

# **Recession Risk and the Long-term Macro Outlook**

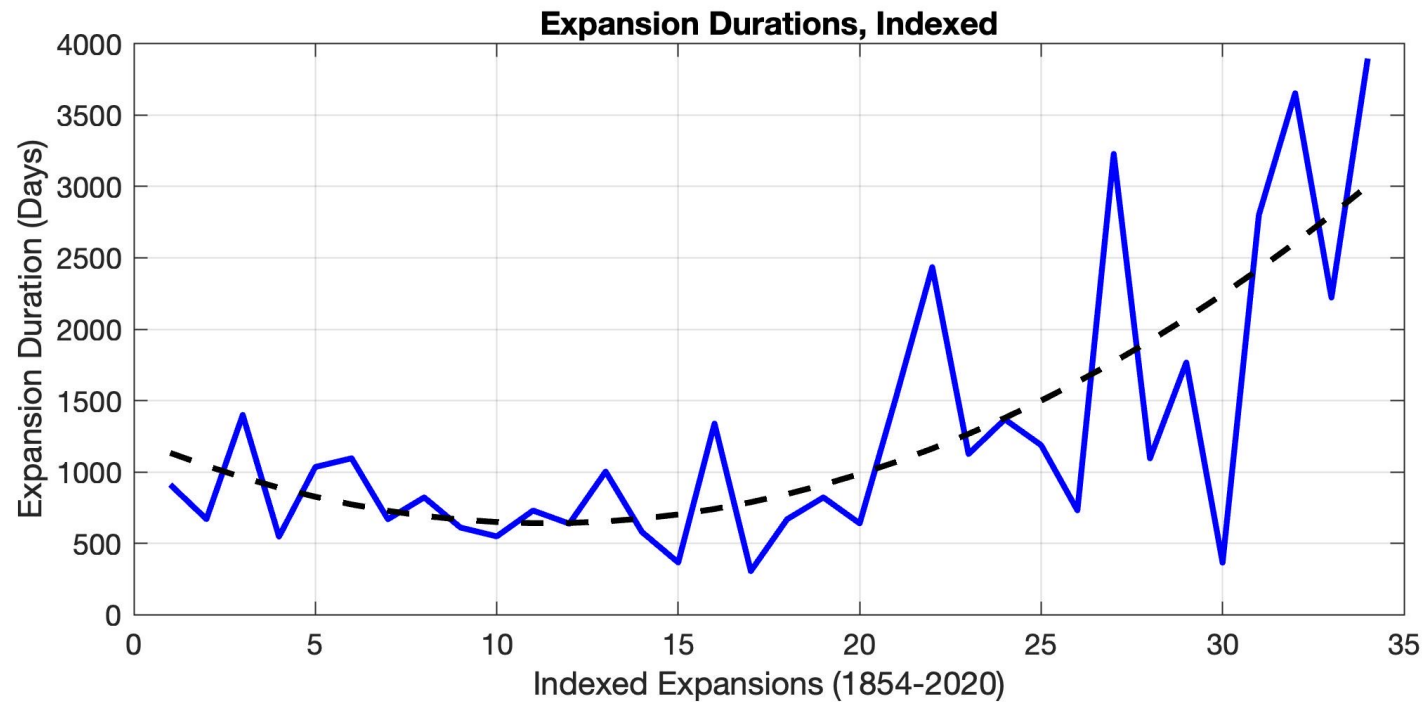
March 27, 2023

Jorge Barro, Ph.D.

