

Retirement Challenges In the 21st Century

Retirement Challenges in the 21st Century

- Who should care and why?
- What will be different?
 - What should we expect?
 - What dangers might emerge?

Who should care, and why?

Who should care?



All of us.

21st century America is like the proverbial frog in a kettle. Organizations operating in America are in that kettle, too.

As actuaries, we have an opportunity and a responsibility to help organizations face the developing challenges. To do that, we must first see them.

Why should we care?



Demographics are changing

- Significantly
- Slowly

What might be affected?

- Public plans
- Retirement funding
- Private insurance
- Retirement income

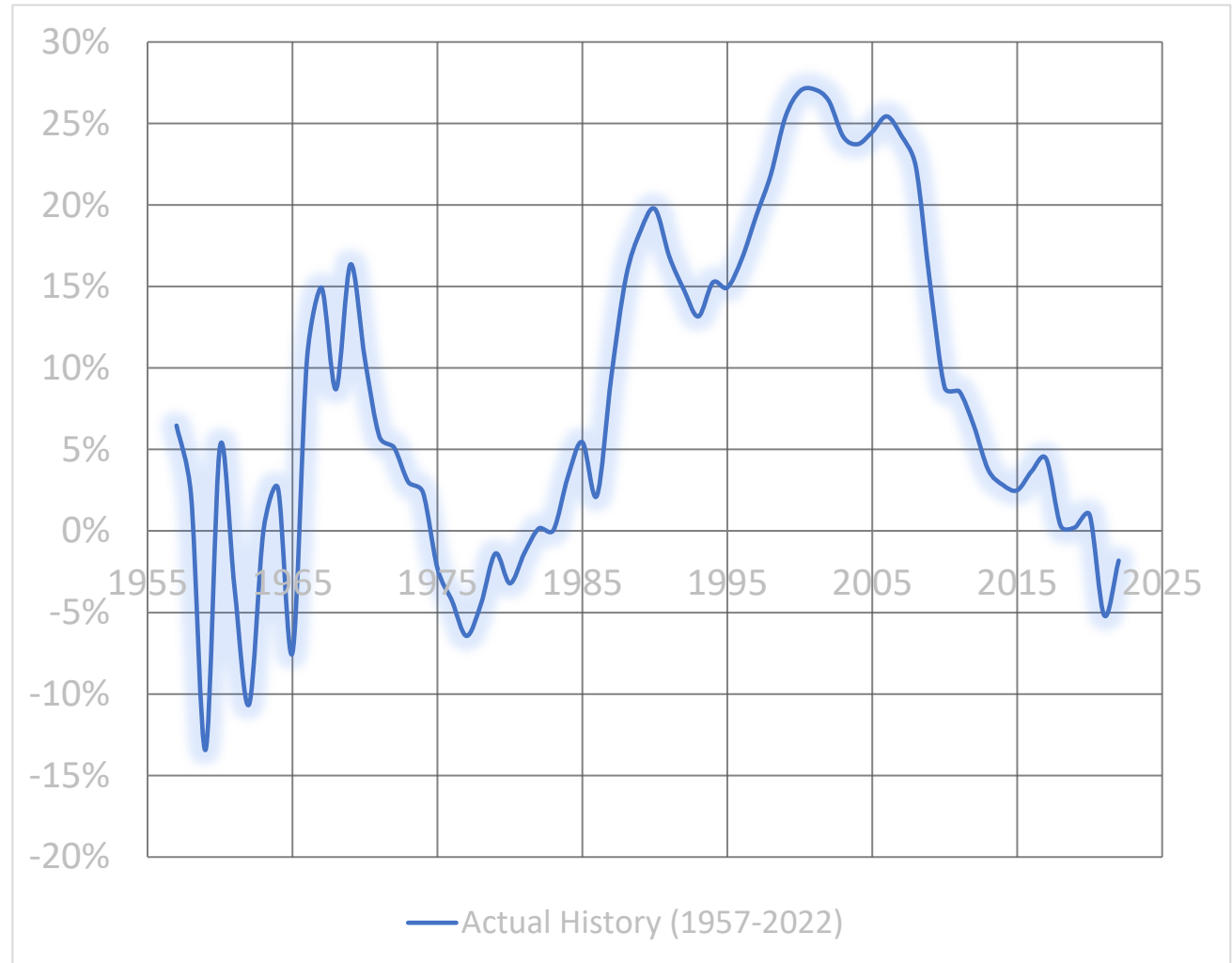
What will be different?

Social Security (Old Age Survivors and Disability Insurance)

OASDI Net Cash Flow

as a Percent of Income

- Around zero through 1983
- Increasing surplus until 2000
- Decreasing surplus for ten years
- Dependent on interest for the next ten years
- Now drawing down the trust fund



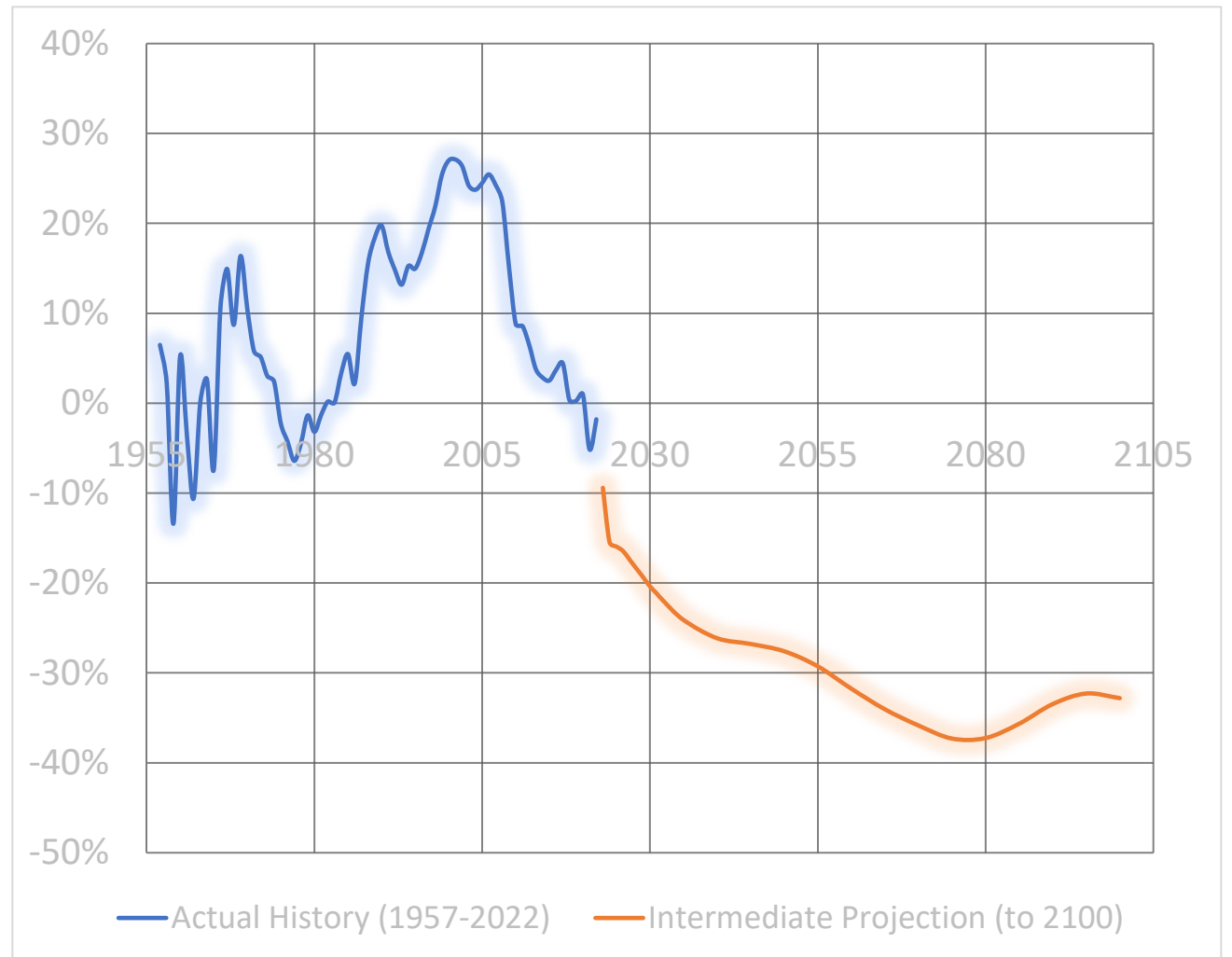
OASDI Net Cash Flow

as a Percent of Income

A grim future

- Baby boom
- Gen X
- Millennials

A symptom



What will be different?

