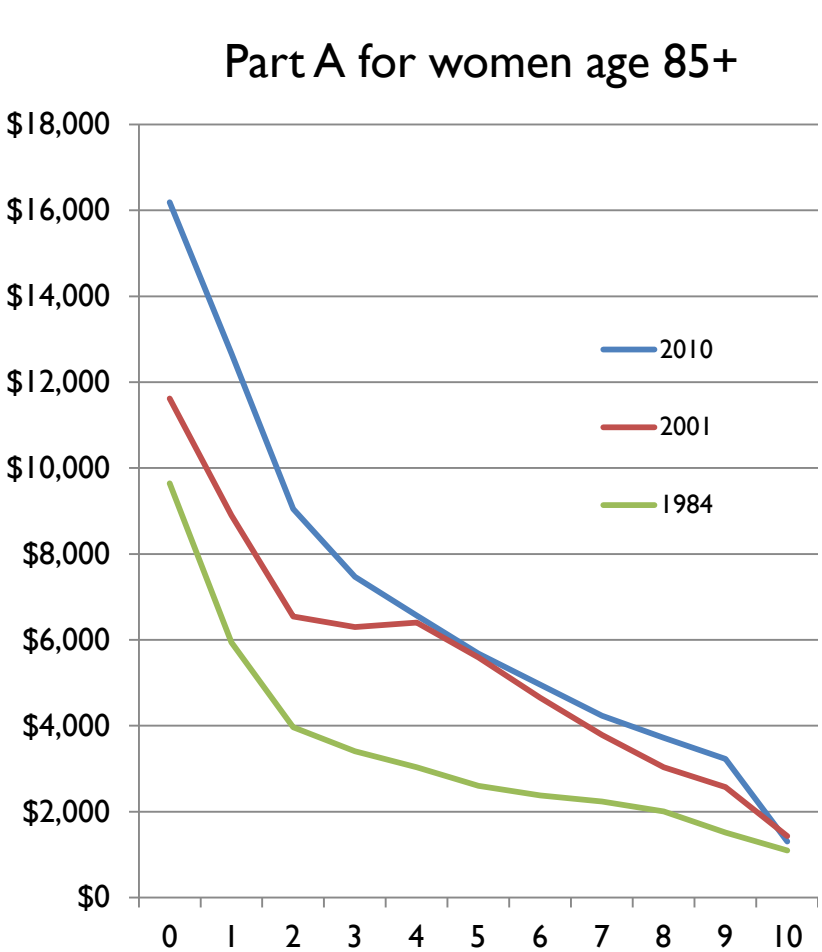
- Is it reasonable to assume the age-sex or age-sex-TTD spending to hold constant?

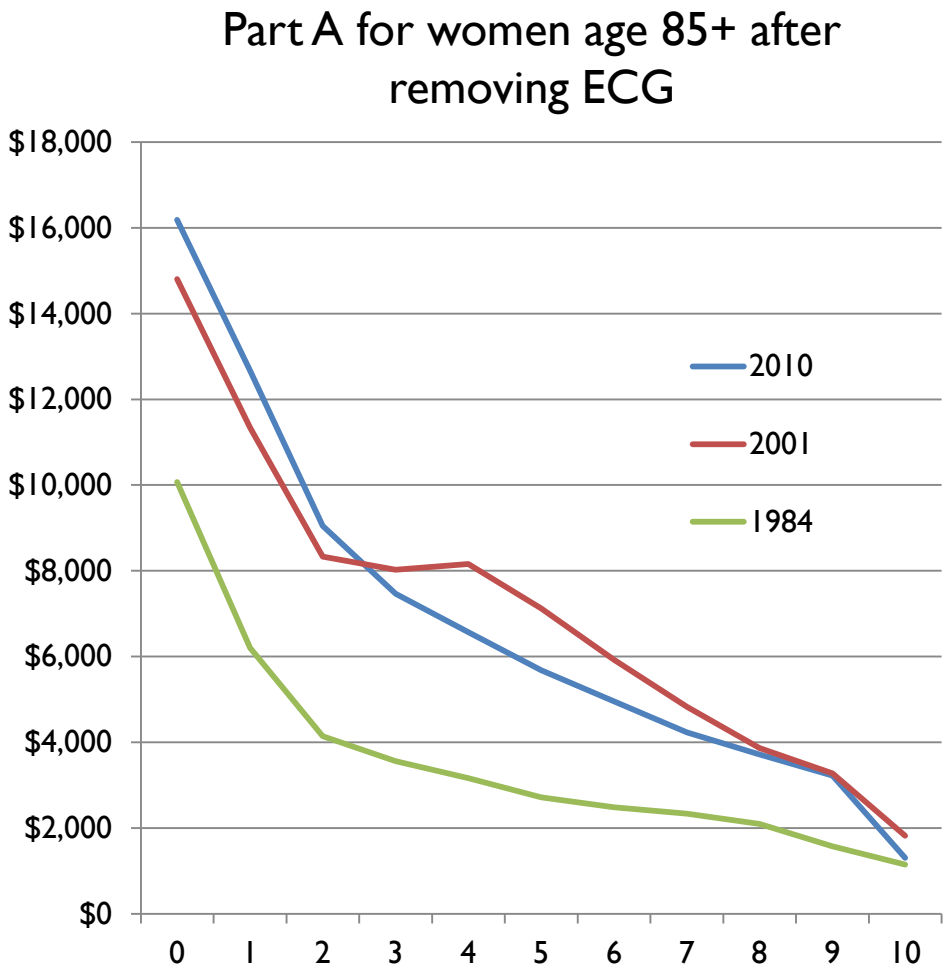
- Age and TTD are used as proxies for population health trends
  - The age-sex approach implies expansion
  - The age-sex-TTD approach implies postponement