# Recession Indicators

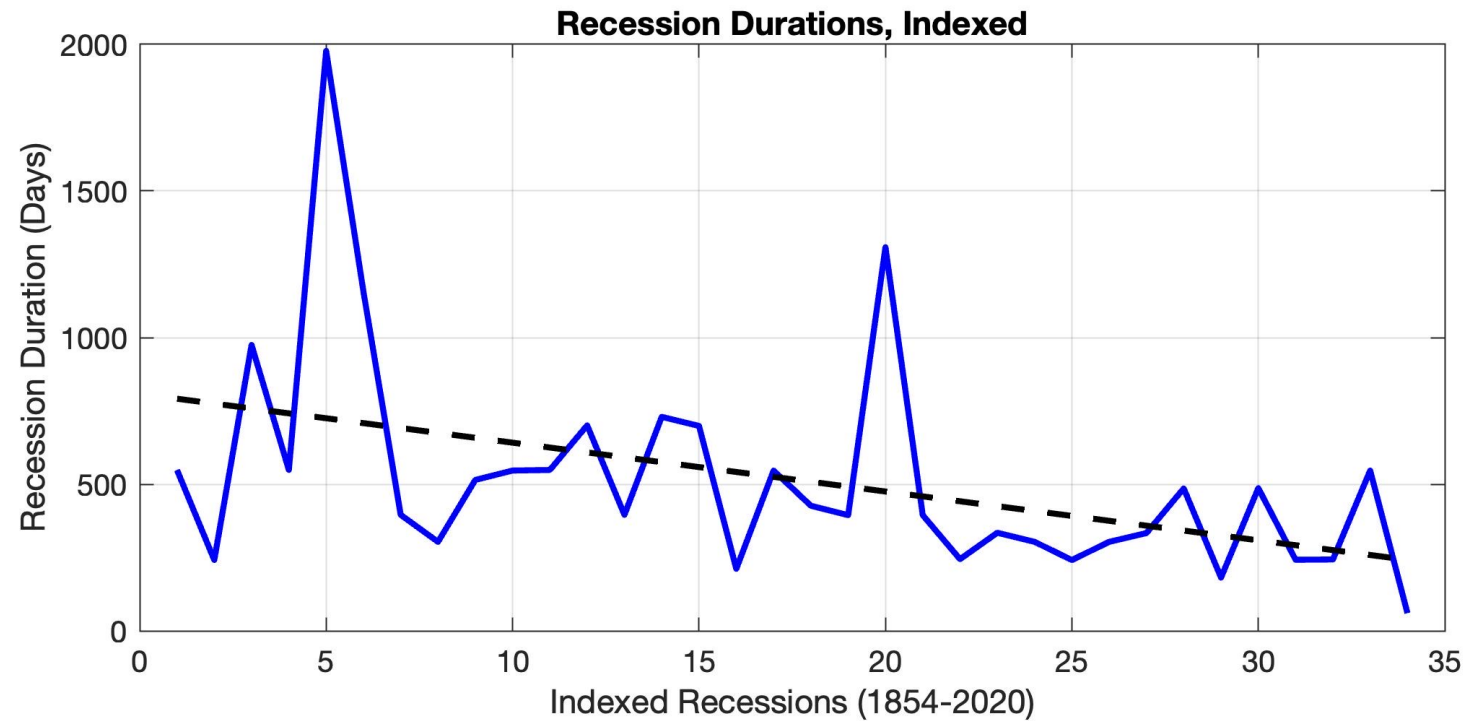
- Financial market conditions (credit spreads, delinquency rates)
- Labor market conditions (layoffs, unemployment rate)
- Yield curve
- Expansion duration...?

