



# Baby Boomers and the Great Resignation: A Pension Actuary's Perspective on Labor Market Demographics

**FPPTA Annual Conference**  
**June 25, 2024**

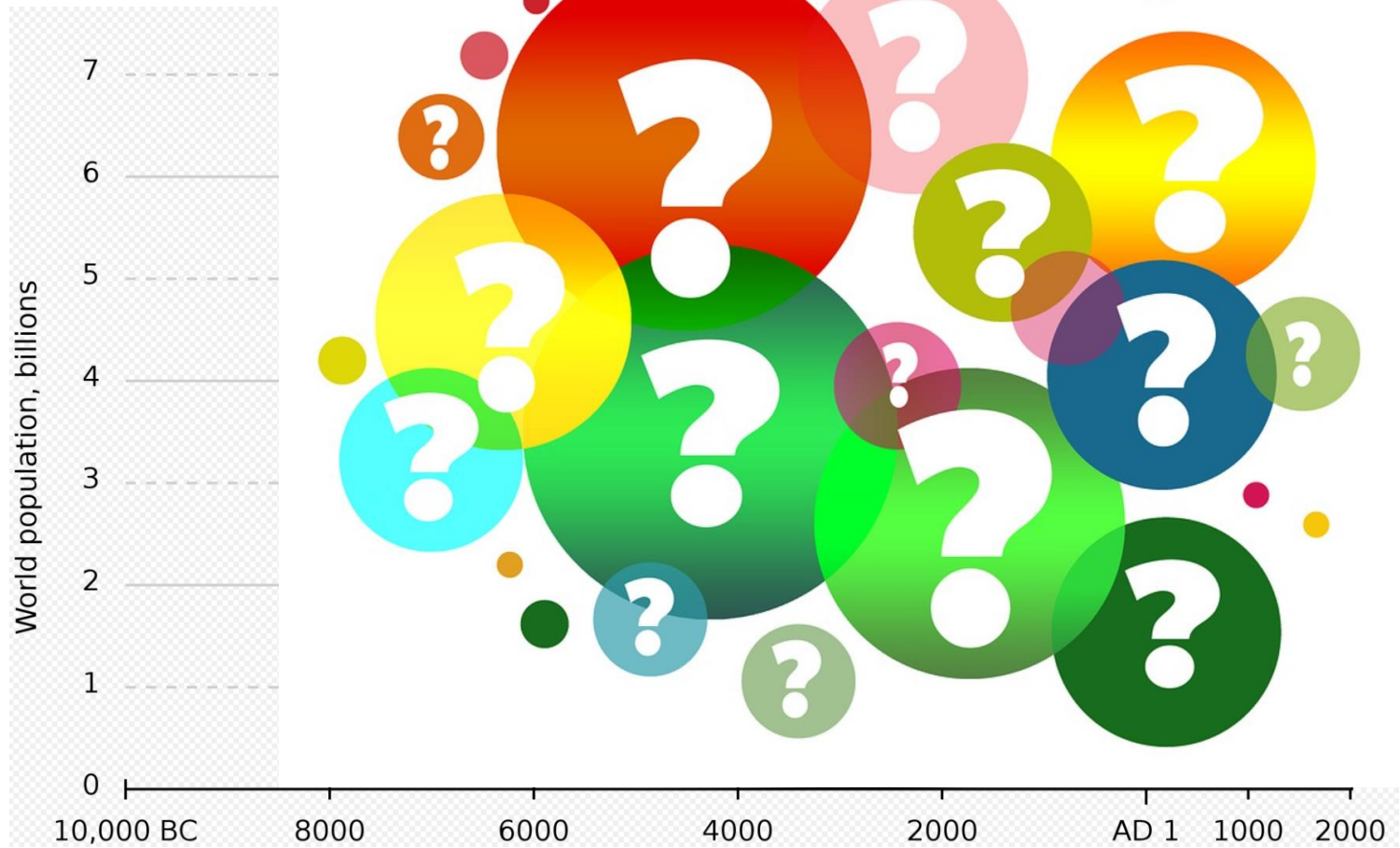
Presented by Brad Armstrong , ASA, EA, FCA, MAAA  
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and Israel Bichachi, ASA, MAAA



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# Implications of a Falling Global Population



