CONFERENCE OF CONSULTING ACTUARIES

CCA Annual Meeting 2025

SESSION 306

# The Choices Facing Aging Societies

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# Speakers



**Tom Terry,** FSA, MAAA, FCA, EA
CEO, The Terry Group

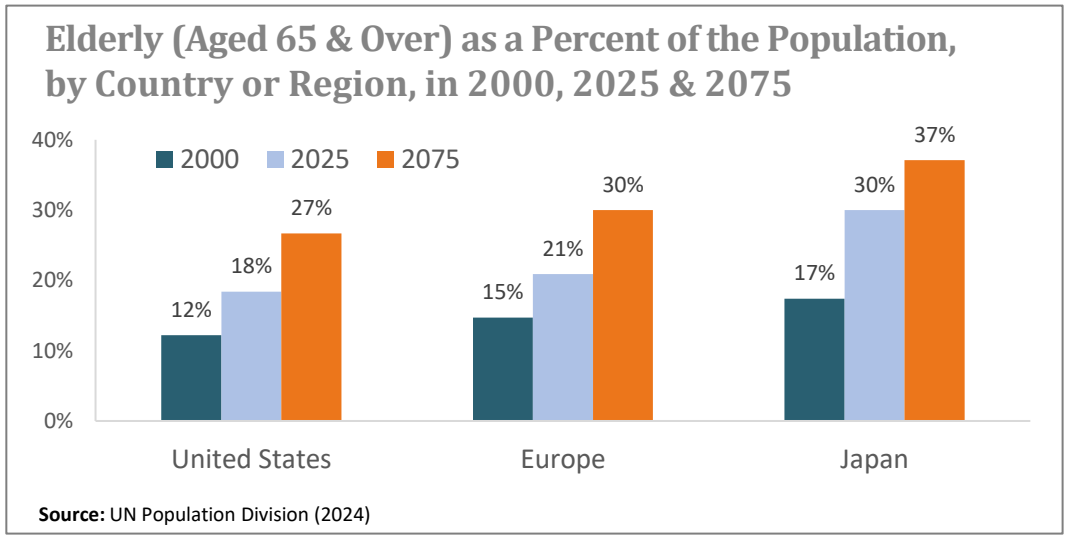


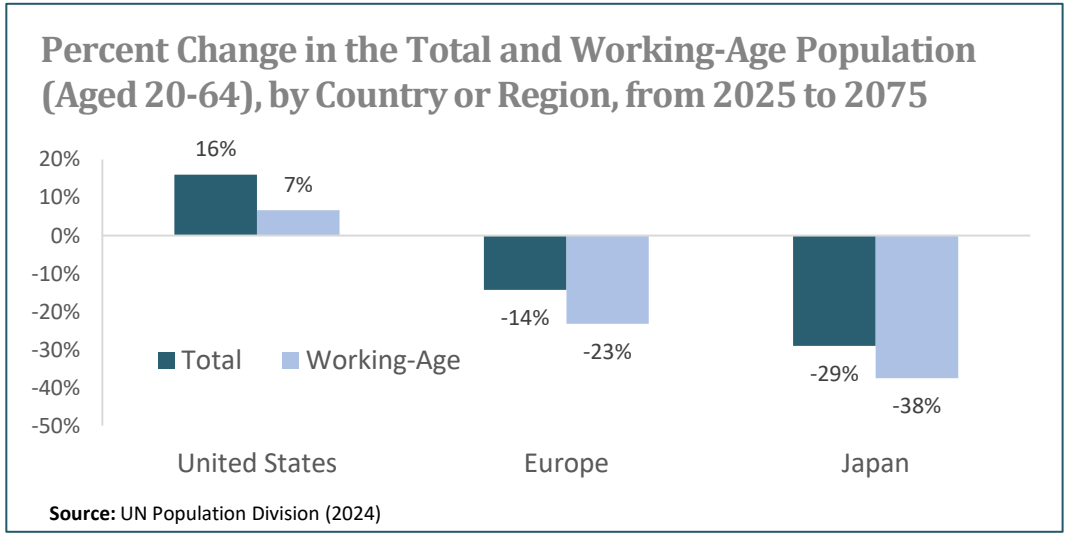
**Richard Jackson, Ph.D.**
President, Global Aging Institute

# The Demographic Transformation

# Shades of Gray

- The United States, along with the rest of the developed world, has entered an unprecedented new era of population aging and population decline.
- Although the extent of the demographic transformation varies considerably from country to country, none will be able to escape the daunting economic, fiscal, and geopolitical challenges it poses.