# Expansion Durations, 1854-2020



Sources: Barro (2023), NBER, and FRED

# Recession Durations, 1854-2020



Sources: Barro (2023), NBER, and FRED

# Long-term Outlook

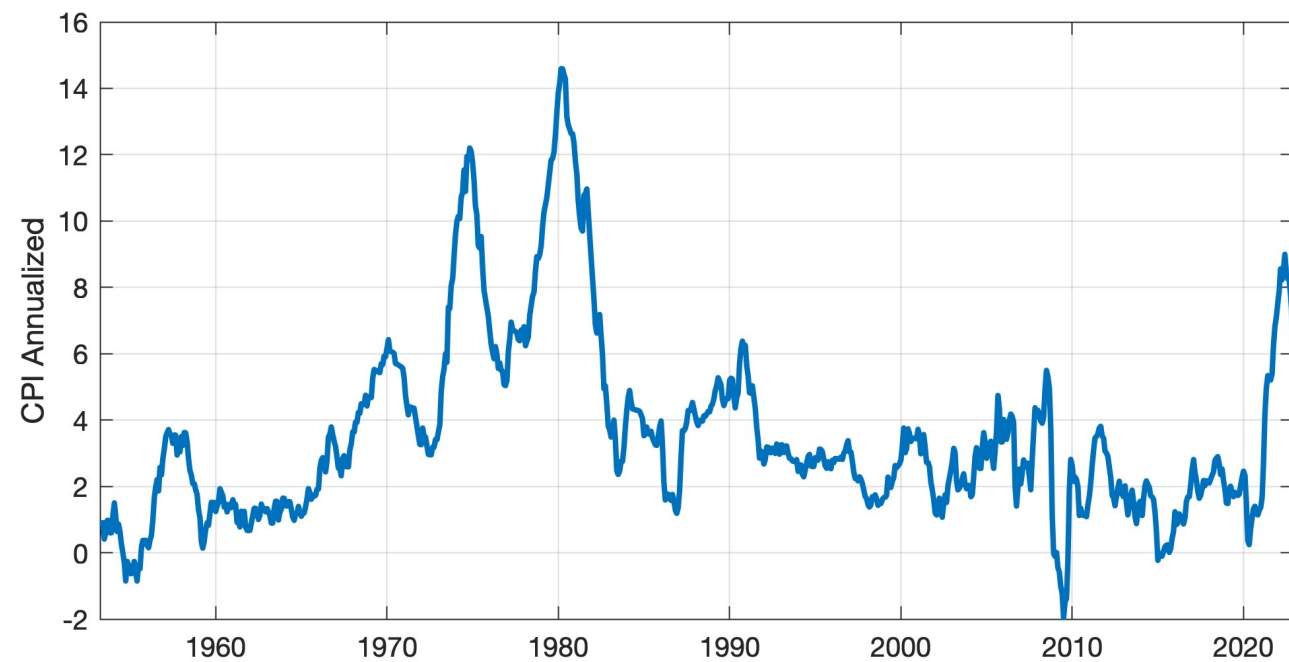
- Macroeconomic dynamics largely impacted by demographics (US & OECD).
- Focus on interest rates and RGDP.
- Historical values and projections from dynamic general equilibrium model.

# 10-year Treasury Rate



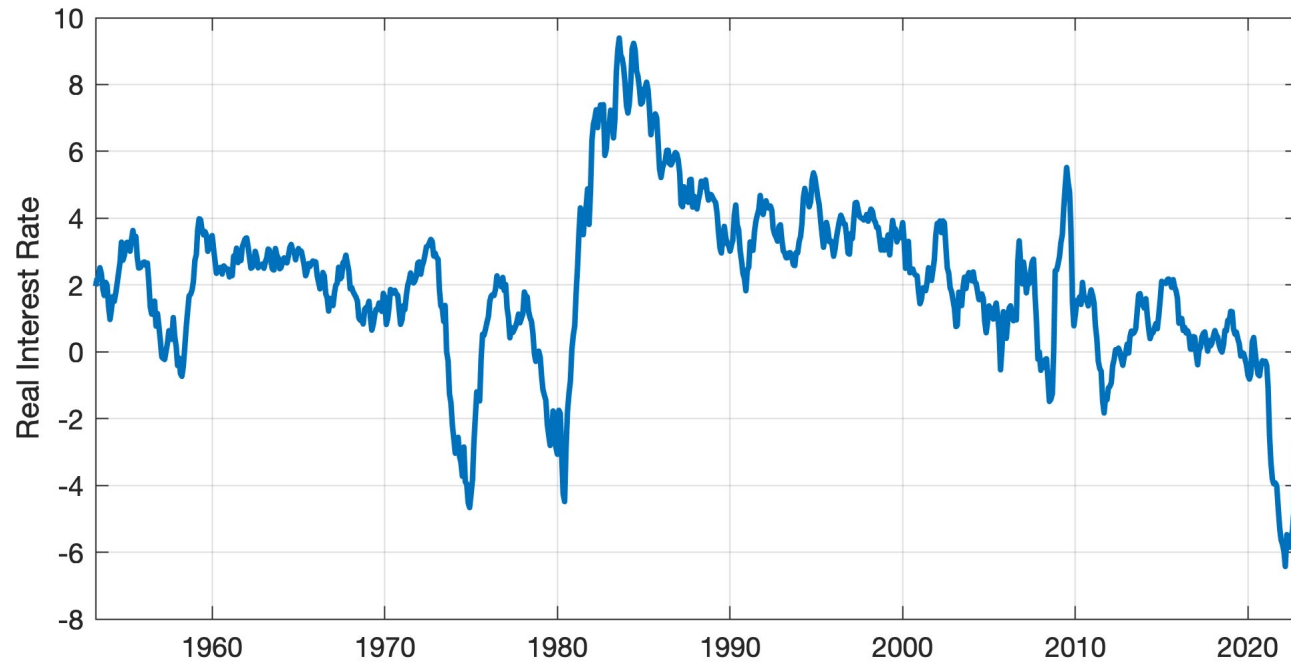
Sources: Federal Reserve Board of Governors and FRED