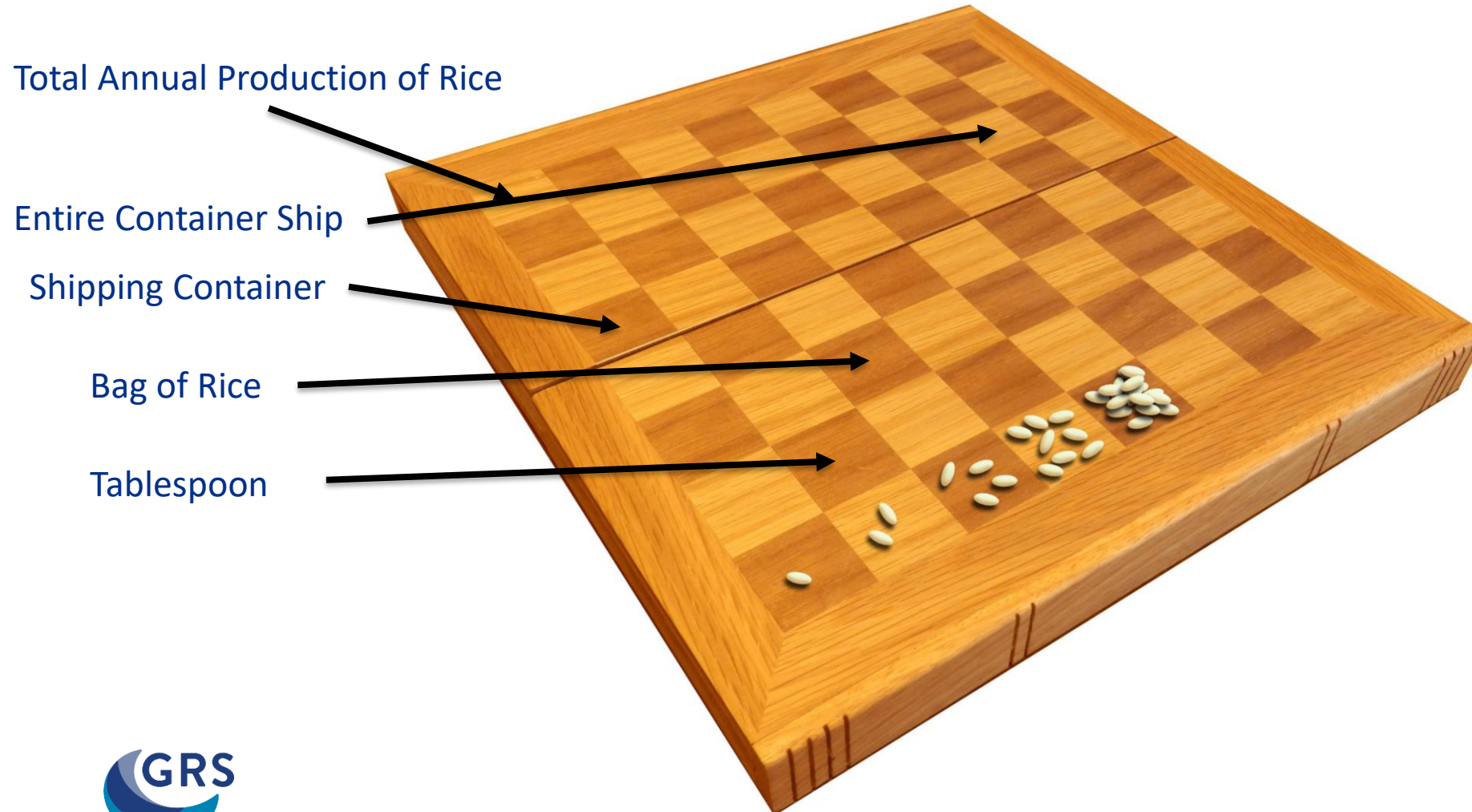


# Thomas Malthus (1766-1834)



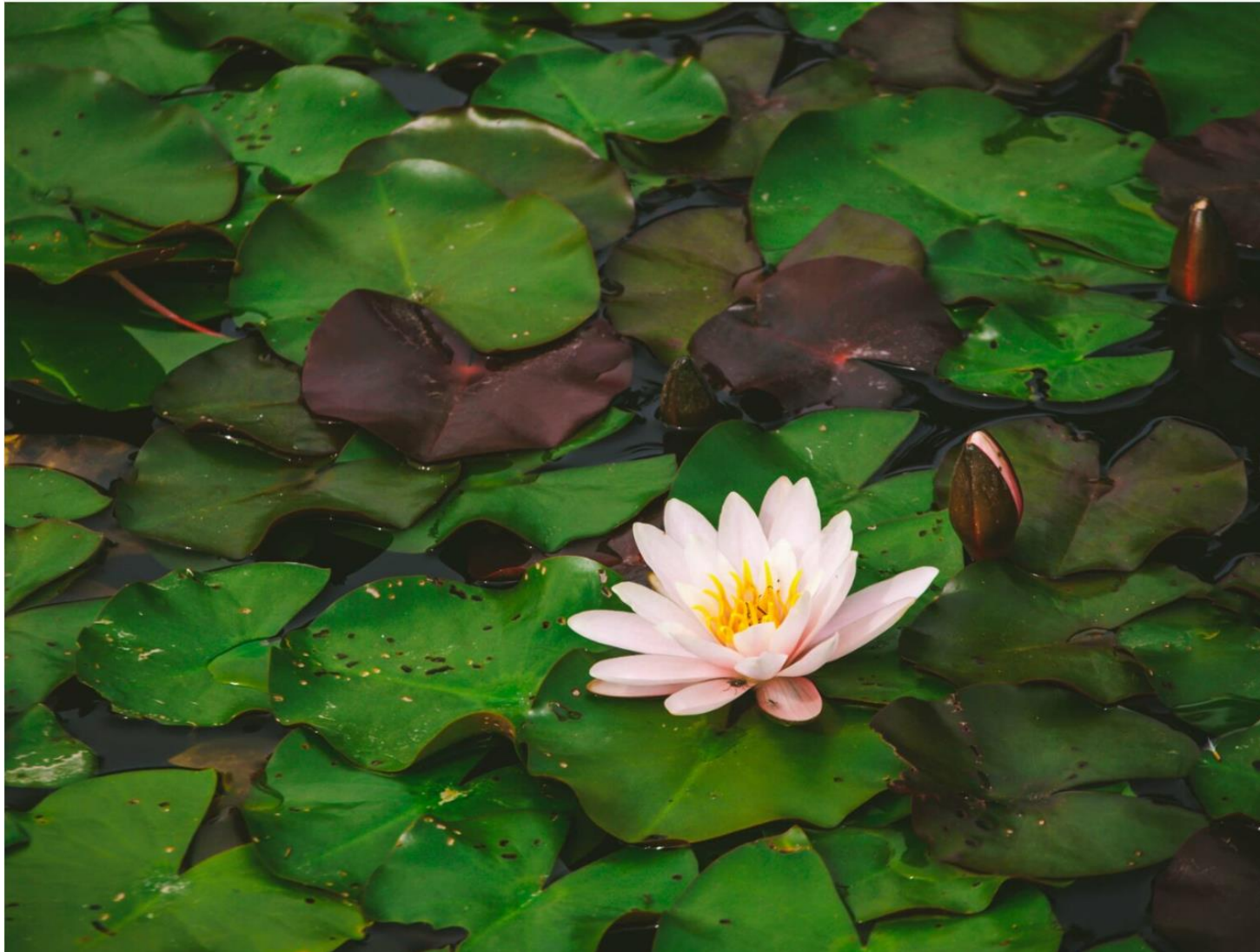
- An Essay on the Principle of Population (1798)
- *“The human population is in constant struggle with its limited resource pool.” (Mukherjee, 2016)*
- *The population is kept under control via:*
  - *Lower birth rates -- historically always very high*
  - *Higher Mortality rates -- dramatically falling because of scientific progress*