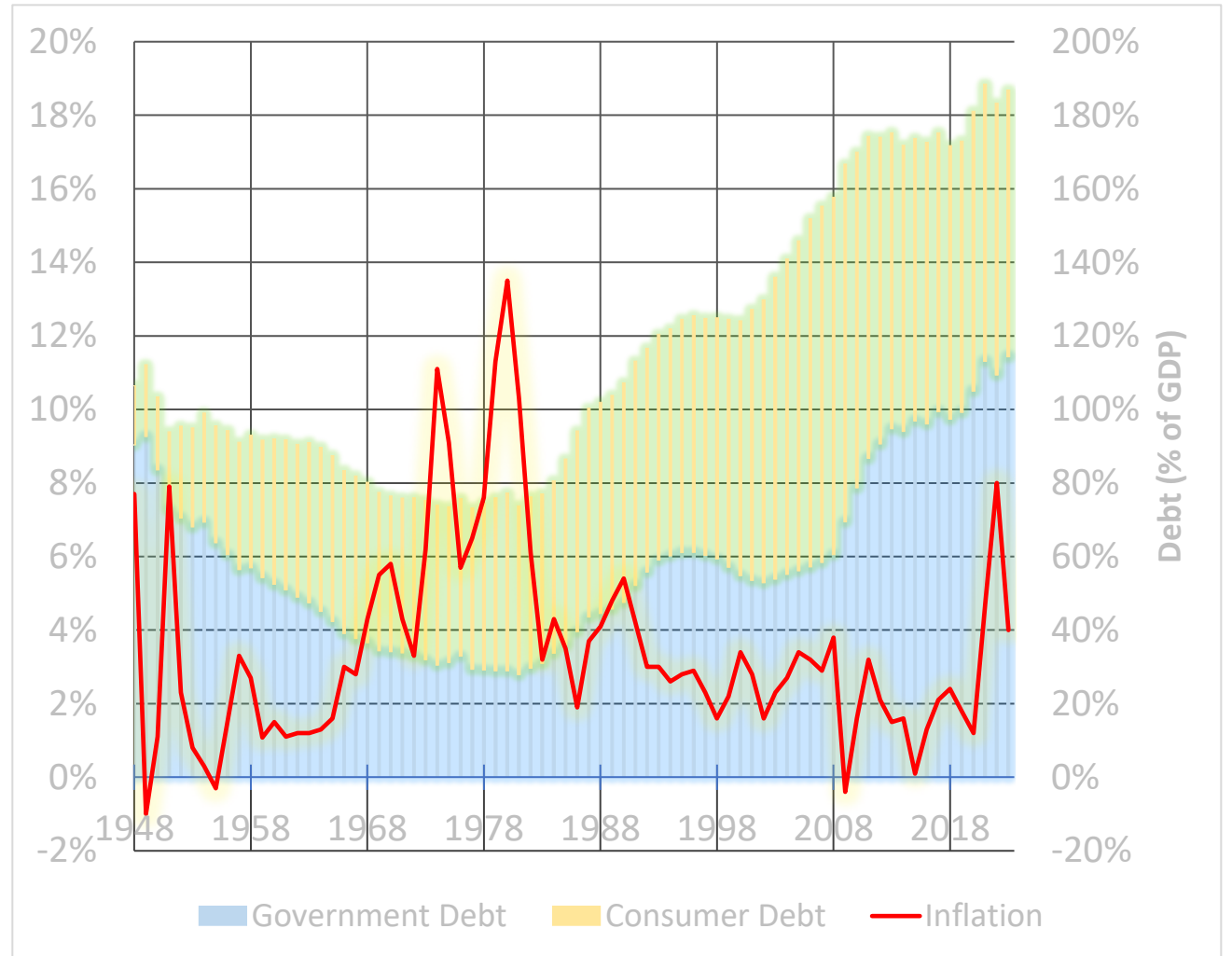
Historical Context

Historical Context

Inflation & Debt

Movements

- Volatile around 1950
- Stabilizing through late 1960s
- Accelerating through the 1970s



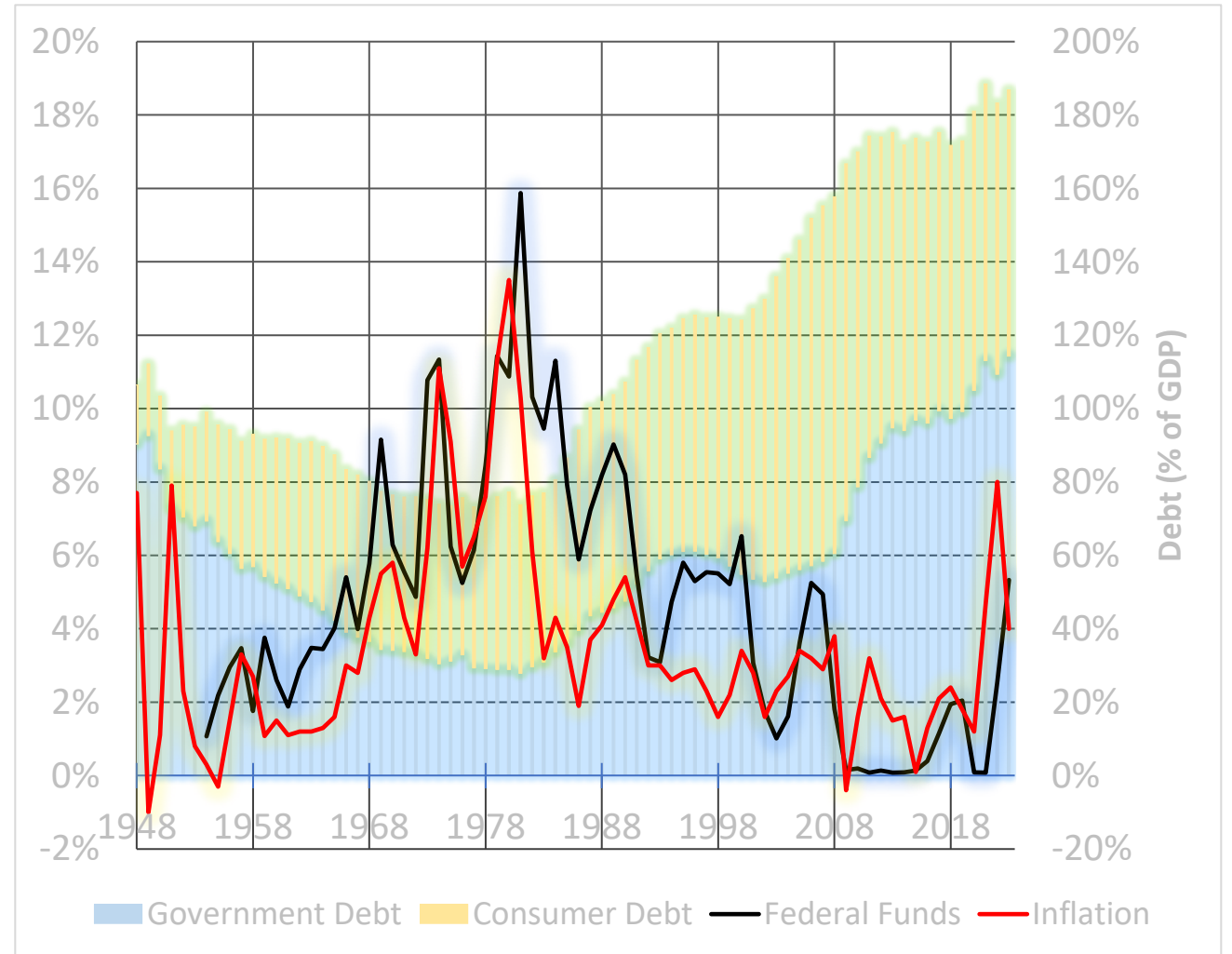
Sources: (fred.stlouisfed.org, minneapolisfed.org,
fiscaldata.treasury.gov)

Historical Context

Inflation & Interest

Movements

- Volatile around 1950
- Stabilizing through late 1960s
- Accelerating through the 1970s
- Then dropping and stabilizing
 - Fiscal policy

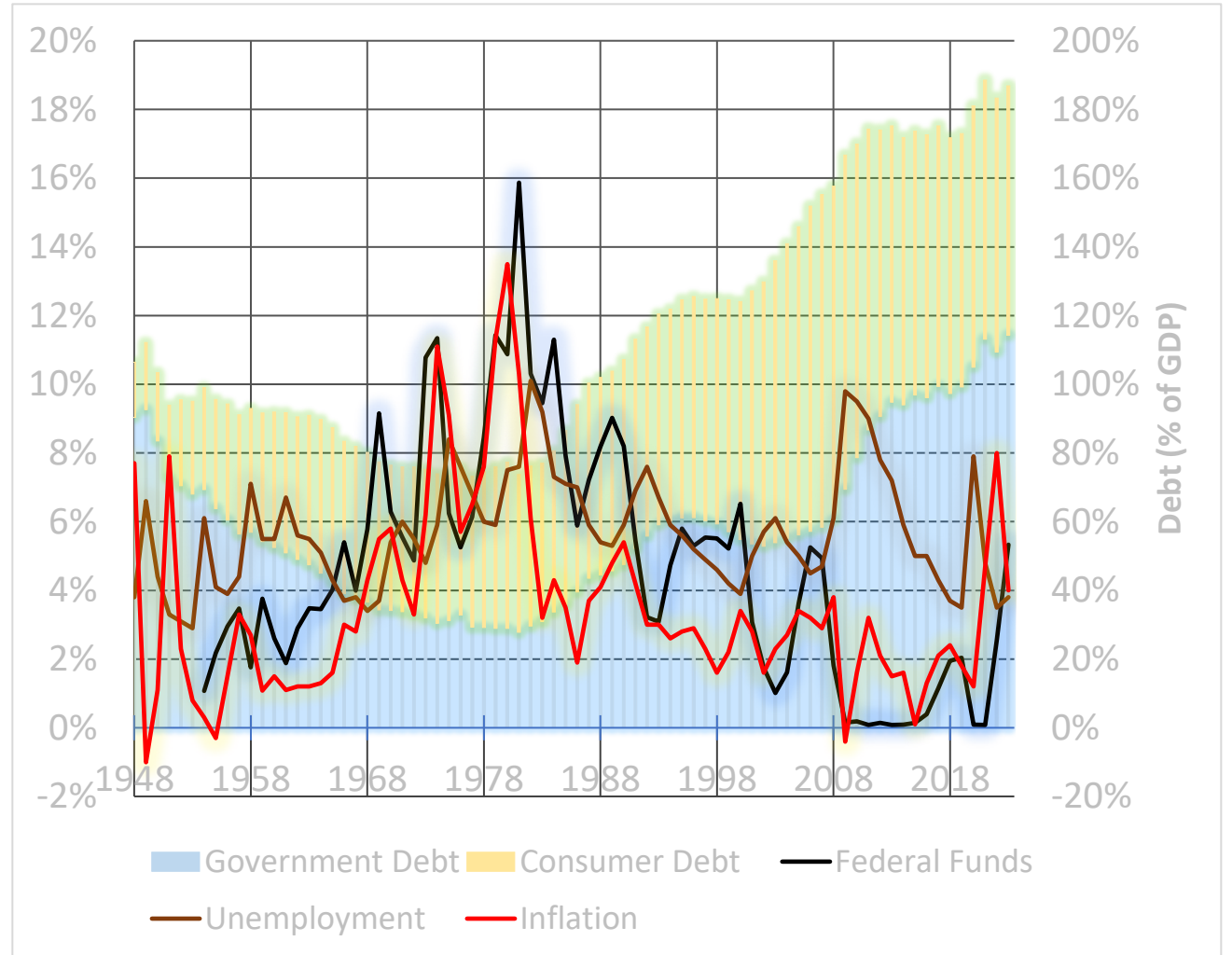


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Historical Context Unemployment