# Inflation Rate (CPI)



Sources: BLS and FRED

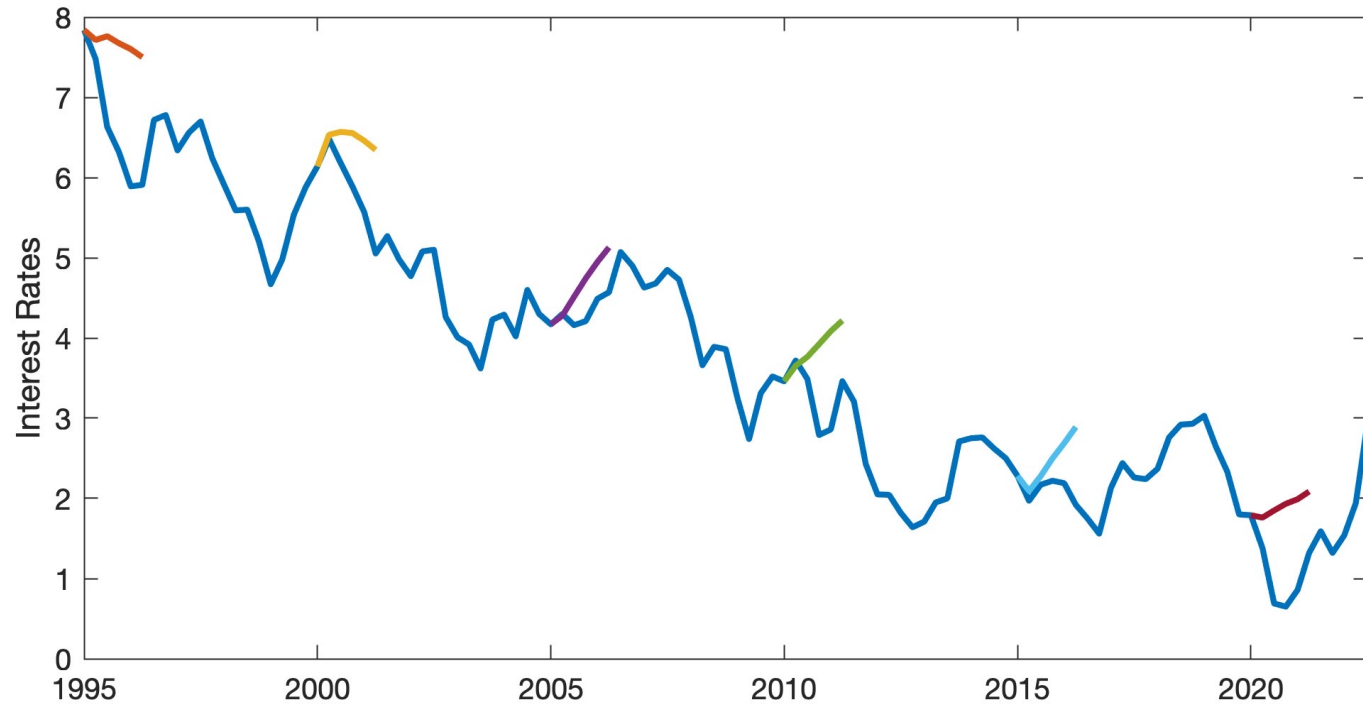
# Real Interest Rate



Source: Author calculation (10-year yield minus CPI year-over-year percentage change)