# Implications of Unchecked Population Growth



# Implications of Unchecked Population Growth

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# The size of the world population over the last 12.000 years

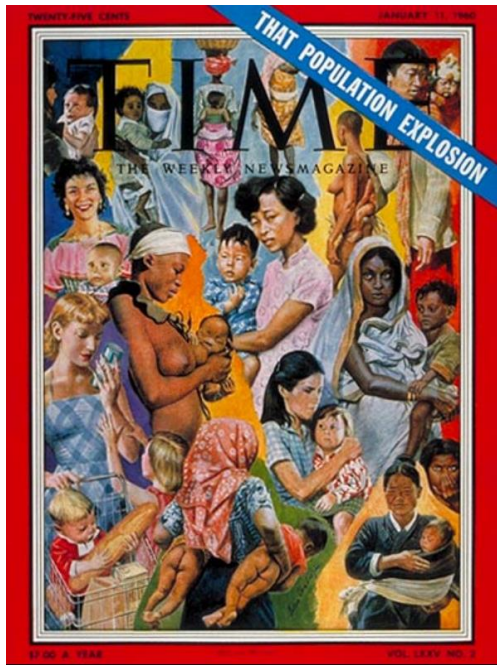
Demography

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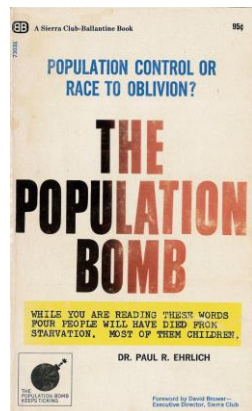


Based on estimates by the History Database of the Global Environment (HYDE) and the United Nations. On [OurWorldinData.org](https://OurWorldinData.org) you can download the annual data.  
This is a visualization from [OurWorldinData.org](https://OurWorldinData.org). Licensed under CC-BY-SA by the author Max Roser.