Movements

- Counter to inflation until 1969
- 1970s trends and shocks
- Downward since 1982
- Shocks
- 2008



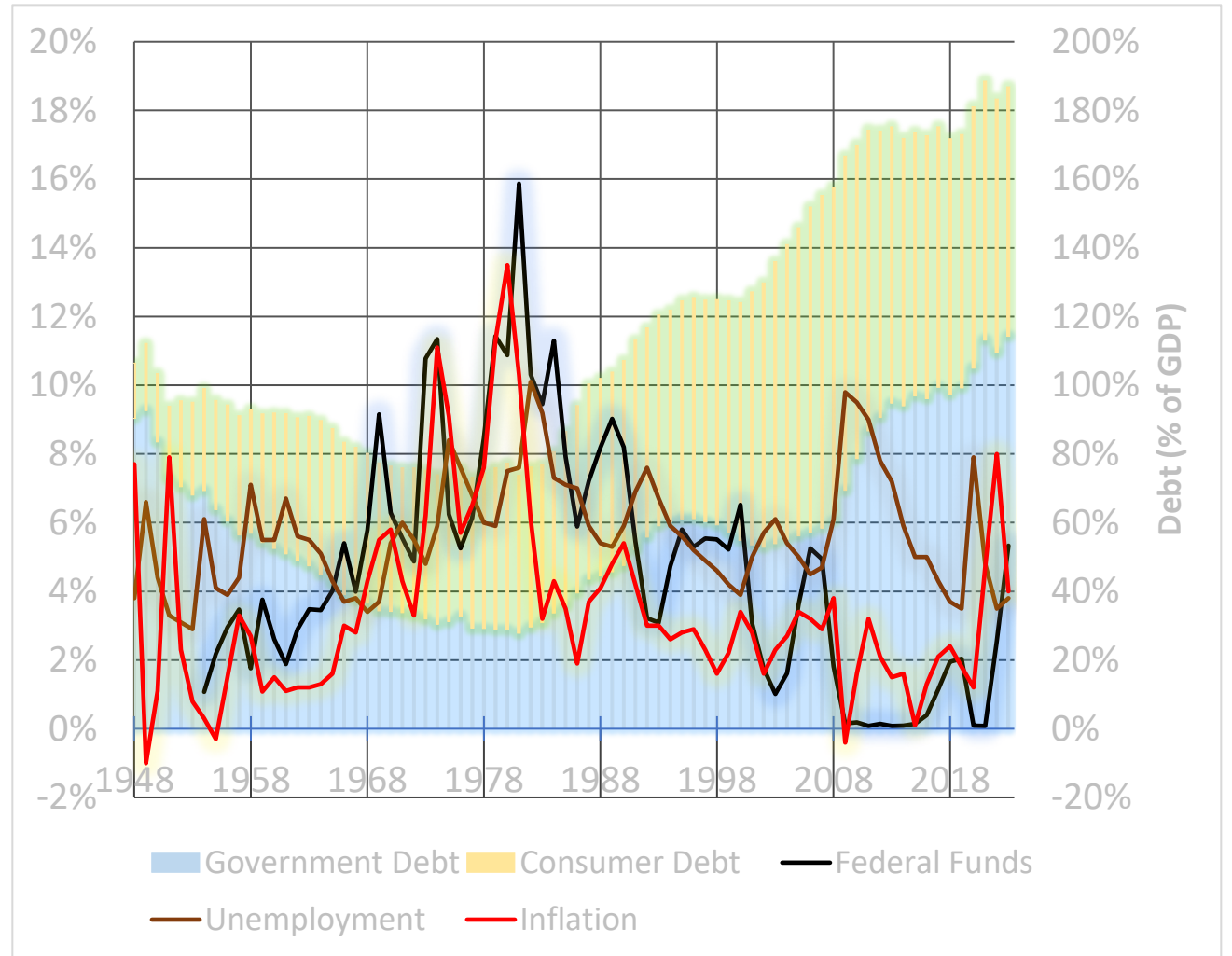
Sources: (fred.stlouisfed.org, minneapolisfed.org,
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Historical Context

A boomer economy

Movements

- Childhood stability
- Young adulthood
- Established adults
- Financial crisis



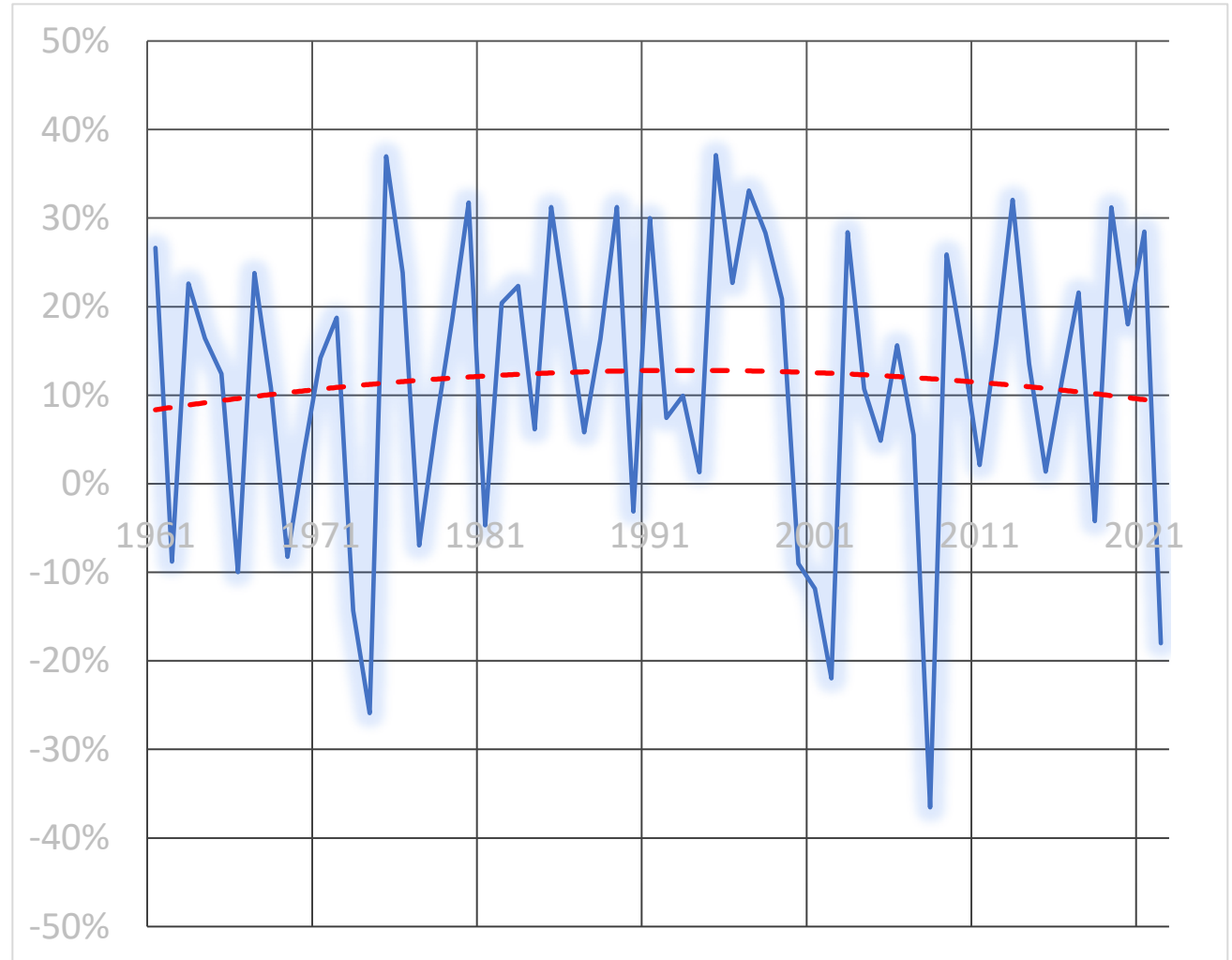
Sources: (fred.stlouisfed.org , data.bls.gov, minneapolisfed.org, fiscaldata.treasury.gov)

What will be different?

Total Return

Total Return of the S&P 500

- Volatile but strong for 60 years.
- Underlying trend—new direction.
- What's next?



Historical Earnings Changes per Year: S&P 500 (stern.nyu.edu)

What drives total return?