# Interest Rate Forecasts over Time




Source: Survey of Professional Forecasters, Federal Reserve Bank of Philadelphia

# “Why are interest rates so low?” –Ben Bernanke (2015)


BROOKINGS

CLIMATE AI CITIES & REGIONS GLOBAL DEV INTL AFFAIRS U.S. ECONOMY U.S. POLITICS & GOVT MORE



**BEN BERNANKE**  
**Why are interest rates so low?**  
Ben S. Bernanke · Monday, March 30, 2015

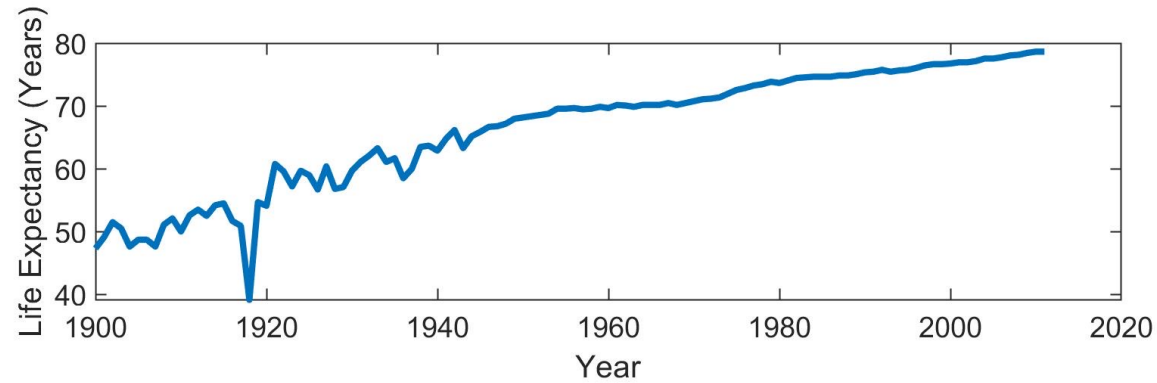
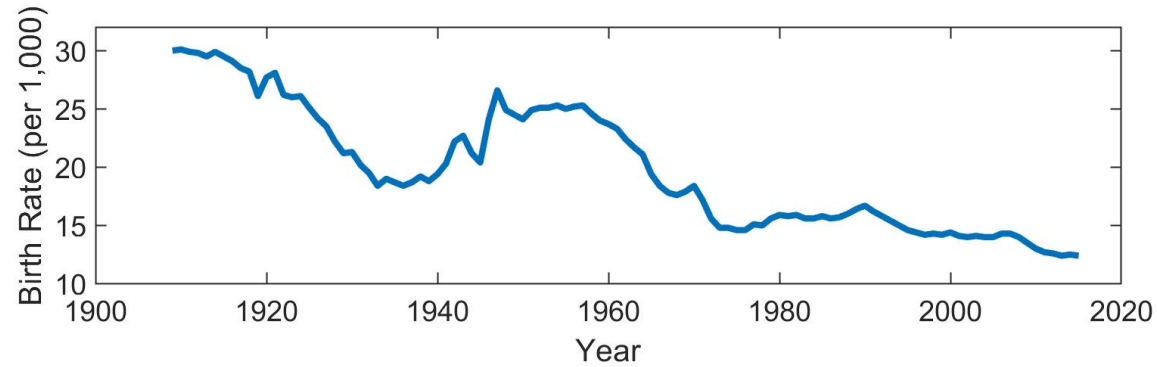
**BEN BERNANKE** INDP 15 +152 8493x21



Interest rates around the world, both short-term and long-term, are exceptionally low these days. The U.S. government can borrow for ten years at a rate of about 1.9 percent, and for thirty years at about 2.5