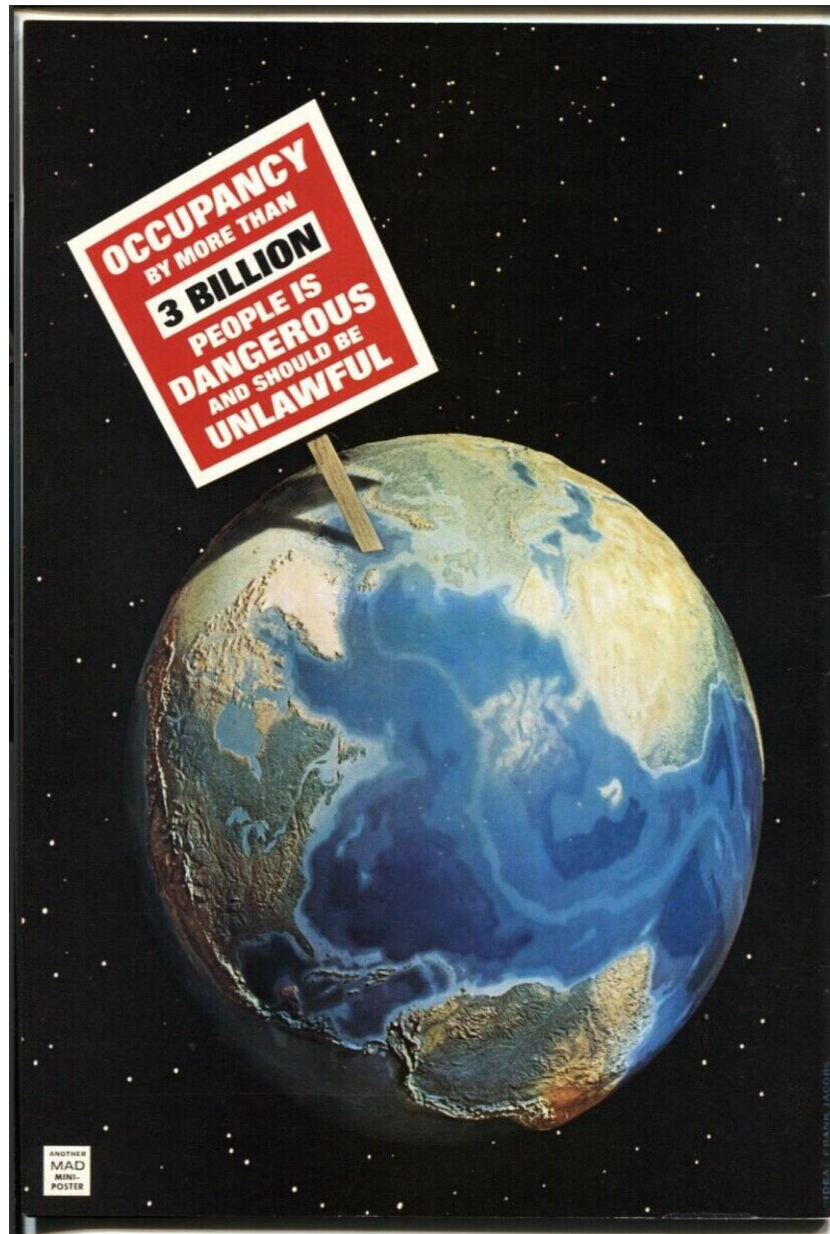




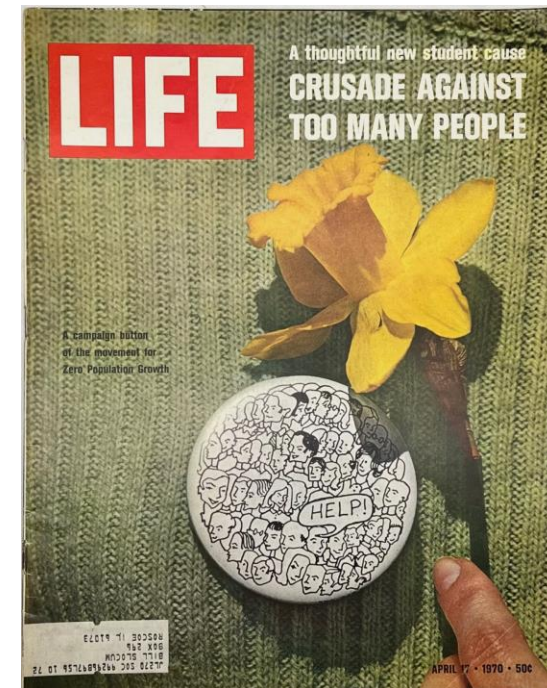
TIME January, 1960



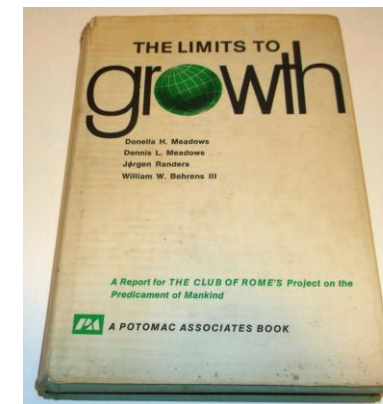
Ehrlich, 1968



MAD July, 1975



LIFE April, 1970



Meadows, 1972





## U.S. Fertility Rate Drops to Another Historic Low

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## Why does the US fertility rate keep dropping?

Women are less eager to have children

THE WALL STREET JOURNAL.

## Suddenly There Aren't Enough Babies. The Whole World Is Alarmed.

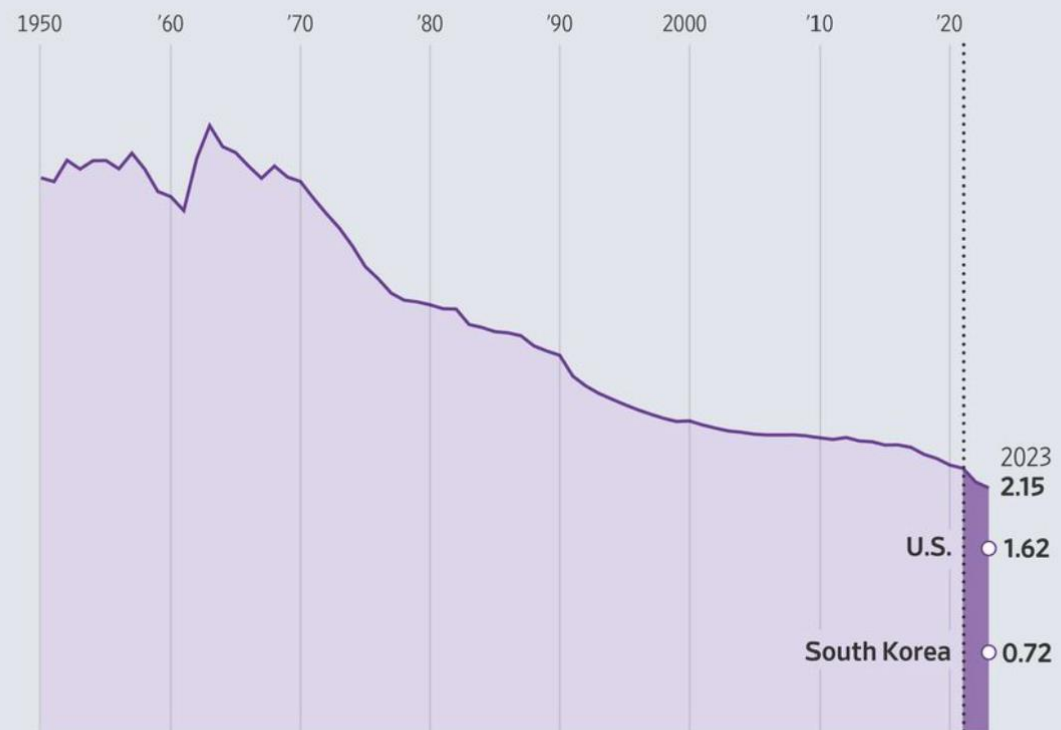
Birthrates are falling fast across countries, with economic, social and geopolitical consequences



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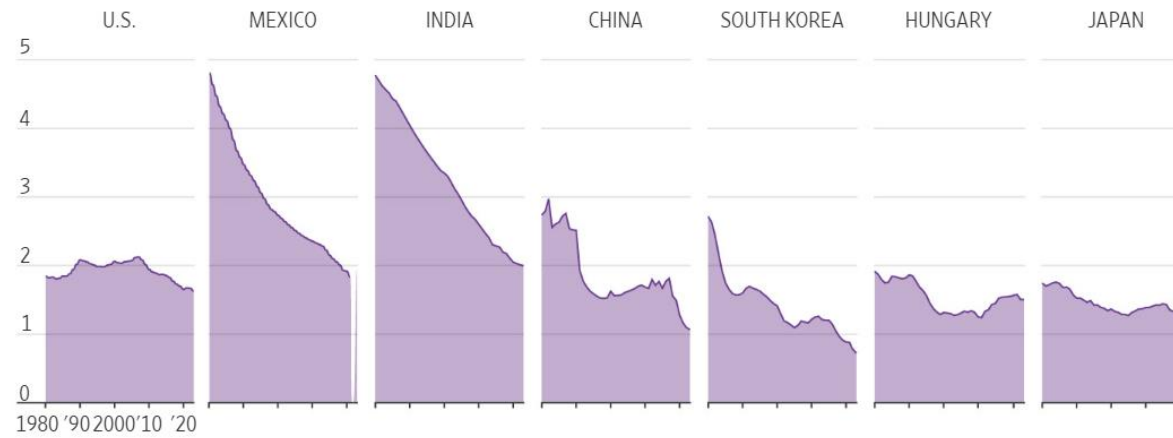
## Population Declines Spell Trouble for Public Pension Plans