- Human capital
- Productivity
- Share prices

Drivers of Total Return

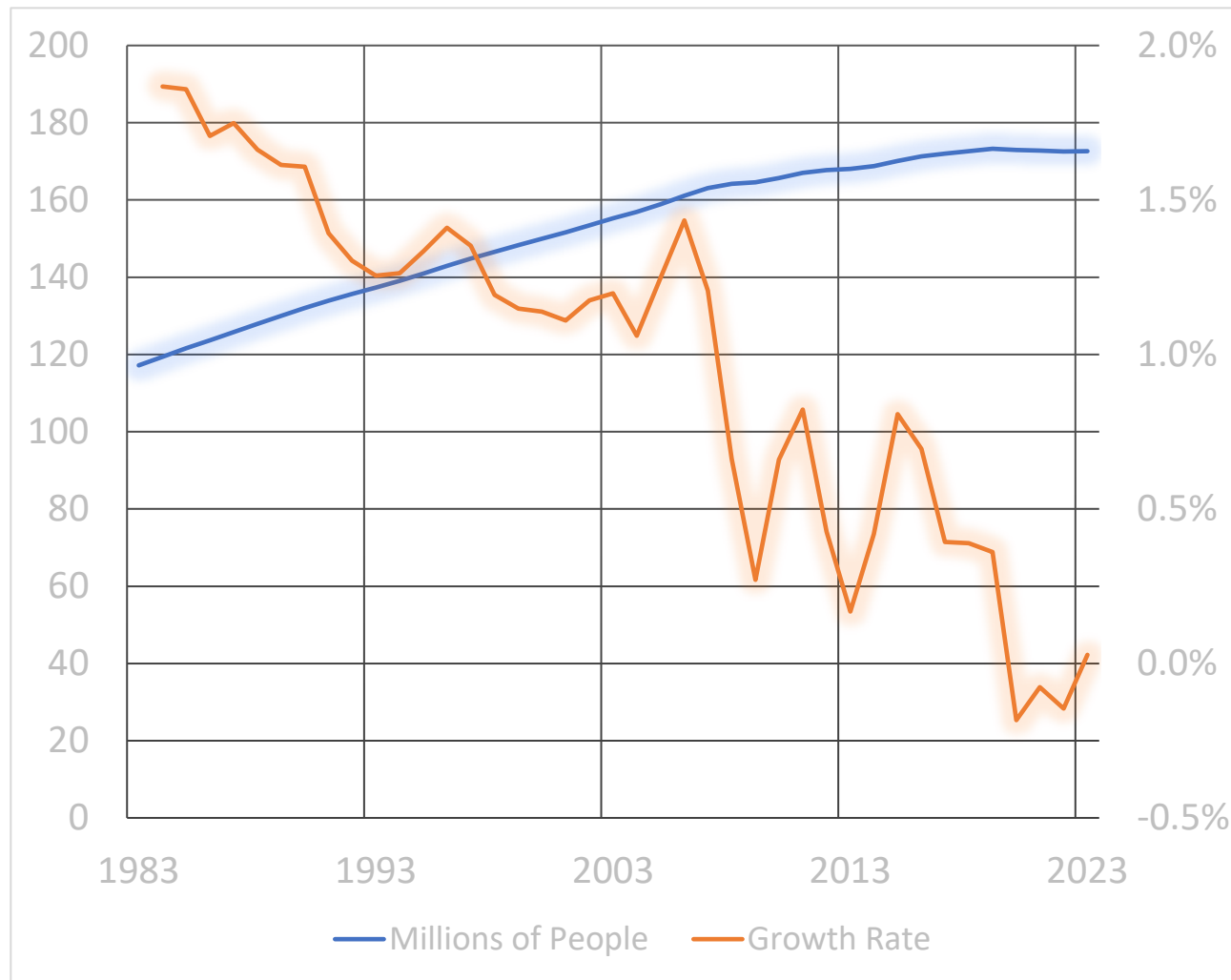
Human Capital

Human Capital

Working Age Population

Growth rate since 1983

- Averaged 1%
- Has been slowing.

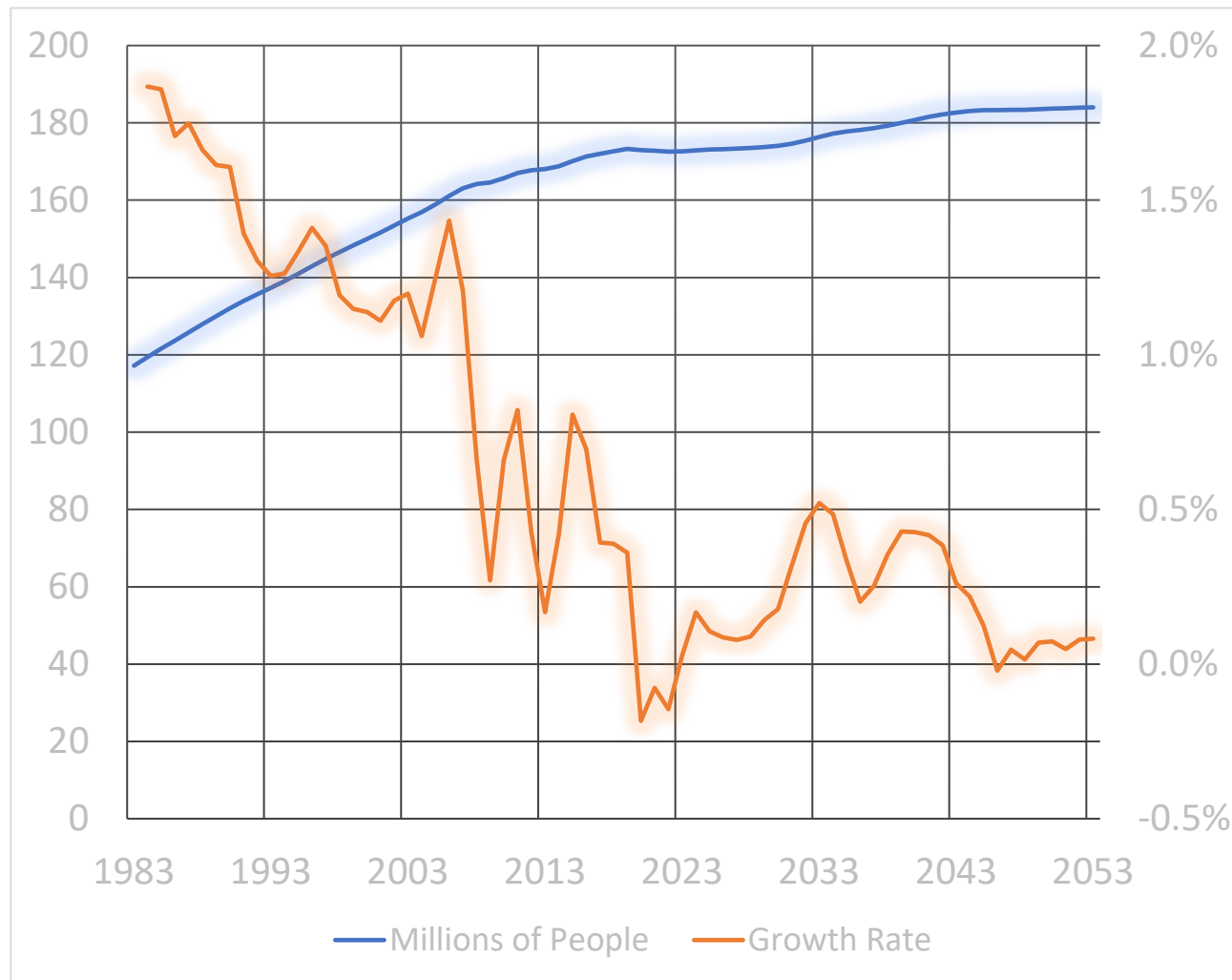


The Demographic Outlook: 2023 to 2053 (cbo.gov)

Human Capital

Working Age Population

- Growth rate since 1983
 - Averaged 1%
 - Has been slowing
- Growth rate after 1983
 - Average less than ¼%
- Total return?



The Demographic Outlook: 2023 to 2053 (cbo.gov)