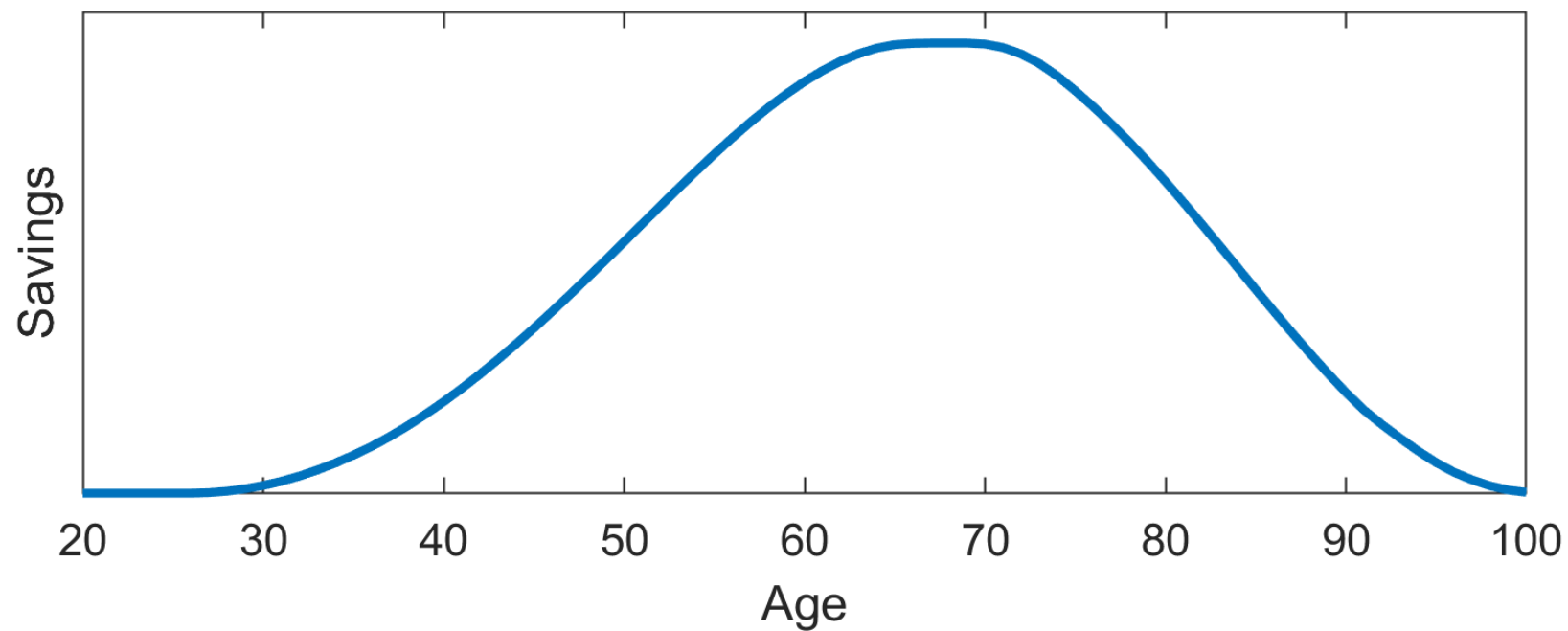
Source: Bernanke (2015)