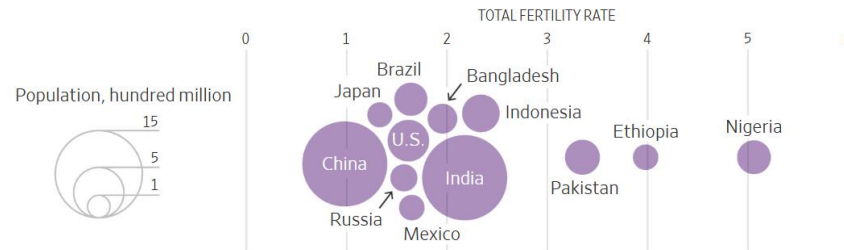
Source: Wall Street Journal

## Total fertility rates



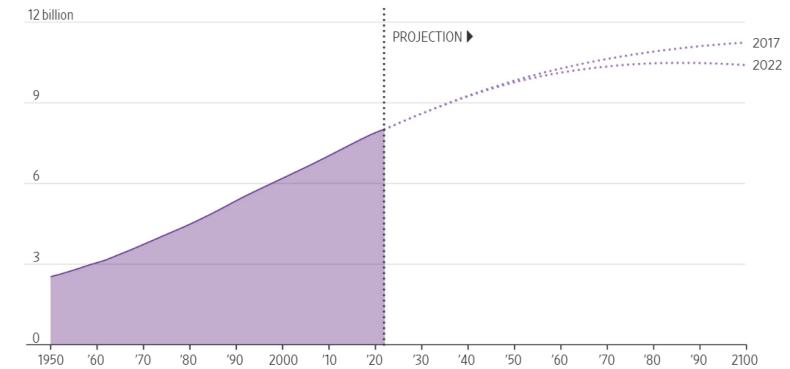
Sources: United Nations; U.S. Centers for Disease Control; national estimates compiled by Jesús Fernández-Villaverde  
Rosie Ettenheim/THE WALL STREET JOURNAL

## U.N. 2023 projections on top 12 most-populous countries and their total fertility



Source: United Nations  
Rosie Ettenheim/THE WALL STREET JOURNAL

## U.N. estimates and projections for world population



Notes: 2022 data are estimates (1950-2021) and projections (2022-2100), medium variant  
2017 data are estimates (1950-2015) and projections (2016-2100), medium variant  
Source: United Nations  
Rosie Ettenheim/THE WALL STREET JOURNAL



# The “Death Spiral” in the U.S.

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- Between 2010 and 2020, more than half of U.S. counties lost population. (The Economist, 2024)
- The population of the U.S. has grown since 2010. Why? *Answer: Immigration*
- So immigration will continue to keep the U.S. population growing, right? *Wrong!*
- Immigration has been falling since the 1990s.

# How will this affect your Plan?

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- Plan 1: uses well-calibrated assumptions.
  - Is overfunded or on track to becoming fully funded.
  - If Active Member population declines, Normal Costs and Required Contribution will decline alongside it.
- Plan 2: uses overly aggressive assumptions.
  - By the time it has paid off an amortization base, more loss bases have taken its place.
  - Even though the Normal Cost declines, amortization bases will cause the required contribution to increase as a percent of pay.

# The Great Resignation

## The Great Stay

## The Resignation Echo





# Time Affluence

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- What is it?
- The average American spends
  - 2.86 hours/day watching TV
  - 2.3 hours/day on social media
  - That's over 5 hours a day
  - 15-16 hours/day awake
- We only get 4,000 weeks & we work during 2,340 of them
- Many of us anoint work as a great source of meaning

# MissionSquare Research Institute Survey

## infographic from January 27, 2022

### Why Employees Are Leaving

#### Top 3 Reasons

#### Employees Are Considering Changing Jobs

52%

Want a higher salary or a better benefits package

47%

Feel burned out from stress of job during pandemic

36%

Need better work-life balance

#### Top 3 Reasons

#### Considering Retiring and/or Leaving the Workforce Entirely

42%

Feel burned out from stress of job during pandemic

37%

Want time to do things that bring joy

26%

Tension have faced working with the public (or students' parents)

#### Top 3 Reasons

#### Causing Increase In People Leaving Their Jobs Voluntarily

58%

Added stress due to the pandemic

52%

Concern about safety due to COVID-19

47%

People are rethinking what they want to do

# The Great Resignation

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- Forty percent of adults identify as “meaningfully bored”
- The pandemic caused us to visualize end of life more seriously and more plausibly
- Resignations included leaving the workforce, leaving public sector, retiring early and changing jobs for greener pastures
- Workforce shortages exacerbated the problem to the point where 52% of public ee’s contemplated leaving their jobs in late 2021, 1/4 of which wanted out of public sector
- 1/3 of workforce quit in both 2021 and 2022