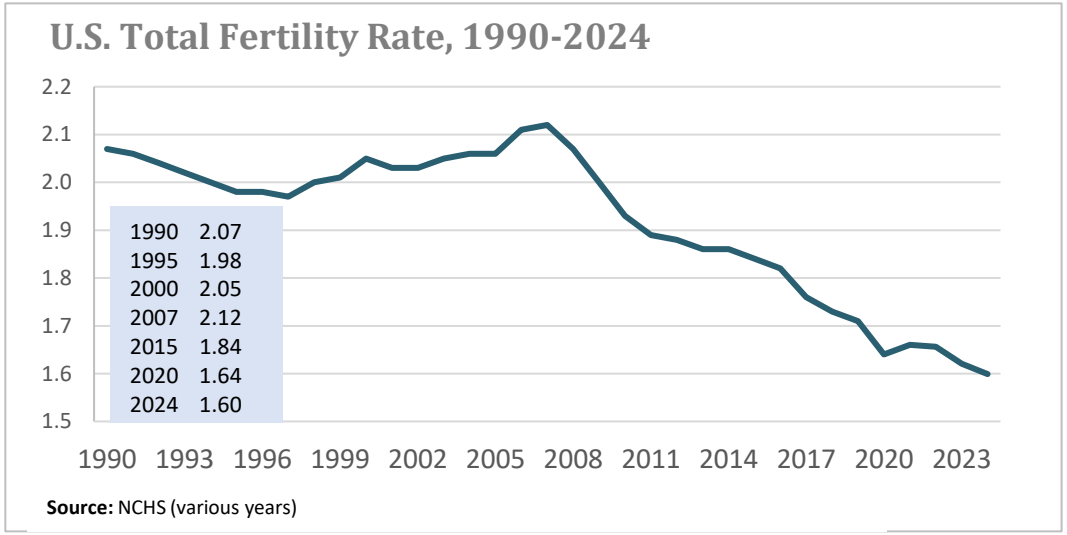



# The Forces behind the Transformation

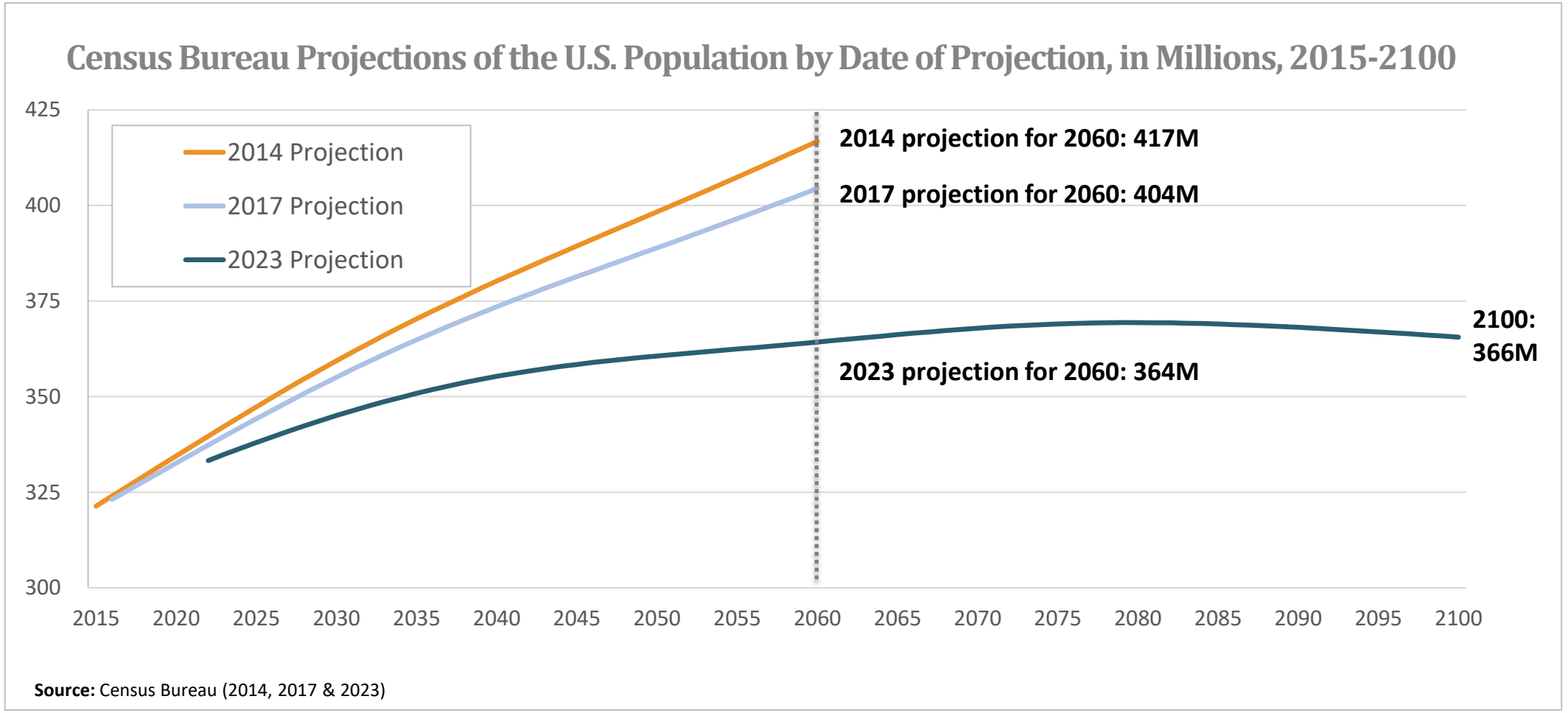
- There are two forces behind the demographic transformation now sweeping the developed world.
- The first and intuitively more obvious force is rising life expectancy. People are living longer, and this increases the relative number of old in the population.
- The second and quantitatively more important force is falling fertility. People are having fewer babies, and this decreases the relative number of young in the population.
- Until the Great Recession, America's comparatively high fertility rate gave it an important demographic advantage over other developed countries. Since then its fertility rate has collapsed, erasing the advantage.

| | Life Expectancy at Birth | | | | Total Fertility Rate | | | |
|---|---|---|---|---|---|---|---|---|
| | 1960 | 1980 | 2000 | 2023 | 1960 | 1980 | 2000 | 2023 |
| **Canada** | 71 | 75 | 79 | 83 | 3.9 | 1.7 | 1.5 | 1.3 |
| **France** | 70 | 74 | 79 | 83 | 2.7 | 2.0 | 1.9 | 1.6 |
| **Germany** | 69 | 73 | 78 | 81 | 2.4 | 1.5 | 1.4 | 1.4 |
| **Italy** | 69 | 74 | 80 | 84 | 2.4 | 1.6 | 1.3 | 1.2 |
| **Japan** | 68 | 76 | 81 | 85 | 2.0 | 1.7 | 1.4 | 1.2 |
| **UK** | 71 | 74 | 78 | 81 | 2.7 | 1.9 | 1.6 | 1.6 |
| **US*** | 70 | 74 | 77 | 78 | 3.6 | 1.8 | 2.0 | 1.6 |

**Source:** UN Population Division (2024) * U.S. data for 2023 are from NCHS.



# A Rapidly Deteriorating U.S. Demographic Outlook




**Source:** Census Bureau (2014, 2017 & 2023)

# Challenges Facing the Developed Countries

# The Economic Challenge: More slowly growing or contracting working-age populations threaten to become a growing drag on economic growth.

- Slower growth in the working-age population will, all other things being equal, translate directly into slower growth in total employment and GDP.
- Unless productivity growth increases at least as fast as employment growth declines, Japan and some European countries may face "secular stagnation"—that is, zero growth in real GDP across the business cycle. Even in the United States, GDP growth could fall to less than half of its postwar average.
- The current hype about AI notwithstanding, there are many reasons to think that productivity growth is likely to remain sluggish in aging societies.