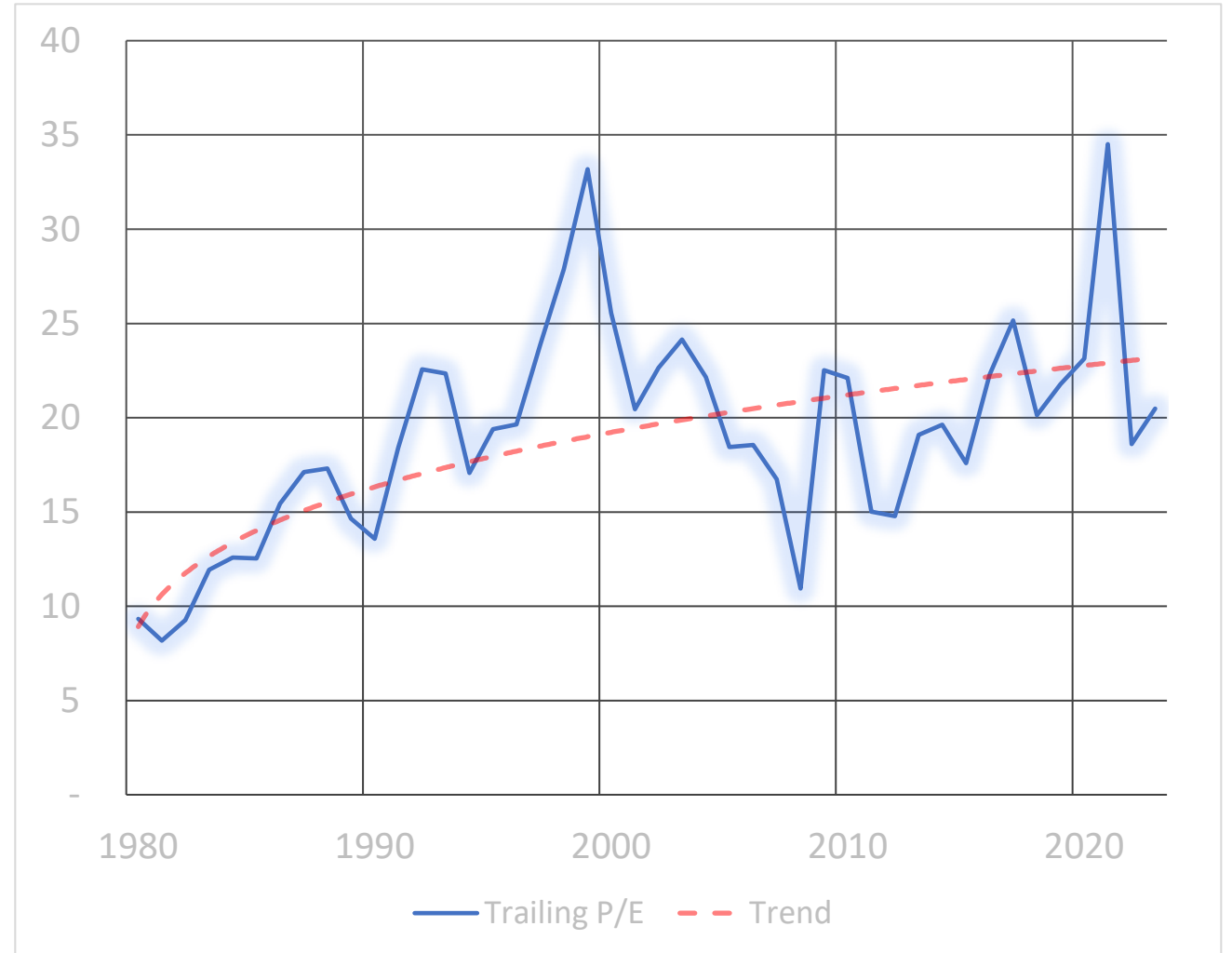
Drivers of Total Return

Share Price

Share Price

Trailing P/E, S&P 500

- Equity price increases since 1980
 - Greater than earnings growth
- Drivers of P/E increase
 - Interest rates
 - Number of investors

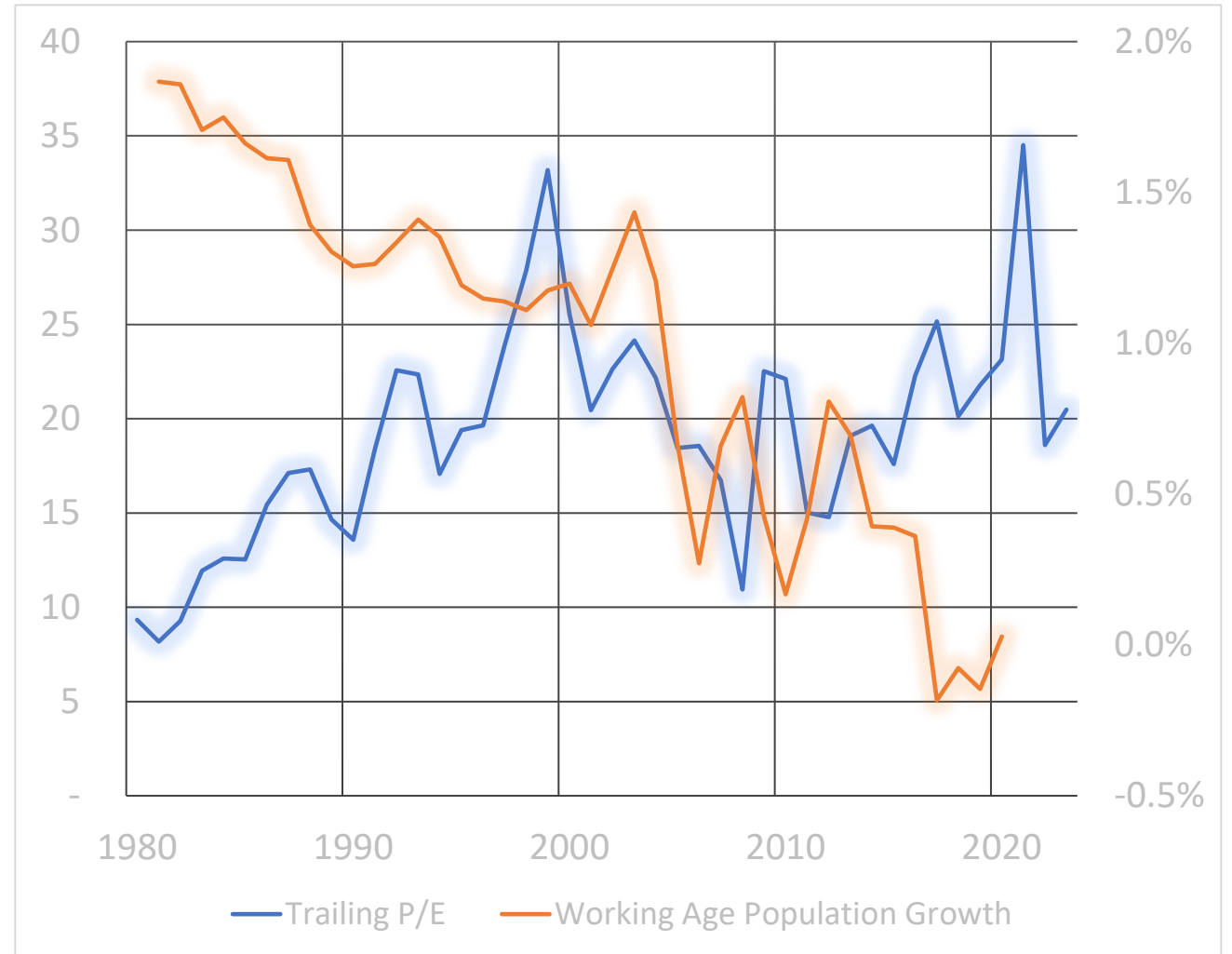


Historical Earnings Changes per Year: S&P 500 (stern.nyu.edu)

Share Price

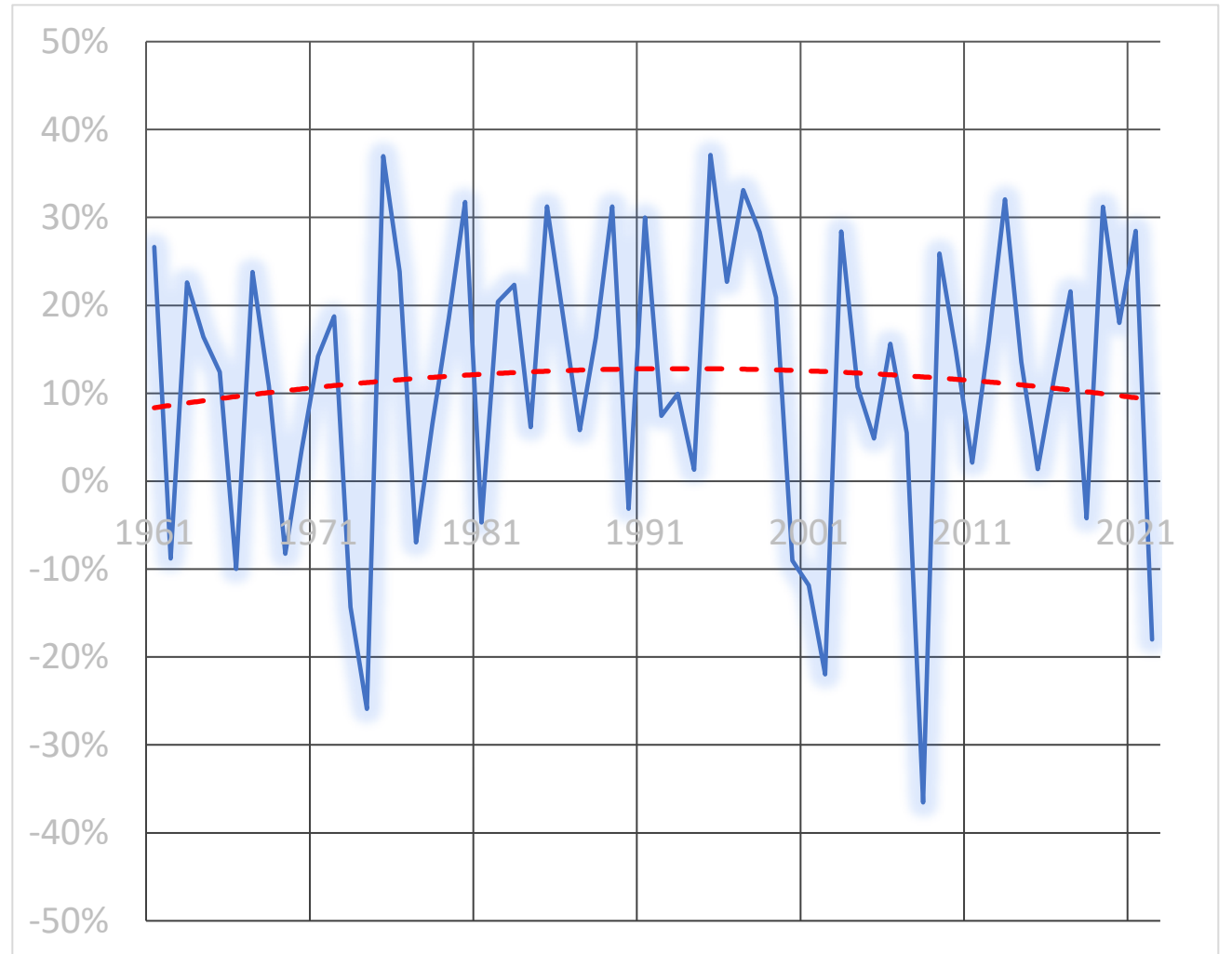
Trailing P/E, S&P 500

- Equity price increases since 1980
 - Greater than earnings growth
- Drivers of P/E increase
 - Interest rates
 - Number of investors
- Rate of increase has slowed along with growth in the working age population.
- Total return?