# MissionSquare Research Institute Survey infographic from January 27, 2022



**8 in 10** say the increase in number of people leaving voluntarily has **put a strain on their workload.**

# What Happened?

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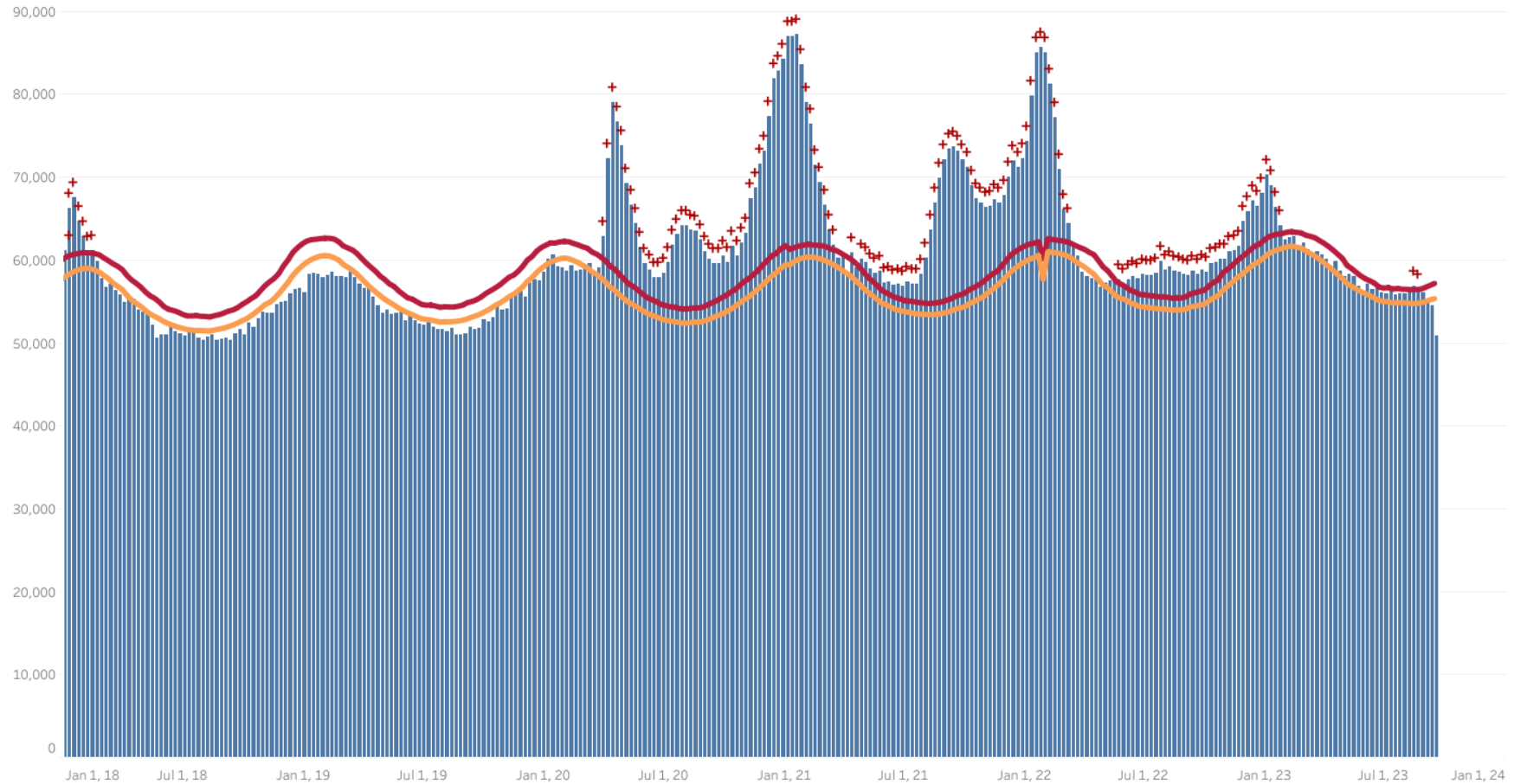
- New jobs were not the panacea expected
- Loss of seniority and less security
- Those who changed jobs were more satisfied than those who did not in 2022, but this reversed in 2023
- Labor shortages were not so short anymore
- Staffing levels were increasing
- Job responsibilities were narrowing back to 1 job, 1 EE instead of increasing the duties of existing staff

# CDC Web Archive

Select a jurisdiction:  
United States

Weekly number of deaths (from all causes)

- + indicates observed count above threshold
- g Predicted number of deaths from all causes
- average expected number of deaths
- upper bound threshold for excess deaths