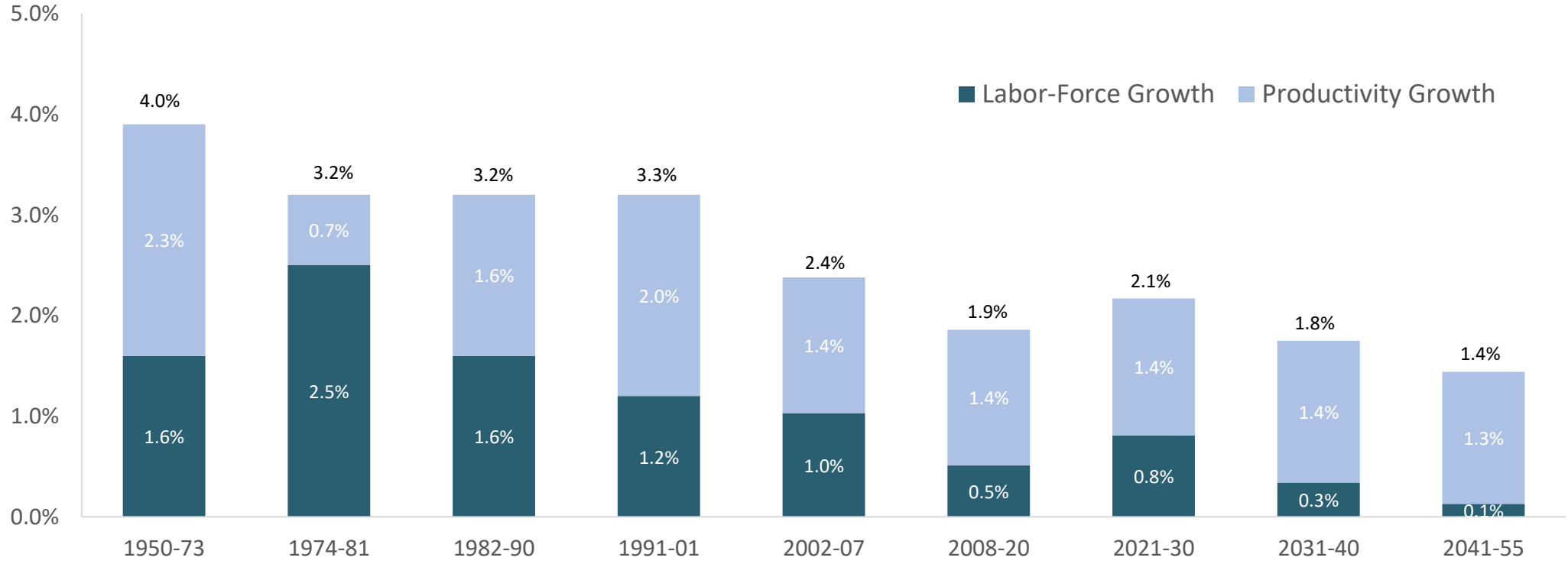
**Growth Rate in the Working-Age Population (Aged 20-64), by Country and Decade, 1980s-2040s**

| | 1980s | 1990s | 2000s | 2010s | 2020s | 2030s | 2040s |
|---|---|---|---|---|---|---|---|
| **Canada** | 1.7% | 1.1% | 1.3% | 0.7% | 0.4% | 0.4% | 0.2% |
| **France** | 1.0% | 0.4% | 0.6% | -0.3% | 0.0% | -0.2% | -0.2% |
| **Germany** | 1.1% | 0.3% | -0.5% | 0.1% | -0.9% | -0.7% | -0.4% |
| **Italy** | 0.9% | 0.2% | 0.2% | -0.3% | -0.7% | -1.4% | -1.2% |
| **Japan** | 0.7% | 0.4% | -0.4% | -1.0% | -0.6% | -1.3% | -1.3% |
| **UK** | 0.7% | 0.4% | 0.7% | 0.4% | 0.4% | 0.3% | 0.0% |
| **US** | 1.3% | 1.2% | 1.1% | 0.6% | 0.2% | 0.3% | 0.1% |

**Source:** UN Population Division (2024)

# A Slow-Growth Future for the U.S. Economy

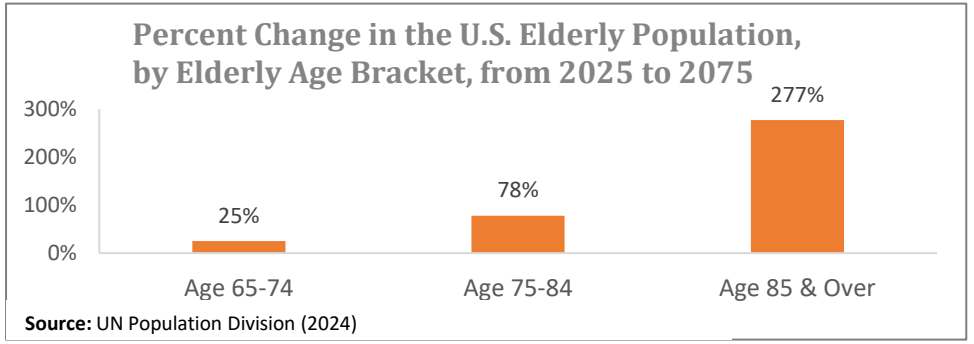
## Average Growth Rate in Real Potential U.S. GDP, by Period and Component, History and CBO Projection, FY 1950-2055