Total Return

- Human capital
- Productivity
- Share prices

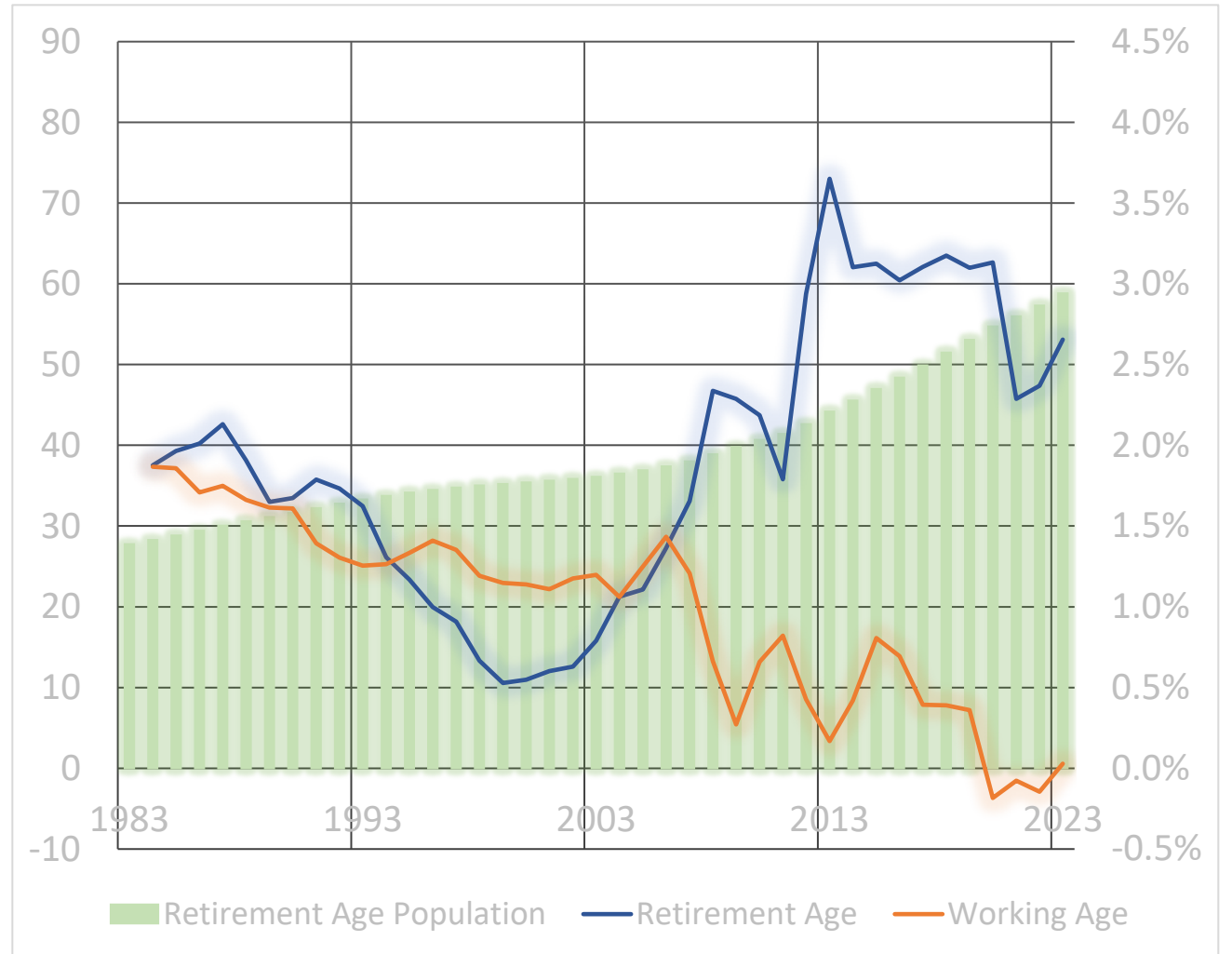


What will be different?

Consumption

Retirement Age Population Growth

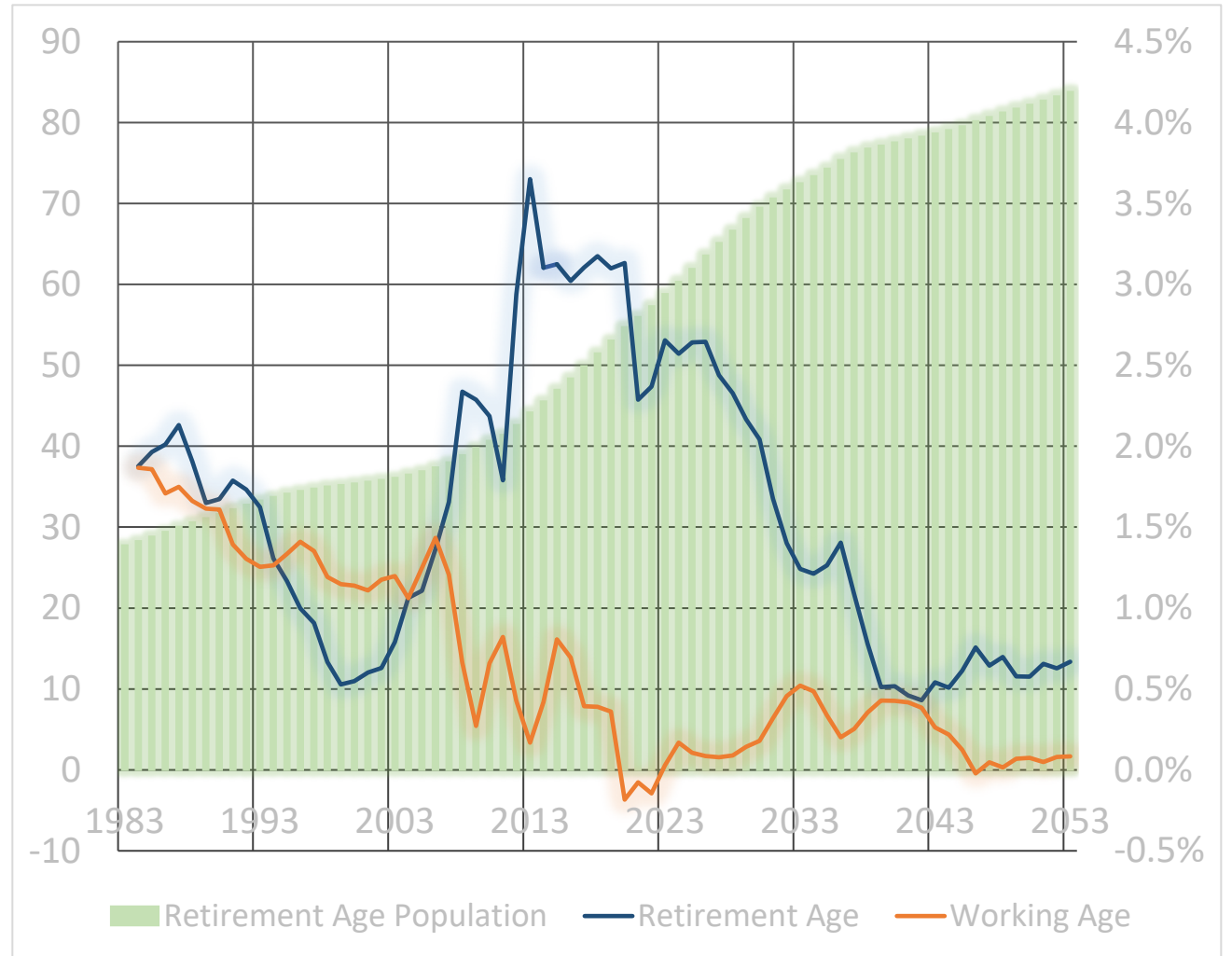
- Faster than working age growth



The Demographic Outlook: 2023 to 2053 (cbo.gov)