- Do we know which hypothesis is correct?
  - Depends on health measure
  - Depends on study period

Trends in Average Spending by TTD

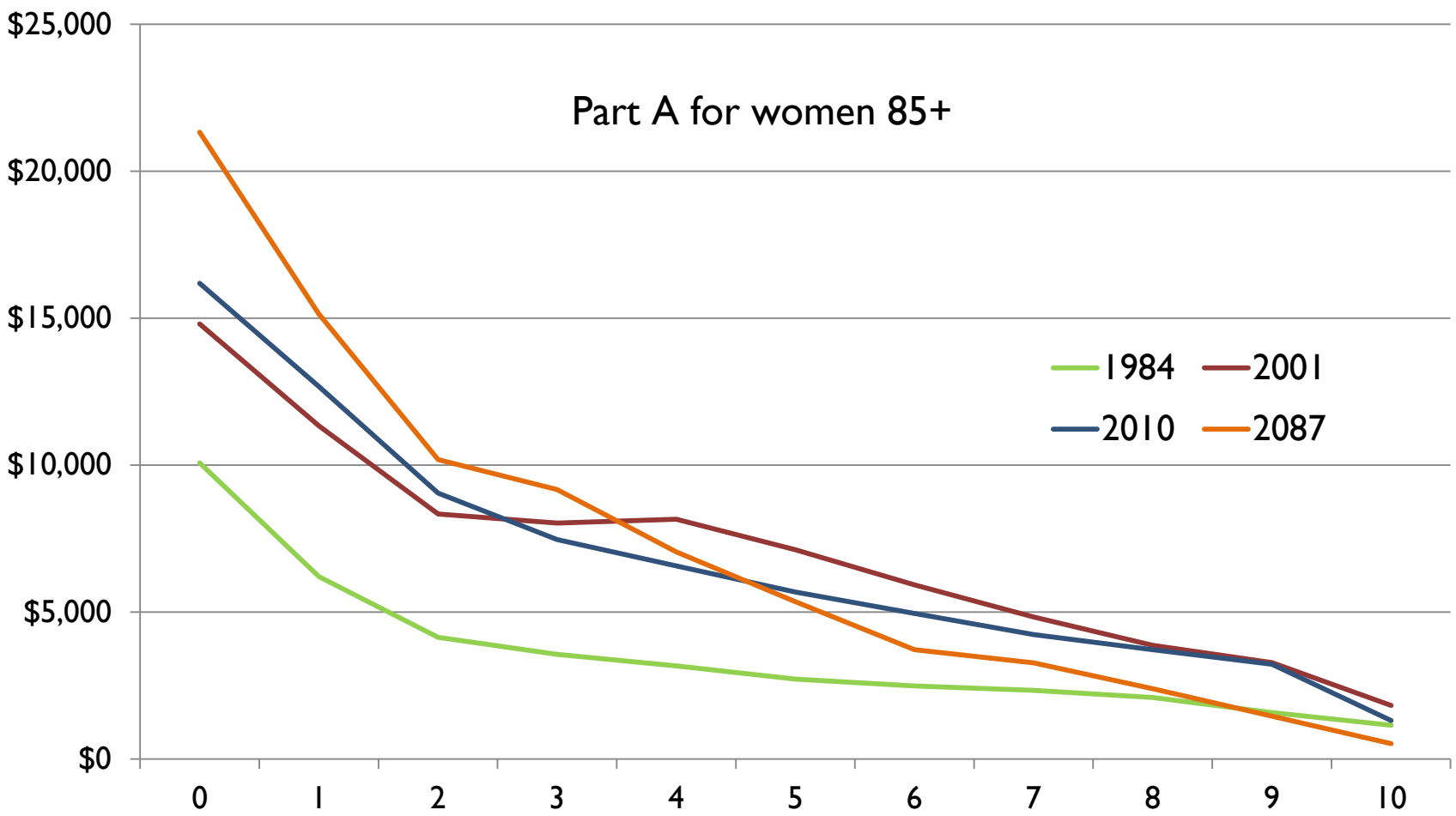
- Shift over time consists of two sources
  - Excess cost growth
  - "Tilt" – relative changes in spending across time to death