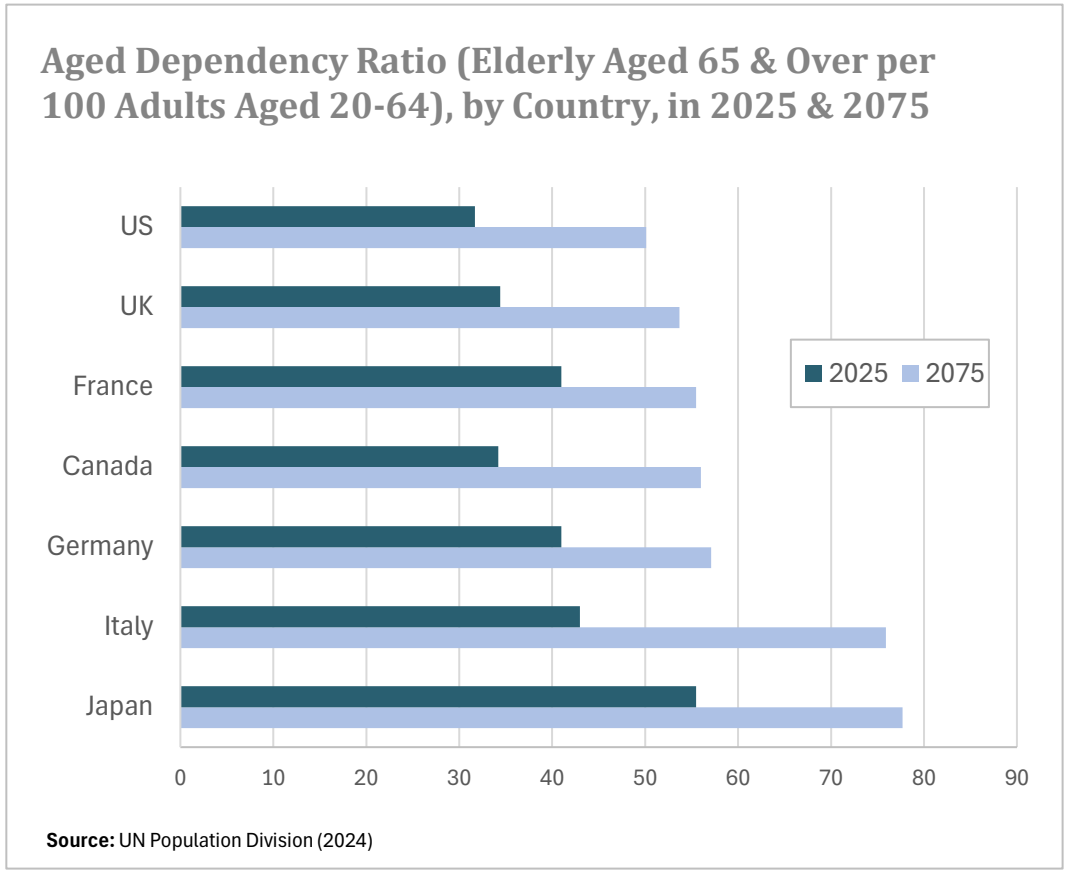

**Source**: CBO (July 2021 & March 2025)

# The Fiscal Challenge: Even as economic growth slows, the rising cost of retirement and health-care programs will drive up fiscal burdens.

- Falling fertility and rising life expectancy translate into a rising aged dependency ratio, which in turn translates into a rising cost rate for PAYGO benefit programs.
- In the case of health care, there are further age-related multipliers. The elderly consume more health care per capita than the nonelderly, the older the elderly are the more they consume, and the oldest elderly age brackets are the fastest growing of all.