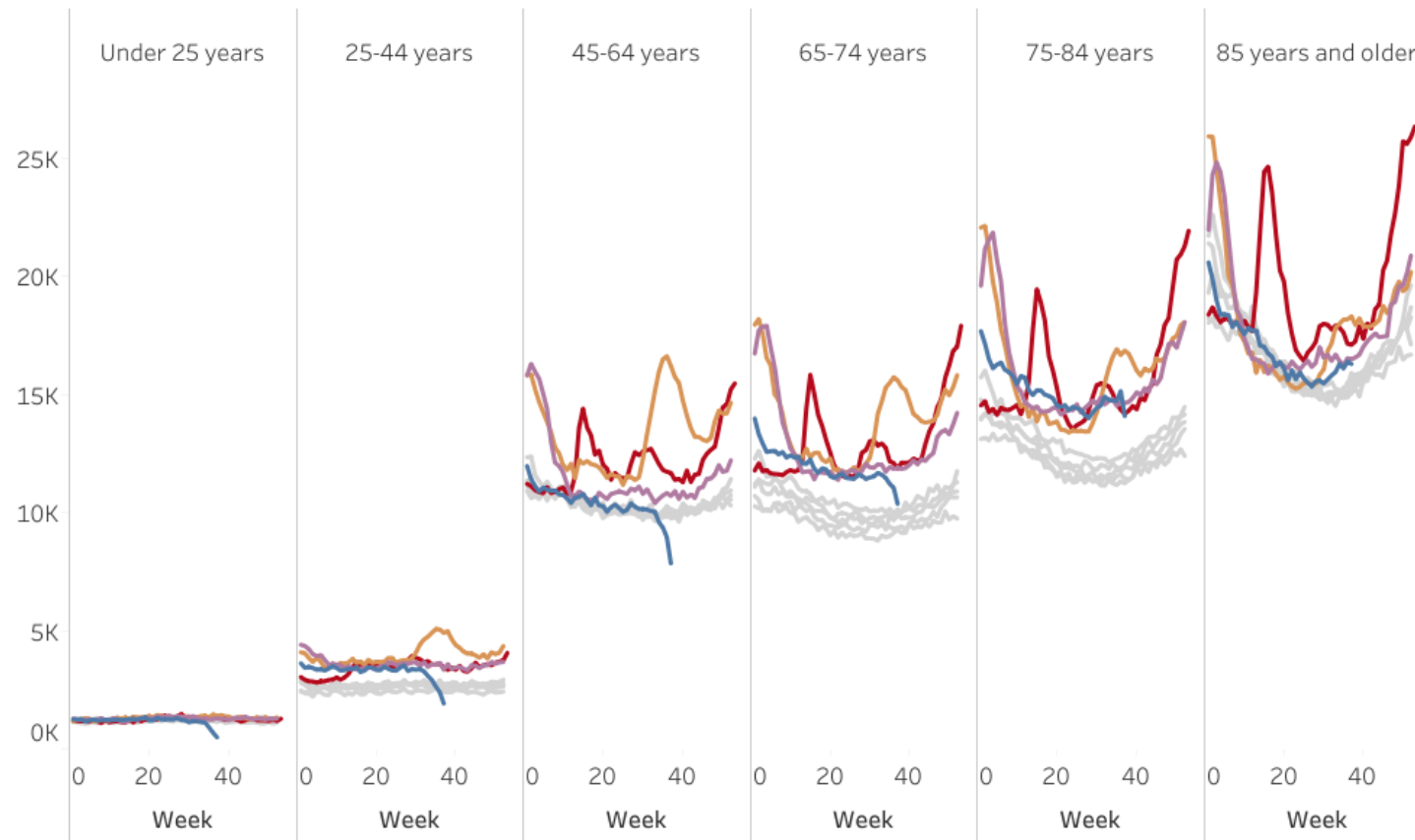
# CDC Web Archive

Select a jurisdiction:  
United States

Select age group(s):  
All

Time Period  
2023  
2022  
2021  
2020  
2015-2019

Weekly counts of deaths by age group



# Big Stay

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- Fewer job openings to entice resignations and more applicants per job opening started in 2023 coinciding with the end of the pandemic
  - More than mere coincidence
- Turnover opened greater promotional opportunities for those who stayed
  - Upskilling due to lack of depth & loss of experience in public safety especially are management problems, but are these pension problems?
  - Sustained period of inflation brought higher revenues and salary increases across all positions

# What Now?

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- Improve workplace morale to prevent another mass exodus
- Take other steps to improve retention
- Half of U.S. workforce is doing the bare minimum, so employee engagement and incentives need to improve
- Offer employees ample opportunity to learn new job skills and develop their technical acumen
- Recruiting should paint an accurate and realistic picture

# Actuarial Impacts on Pension Plans

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- Higher salaries and larger covered employee populations:
  - Increase in liabilities for ongoing actives
  - Decrease in employer contribution rate for unfunded liabilities
  - Increase in normal cost dollar contributions
- Higher number of terminations and retirements than assumed probably already recognized in pension liabilities
- Promotions at or near retirement eligibility will create a lull in retirements due to employees wanting to reap the benefits of a higher final average compensation



# Resignation Echo

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- Employees who changed jobs have uncertainty and remorse about pandemic choices
- Creeping feeling that 2018-19 were the Good Ole Days
- Seeking the return to “normalcy”
- Make up for lost time
- Staffing concerns will far outweigh pension funding concerns should turnover echo the Great Resignation



# Debbie Downer Perspective



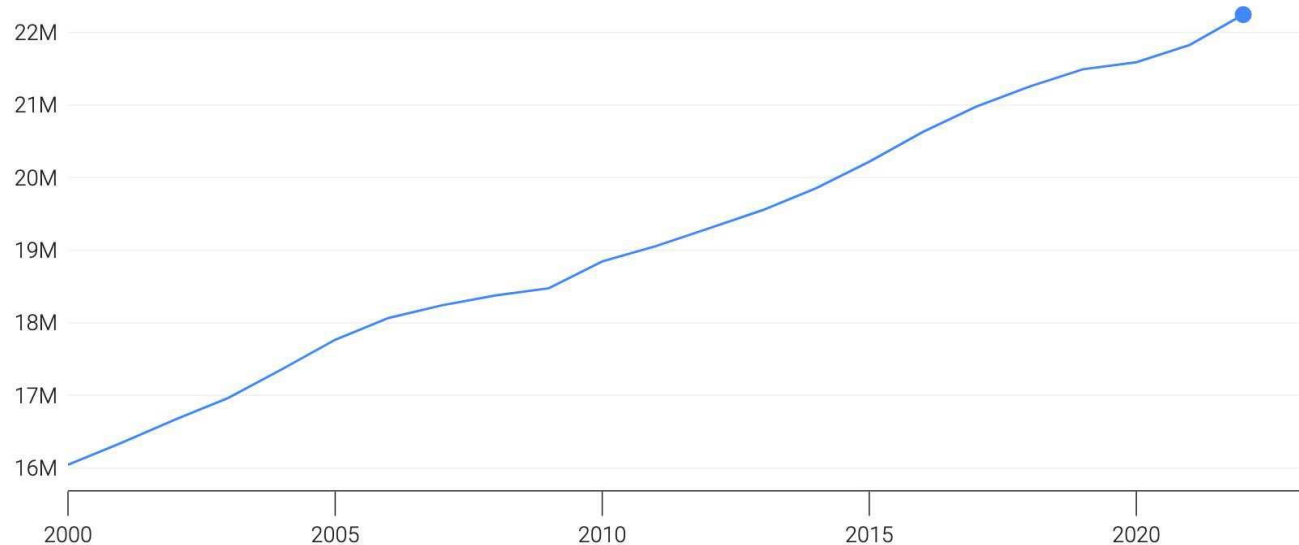


# Positive Polly Perspective

# Positive Polly - Glass half FULL

## Florida population from 2000 to 2022

Florida had an official estimated population of 22,244,823 on July 1, 2022



Source: U.S. Census Bureau (Population Estimates Program)

Neilsberg

- Some areas of the United States will be worse off than others – Not bad everywhere



# Positive Polly – Glass half FULL

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- **Other generations will need to fill the gap**
  - AI can help
  - Fewer with childcare needs
  - Remote work
- **Next Man Up Mentality**



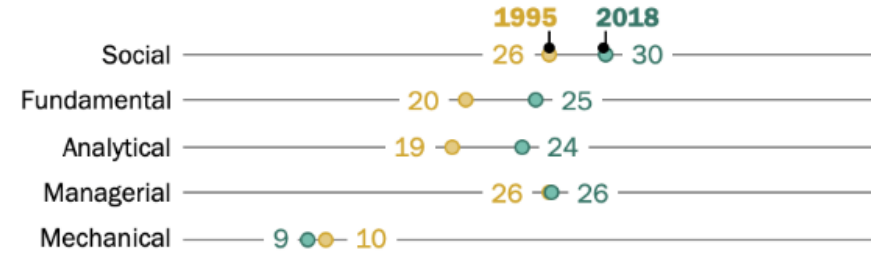
# Positive Polly – Glass half FULL

- Net immigration increases can increase overall workforce
- Foreign-born workforce is not in all low-skill jobs