Retirement Age Population Growth

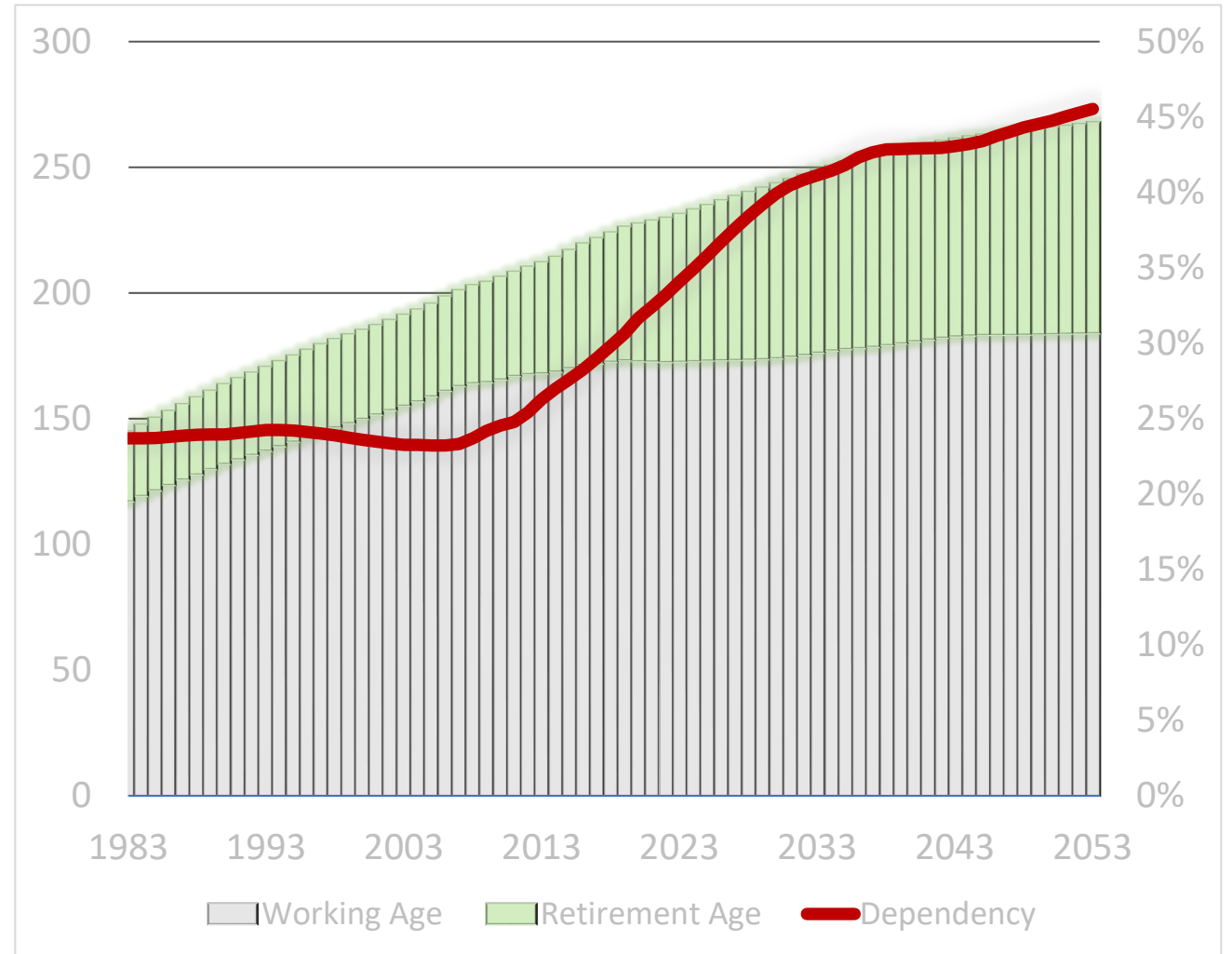
- Faster than working age growth
- Growth is now slowing, but
 - Remains high for several years
 - Stabilizes higher than working age
- Demand?



The Demographic Outlook: 2023 to 2053 (cbo.gov)

Adult Population

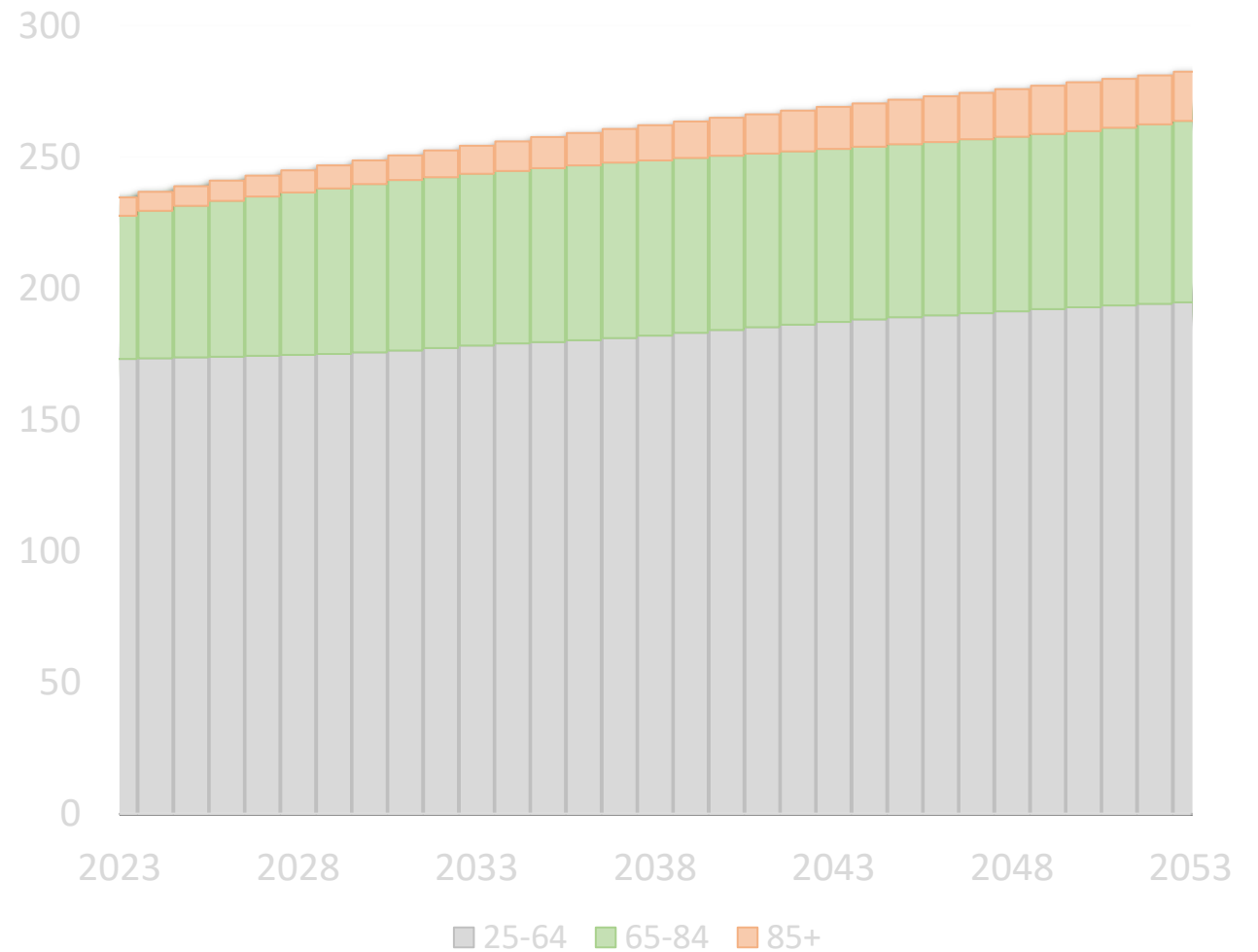
- Looking at both groups together
 - Total growing faster than working age
 - Rapidly growing dependency
- Demand?
 - Consuming excess capacity
 - Future demand



The Demographic Outlook: 2023 to 2053 (cbo.gov)

Adult Population

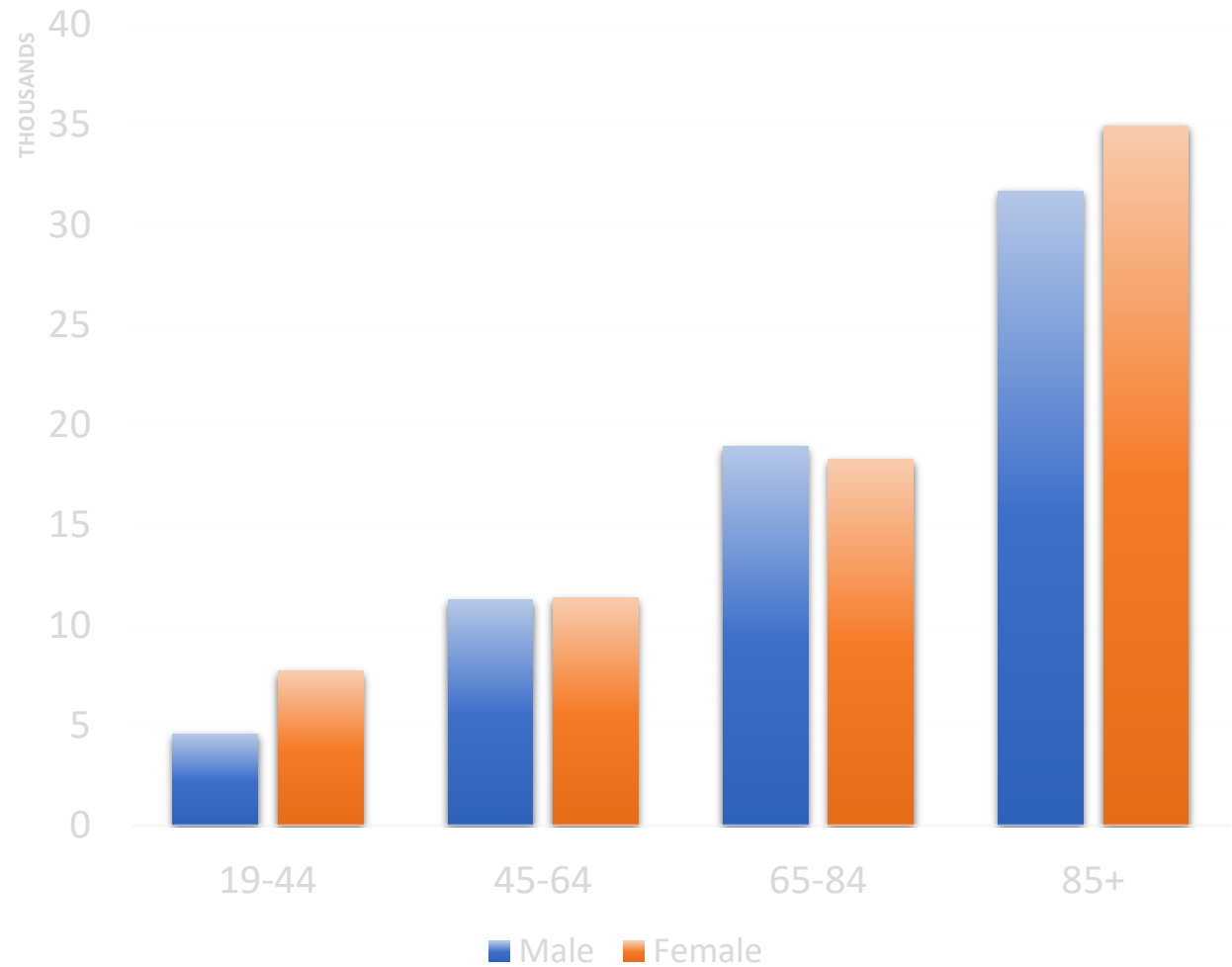
- Census projections
- Growth among advanced ages is expected to accelerate



Population Projections for 2020 to 2060 (census.gov)

Medical Expense per Person

- Substantial increase by age
- Assuming constant, 2018 levels ...