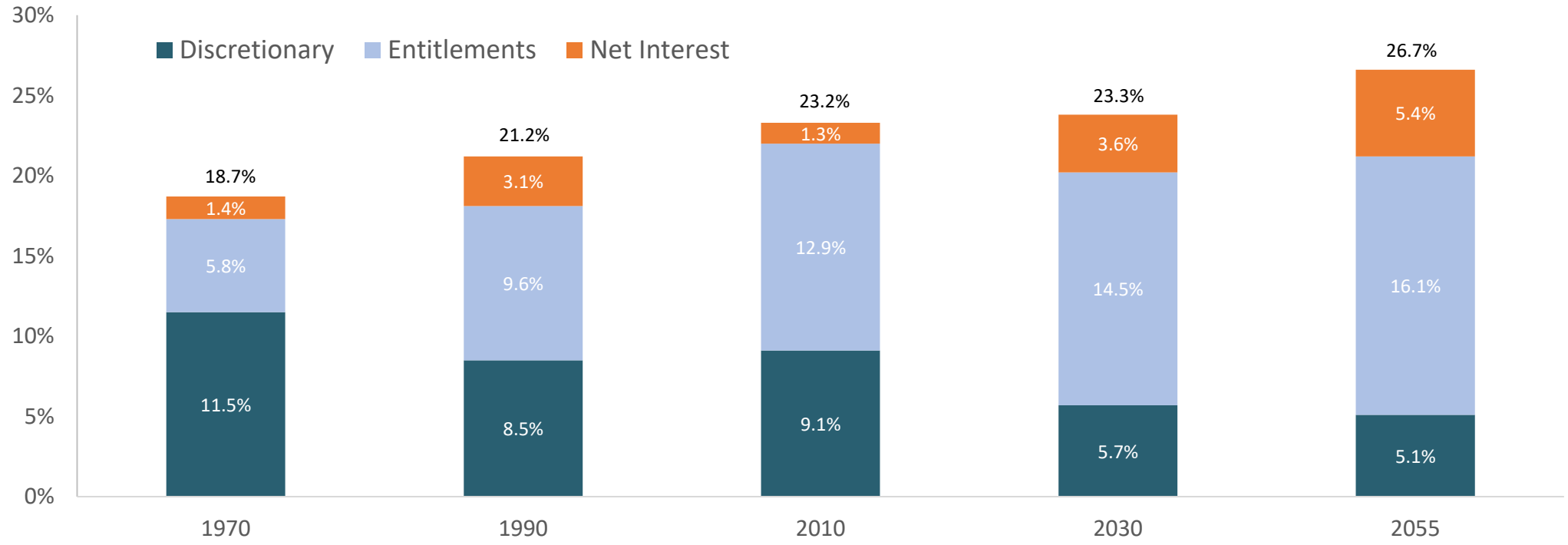

**Source:** UN Population Division (2024)




**Source:** UN Population Division (2024)

# Entitlements and the Federal Budget

## Federal Spending by Category as a Percent of GDP, History and CBO Projection, FY 1970-2055

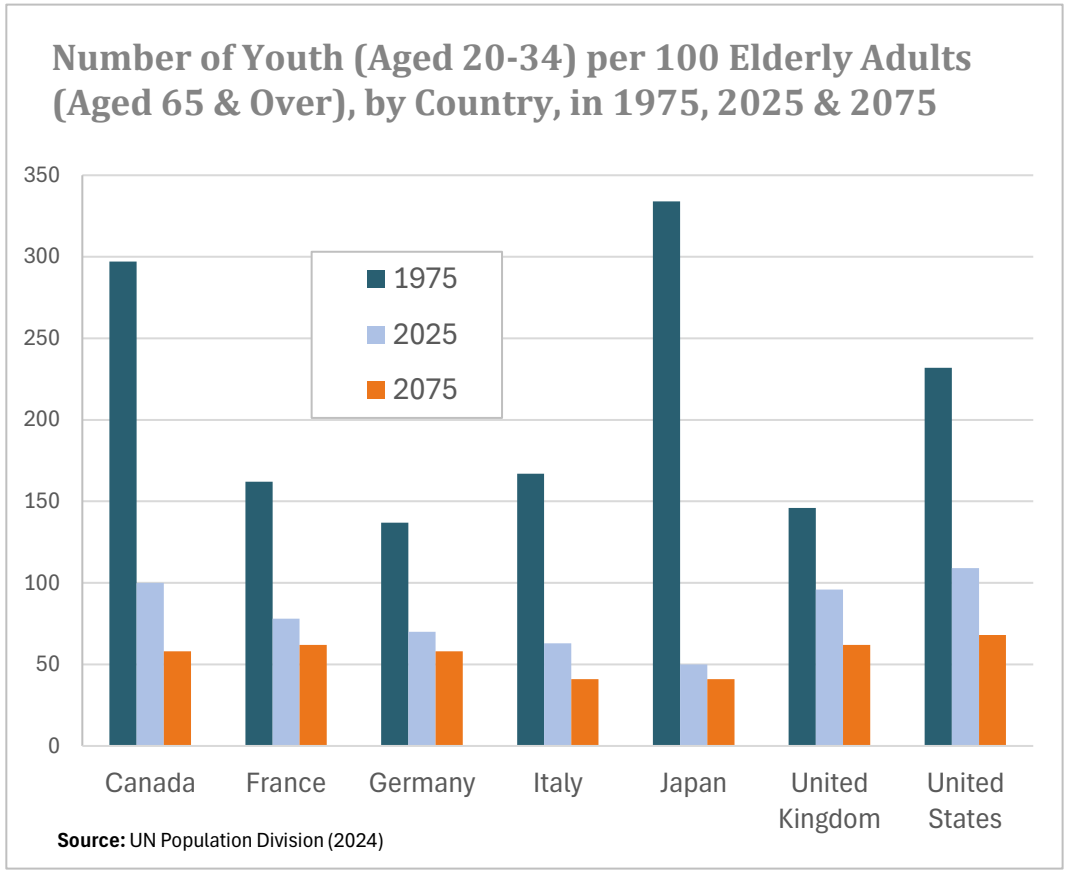



**Note:** The CBO's "extended baseline" assumes that scheduled Social Security and Medicare benefits will be paid in full; entitlement spending is net of offsetting receipts.

**Source:** CBO (January 2025 & March 2025)

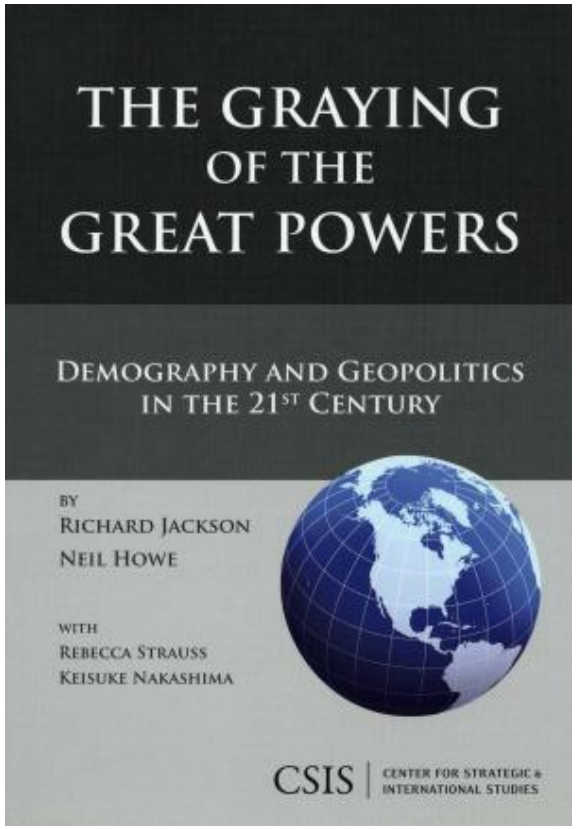
# Shifts in business psychology and social mood could exacerbate the economic and fiscal challenges facing aging societies.

- With domestic markets growing more slowly or even contracting, we may see more cartel behavior to protect market share and more restrictive rules on hiring and firing to protect jobs. We may also see increased pressure on governments to block foreign competition.
- Shifts in business psychology could be mirrored by a broader shift in social mood. Aging societies may be more risk averse, have shorter time horizons, and be less willing to make investments with long-term payoffs.
- A robust statistical literature establishes that extremely youthful societies are often dysfunctional. Extremely aged societies may also prove dysfunctional in some ways, favoring consumption over investment, the past over the future, and the old over the young.



# The Geopolitical Challenge: An aging developed world may lack the capacity and the will to maintain today's rules-based world order.

- Although population size alone does not determine geopolitical stature, population size and economic size together are potent twin engines of national power.
- They underpin the hard power of national defense and the semi-hard power of foreign assistance. They may also affect the "soft power" that flows from dominance of global business and the global culture.
- In coming decades, the developed world will be shrinking demographically and economically relative to a faster-growing emerging world.
- While history has many examples of small powers that exercised outsized geopolitical power, it has few if any of geopolitically rising powers that were at the same time demographically and economically declining powers.