# The Demographics Story



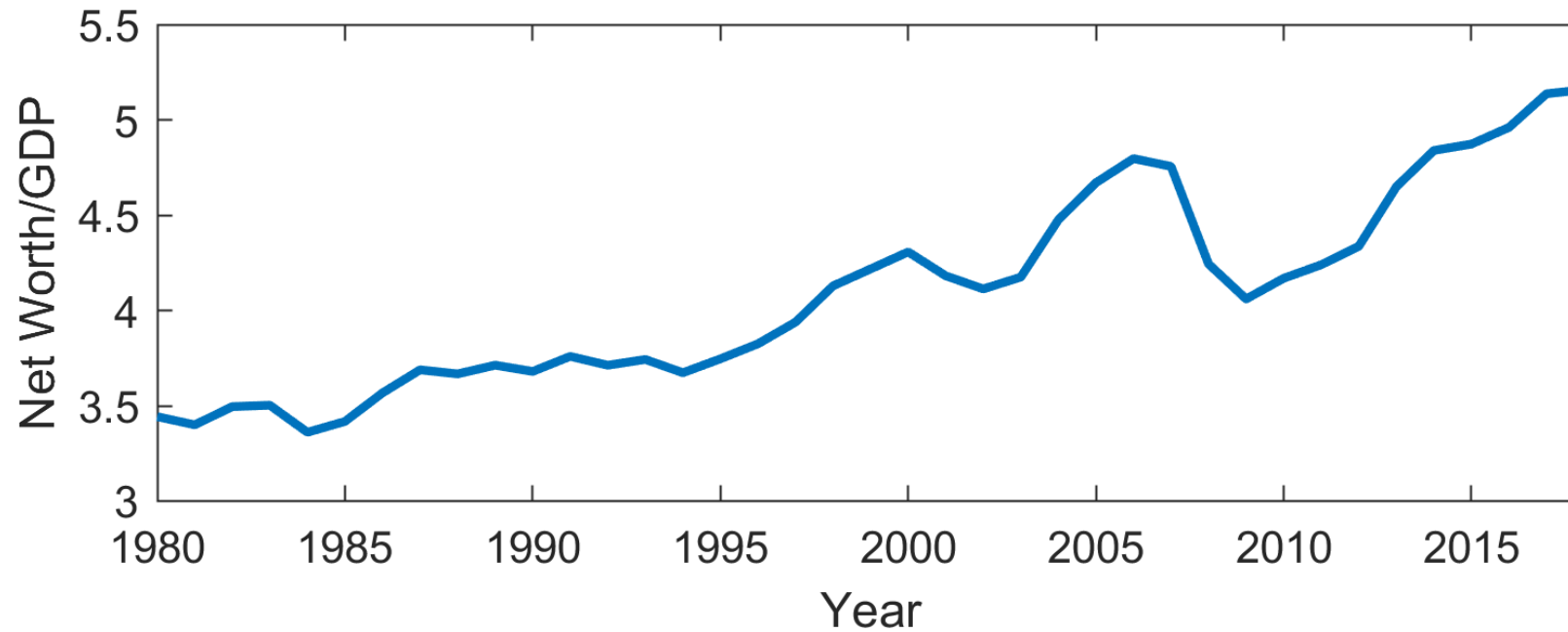
Sources: NCHS and CDC

# Life-cycle Savings



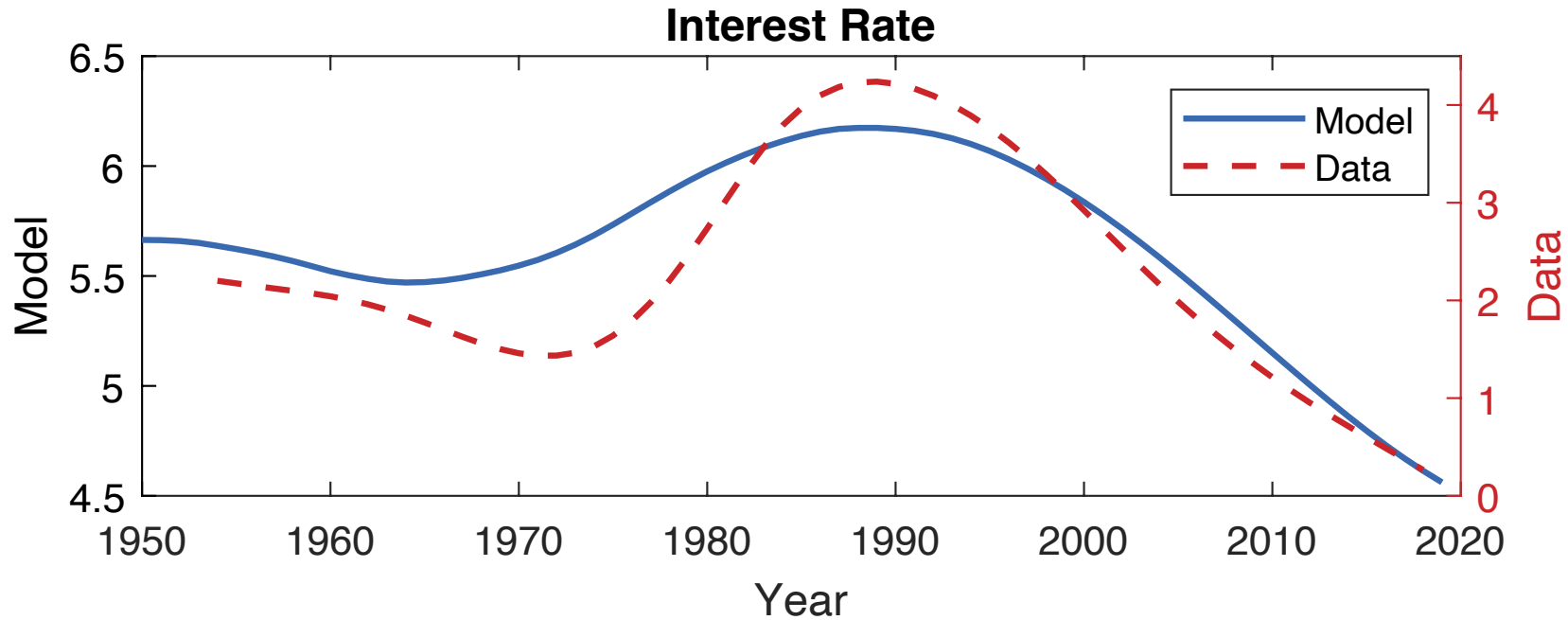
Source: Author calculation (simulated lifecycle savings profile)