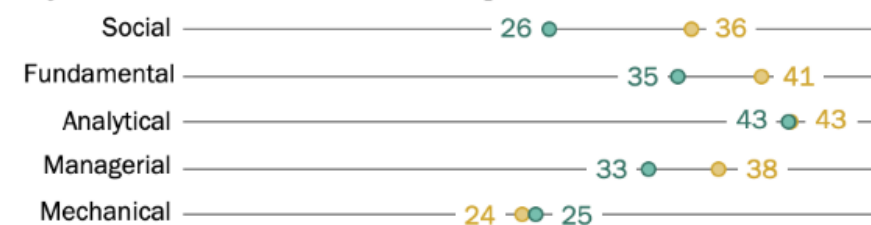
## Foreign-born workers made significant gains in high-skill occupations, moved away from low-skill jobs

% of foreign-born workers employed ...

*In jobs where \_\_\_\_ skills are MOST important*



*In jobs where \_\_\_\_ skills are LEAST important*



Note: Occupations are ranked by the ratings for a skill, and those in the highest quartile of a skill are ones in which that skill is "most important." A skill is "least important" in occupations in the lowest quartile. An occupation may rank at the top or the bottom with respect to more than one skill. Full-time and part-time workers ages 16 and older. Source: Pew Research Center analysis of O\*NET (Version 23) and 2018 Current Population Survey (IPUMS).

PEW RESEARCH CENTER

# Positive Polly – MIND THE GAP

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## What can boards do?

- **Pension Plan Advocacy**
  - For retention of smaller labor force
  - Recommend changes to combat the gap

# Positive Polly – Extending the DROP

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Member

- Larger portion of Benefit in Lump Sum
- More Choice

City

- Better Succession Plans
- Typical actuarial impacts are marginal



# Positive Polly – MIND THE GAP

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## What can boards do?

- **Reasonable Assumptions / Methods**
  - **Lower Amortization Periods**
  - **Frequent Experience Studies**
  - **Keep intergenerational equity in mind**

# Positive Polly – Amortization Policy Models

## Experience Gain/Loss

- 15 to 20 years

## Assumption or Method Changes

- 15 to 25 years

## Benefit Changes

- Affecting active employees: lesser of future service or 15 years
- Affecting retired employees: lesser of life expectancy or 10 years

## Early Retirement Incentives

- 5 years or less

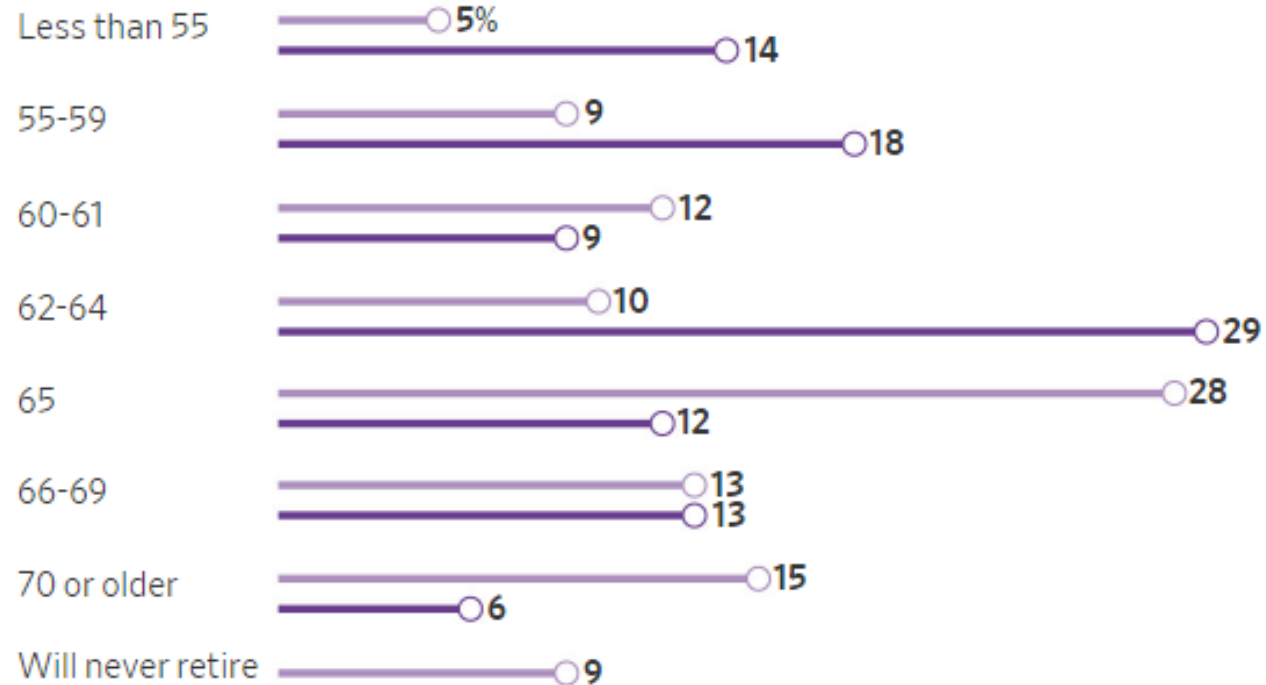


*The periods shown above are considered “Model” practices by the CCA White Paper.*

# Positive Polly – Importance of Experience Study

## Expected vs. actual retirement age

■ Workers ■ Retirees



Source: Employee Benefit Research Institute and Greenwald Research survey of 2,521 U.S. adults ages 25 and older, conducted online Jan. 2-31, 2024; margin of error: +/-2.8 pct. pts.

# Positive Polly – Intergenerational Equity Mindset

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- Funding Policy
  - Creation of Credit Balances when times are good – rainy day Fund
  - Asset Smoothing Policy
  - Amortization Policy – MORE smoothing
  - Discount Rates - based on asset allocation and capital market expectations
- Making recommended changes timely – no can kicking!
- Whenever confused – think balance!