# Strategies for Addressing Population Aging

# A Schema of Possible Strategies

## Strategies to Limit the Extent of Population Aging

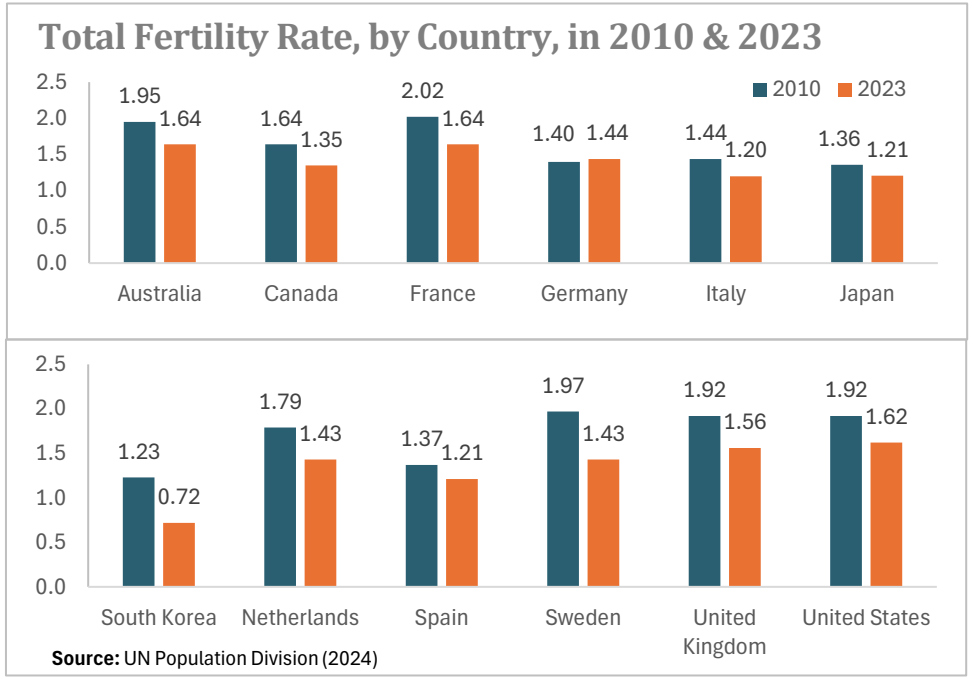
- Encourage higher birthrates
- Increase net immigration

## Strategies to Boost Economic Growth Assuming Any Given Degree of Population Aging

- Encourage longer work lives
- Reduce PAYGO pension costs
- Slow health-care cost growth
- Leverage globalization

# Strategy: Encourage Higher Birthrates

- Many developed countries have introduced policies that are explicitly or implicitly designed to encourage higher birthrates, from "baby bonuses" and tax breaks for families with children to subsidized daycare and paid maternity and paternity leave.
- The impact on birthrates has at most been minor. Cash and tax incentives appear to have no appreciable effect. And while policies that focus on helping parents balance work and family responsibilities boosted birthrates in countries like France and Sweden for a while, their effect has faded over time.
- The fact that there is a persistent gap between desired fertility and actual fertility in most developed countries suggests that there may be a role for public policy in eliminating obstacles to achieving desired family size.
- As a strategy for addressing population aging, however, pronatal policies are clearly a blunt instrument. Birthrates are now falling steeply in virtually every developed country, regardless of the types of pronatal policies they have in place.

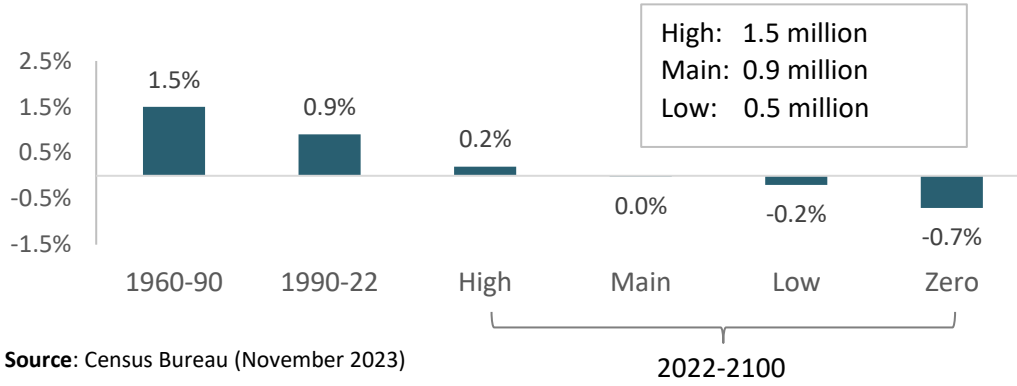



**Source:** UN Population Division (2024)

# Strategy: Increase Net Immigration

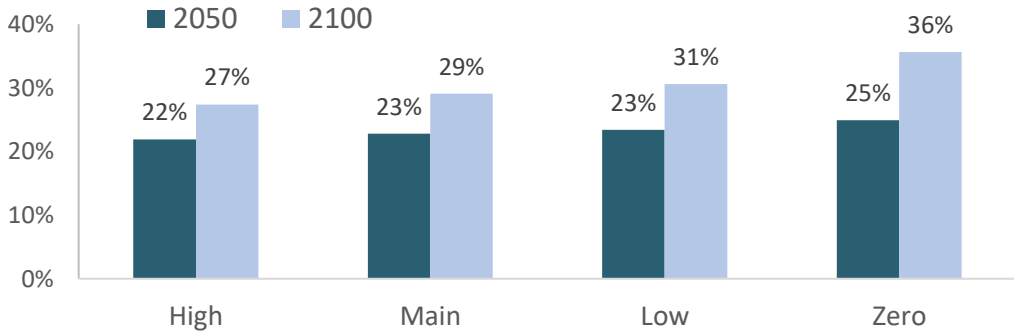
- In a low-fertility environment, immigration becomes an increasingly important determinant of future population growth rates and age structures.
- Immigration Paradox: The lower the fertility rate, the greater the potential economic benefit of higher immigration. Yet the lower the fertility rate, the more difficult it may be to assimilate any given level of immigration and the more socially and culturally threatening immigration may appear.
- A few developed countries, notably Australia and Canada, have made immigration the lynchpin of their strategies for addressing the aging challenge. Most developed countries, however, are now moving toward more restrictive immigration policies.