# Household Net Worth to GDP



Sources: Federal Reserve Board of Governors, BEA, and FRED

# Interest Rate: Simulation Model vs. Data

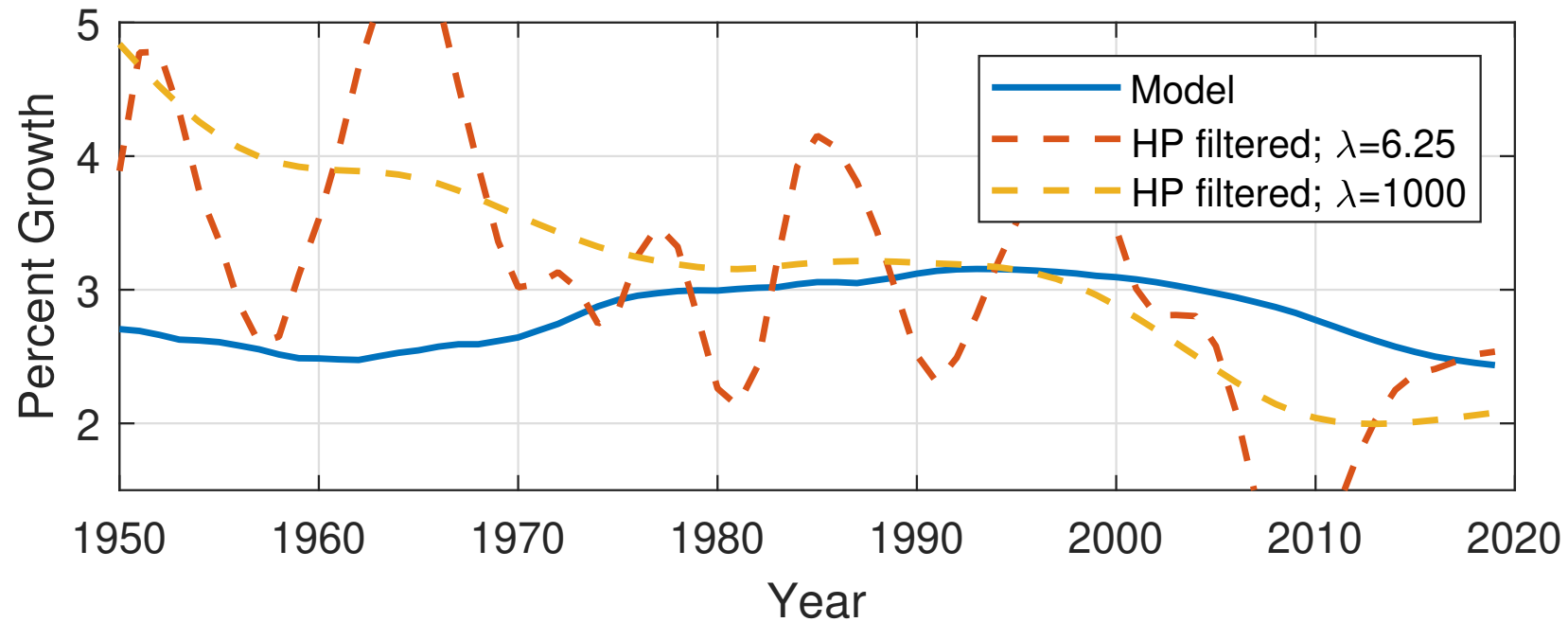


Source: Barro (2022)

# Outlook on Interest Rates

- Model predicts real interest rates will decline steadily by at around 100 basis points by 2050.
- Current interest rates are experiencing a cycle, not change in long-run trend.
- Inflation stabilizes → nominal interest rates will likely fall.

# RGDP: Simulation Model vs. Data



Source: Barro (2022)



# Outlook on RGDP

- Model predicts RGDP will decline steadily by at around 25 basis points by 2050.
- Largely driven by declining population growth rate.
- Also dependent on education, birth rates, and immigration.

# Summary

- Expansions are getting longer; recessions are getting shorter.
- Demographics largely impacting the long-term macro outlook.
- Interest rates and RGDP likely to trend downwards through 2050.

# References

- (Bernanke Blog) [Bernanke, Ben S. 2015. Why are interest rates so low? Brookings Institution Blog. Brookings Institution, Washington, D.C.](#)
- (Macro Risk) [Barro, Jorge. 2023. Assessing Recession Risk in a Post-pandemic Economy. Issue brief no. 01.26.23. Rice University's Baker Institute for Public Policy, Houston, Texas.](#)
- (Long-term Outlook) [Barro, Jorge. 2022. Demographics and the U.S. Economy. Working paper. Rice University's Baker Institute for Public Policy, Houston, Texas.](#)

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