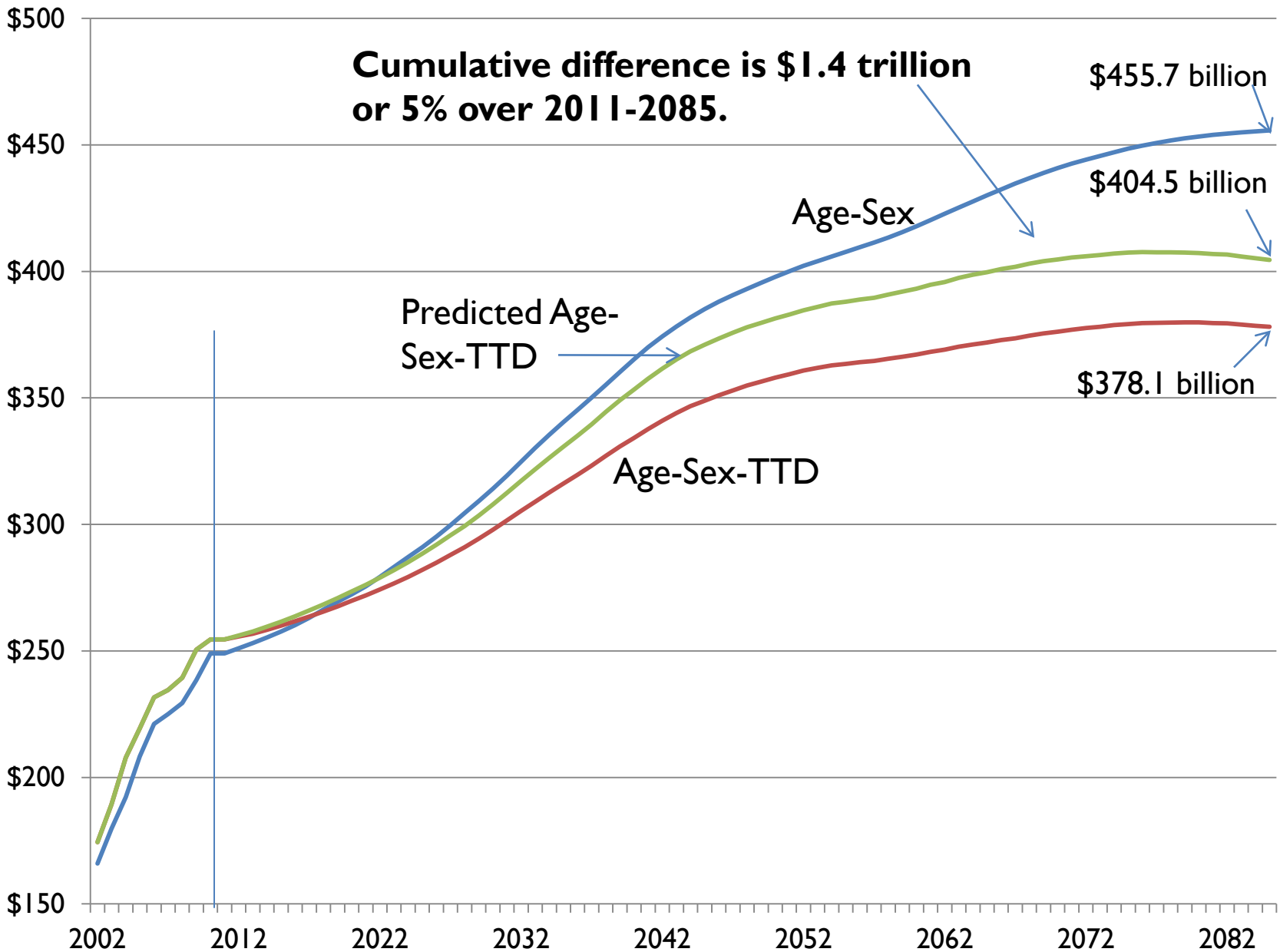


A Balanced Approach

- Assume non-constant average spending by TTD
  - Allow the "tilt" to continue with decreasing strength over the projection period



Projection by the Actuaries



Conclusion and Discussion

- The current age-sex approach and the age-sex-TTD approach both make unrealistic assumptions
  - The age-sex approach – upper bound
  - The age-sex-TTD approach – lower bound

- The actuaries' projection is more reasonable because it recognizes shifts in both TTD distributions and average spending by TTD
  - Pieter van Baal & Wong (2012)

- What does this "tilt" measure exactly?

- How to take into account the fact that spending growth influences longevity? And HEALTH???