**Growth Rate in U.S. Working-Age Population (Aged 20-64), by Period and Census Immigration Scenario, 1960-2100**



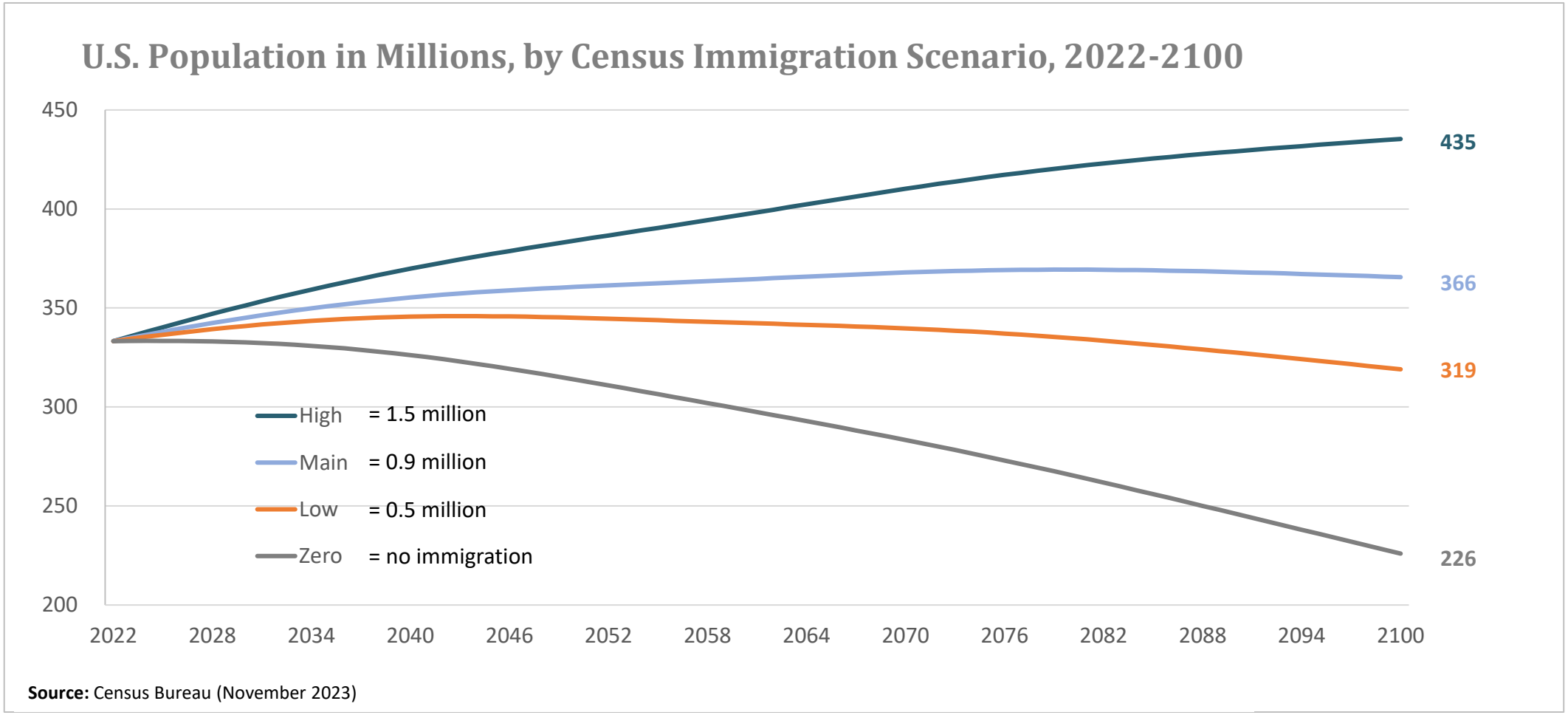

**Source**: Census Bureau (November 2023)

**Elderly (Aged 65 & Over) as a Share of the U.S. Population, by Census Immigration Scenario, in 2050 & 2100**




**Source**: Census Bureau (November 2023)

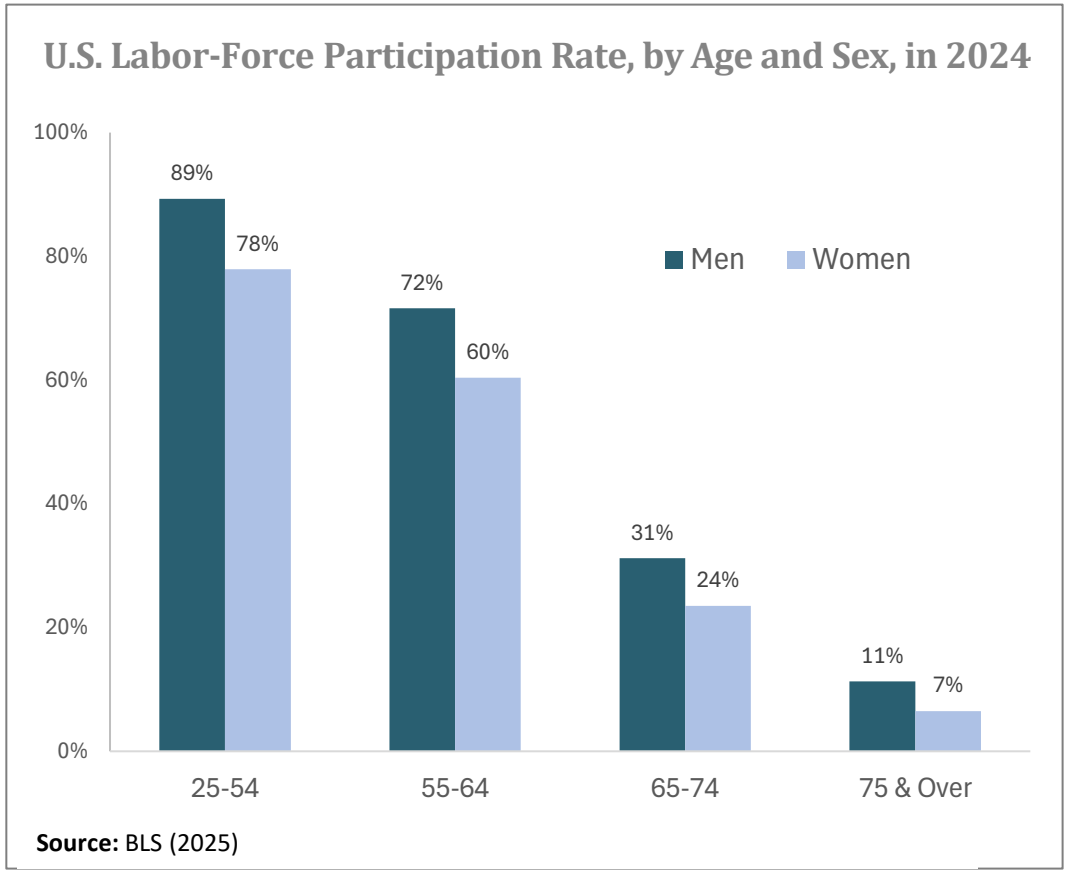
# Total U.S. Population under Different Immigration Assumptions