Personal Health Care Per-capita Spending (cms.gov)

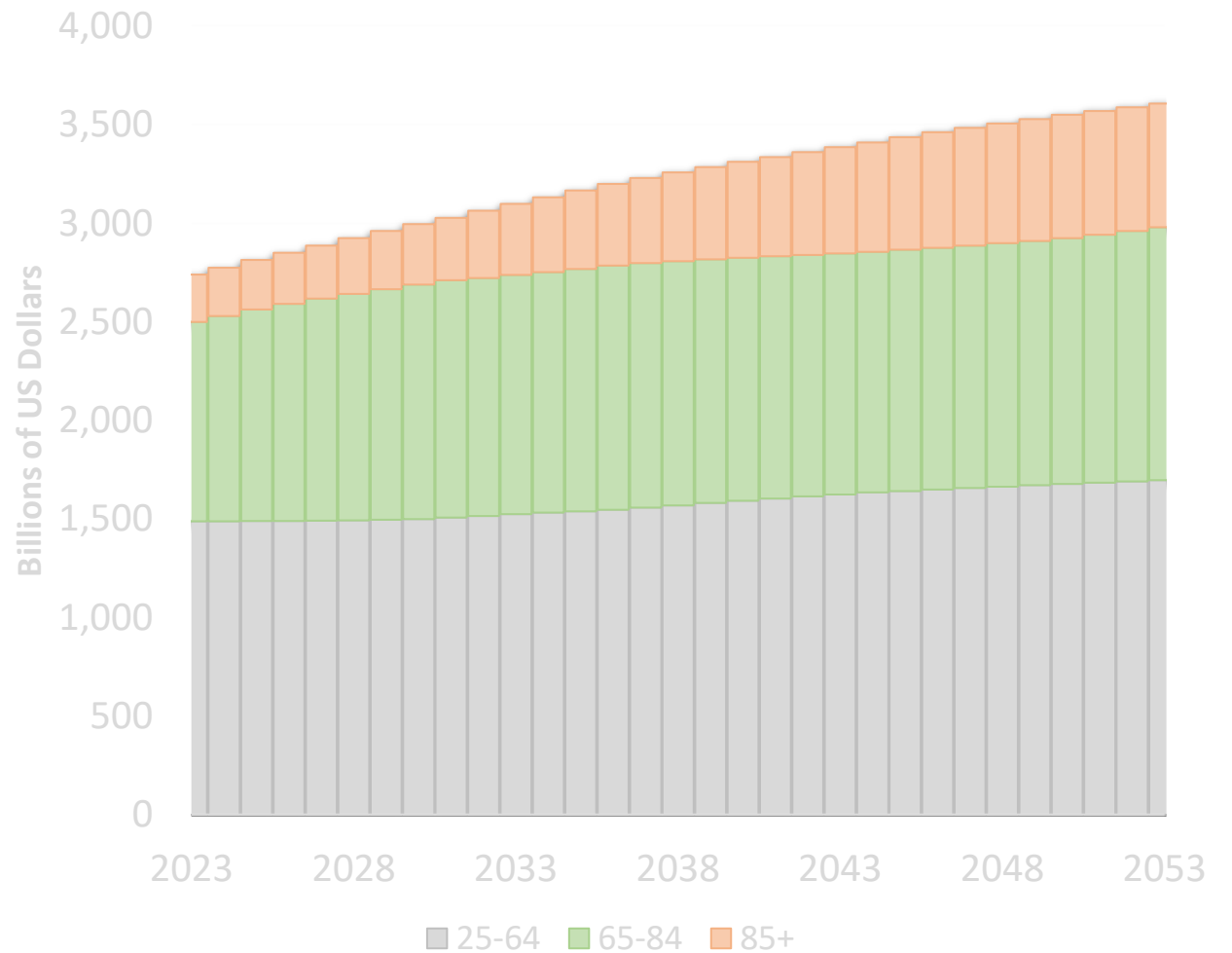
Medical Expenses 2018 Dollars

Retirement age medical costs

- 5% of GDP in 2018
- 8% of GDP in 2053

Indicators

- Productivity
- Shortages

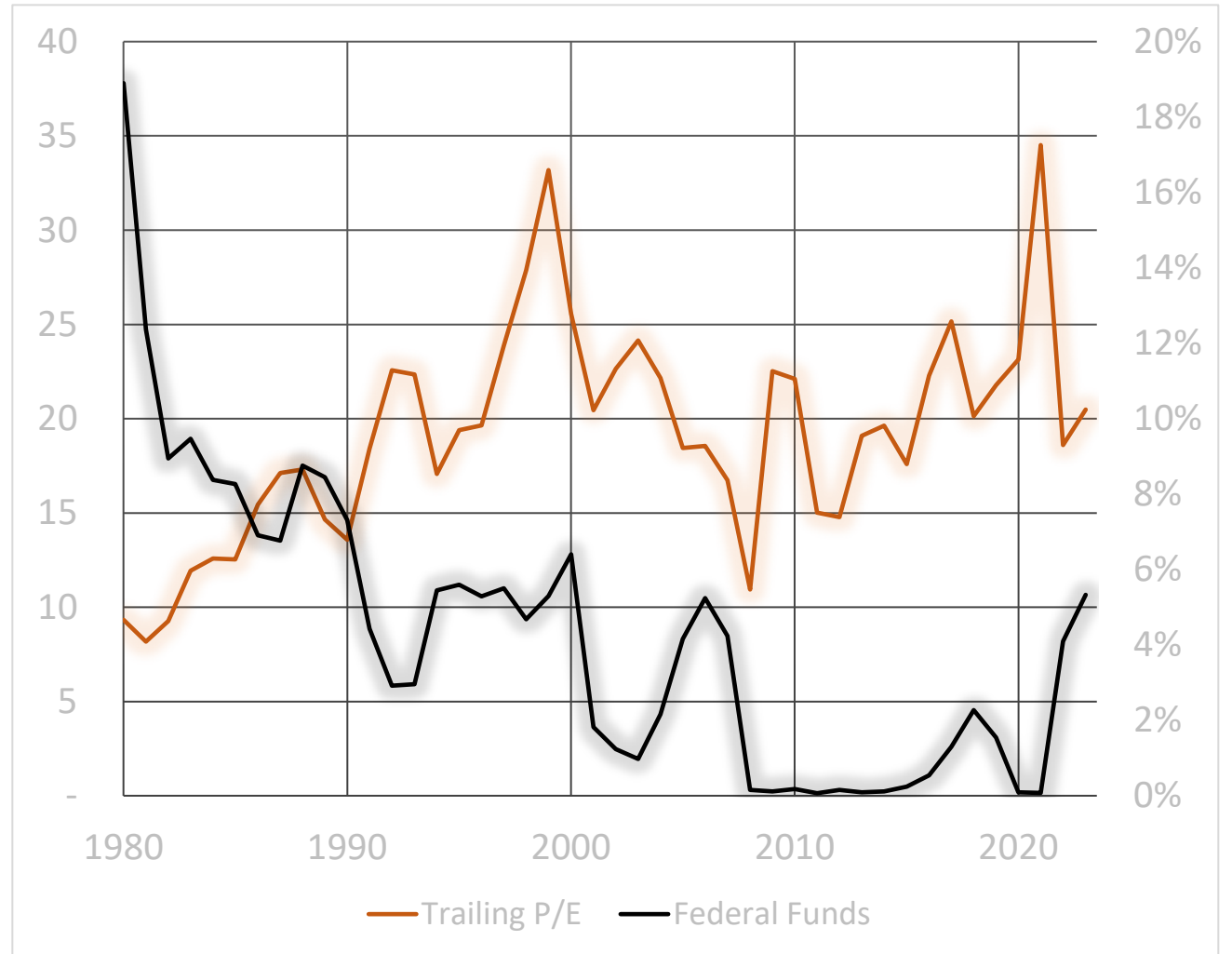


*Population Projections for 2020 to 2060 (census.gov)
Age and Sex Tables (cms.gov)*

Demand

Exceeding supply

- Inflation
- Interest rates
- Asset values
- Liquidation



Outlook – demographic influences

Summary

- Social Security
- Boomer economy
 - Early adulthood
 - Producing
 - Investing
- Retired population
 - General consumption
 - Medical needs

Outlook – other influences

Demographic Influences

- Social Security
- Working population
 - Producing
 - Investing
- Retired population
 - General consumption
 - Medical needs

Other Influences

- Imports
- Immigration
- Technology
 - Medical
 - Forestry
 - Fishing
 - Agriculture
 - Fuel

Outlook – financial security systems

Funding

- Social Security
- Pensions and private savings

Benefits

- Medicare and Medicaid
- Private health insurance
- Pensions
- Personal annuities

A frog in a kettle

As actuaries, we have an opportunity and a responsibility to help organizations face these challenges. To do that, we must first see them.



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