**Source:** Census Bureau (November 2023)

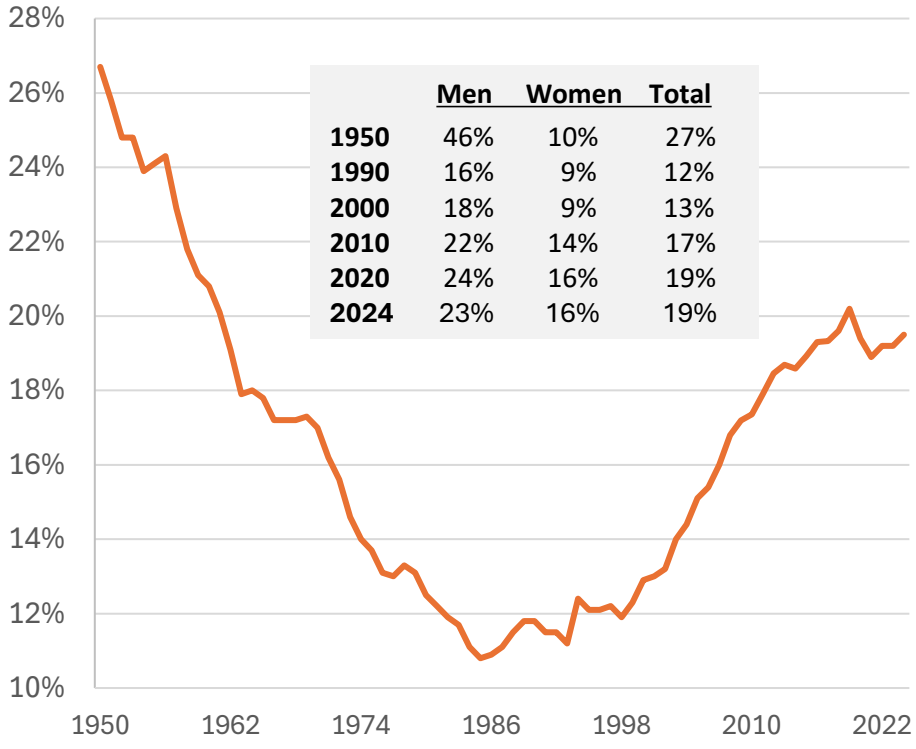
# Strategy: Encourage Longer Work Lives

- The elderly are not only the fastest growing segment of the population in today's developed countries, but also the most underutilized human resource.
- Longer work lives could help to offset the drag that slower growth in the population in the traditional working years will otherwise put on economic growth.
- Both life spans and health spans have risen dramatically since today's retirement institutions were first put in place, while the structure of the economy has also changed in ways that make later retirement feasible.
- Policies that encourage longer work lives, however, will need to take into account the wide differences by income and educational attainment in ability to work at older ages.



# Elderly Labor-Force Participation: A Promising Turnaround

## Labor-Force Participation Rate of the U.S. Elderly (Aged 65 & Over), 1950-2024




| | Men | Women | Total |
|---|---|---|---|
| **1950** | 46% | 10% | 27% |
| **1990** | 16% | 9% | 12% |
| **2000** | 18% | 9% | 13% |
| **2010** | 22% | 14% | 17% |
| **2020** | 24% | 16% | 19% |
| **2024** | 23% | 16% | 19% |

**Source:** BLS (various years)

## Labor-Force Participation Rate of Older Men, by Age and Country, in 1970, 1995 & 2024

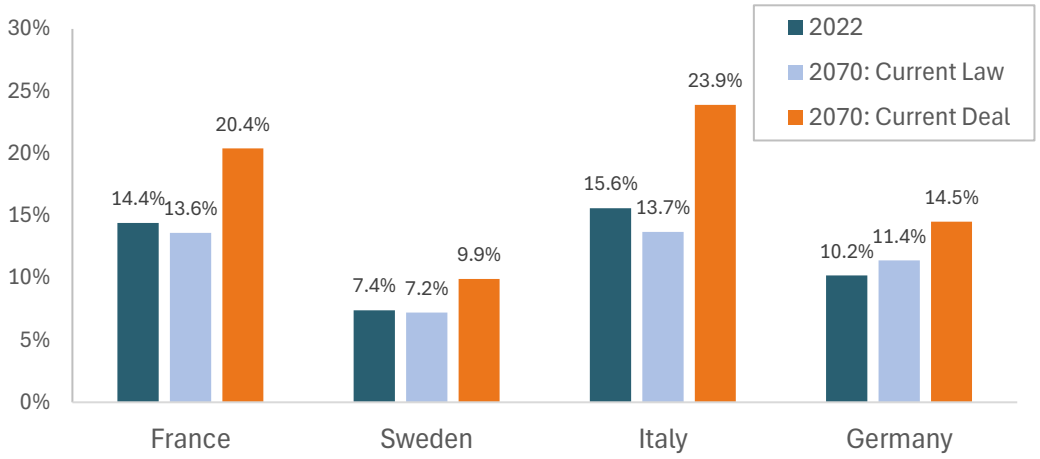
| | Age 60-64 | | | Age 65 & Over | | |
|---|---|---|---|---|---|---|
| | **1970*** | **1995** | **2024** | **1970*** | **1995** | **2024** |
| **Australia** | 77% | 47% | 68% | 22% | 9% | 20% |
| **Canada** | 67% | 43% | 65% | 15% | 10% | 19% |
| **France** | 53% | 11% | 46% | 13% | 3% | 5% |
| **Germany** | 72% | 28% | 73% | 17% | 4% | 12% |
| **Italy** | 48% | 31% | 59% | n.a. | 6% | 8% |
| **Japan** | 81% | 75% | 87% | 49% | 37% | 35% |
| **Netherlands** | 74% | 21% | 79% | 11% | 5% | 19% |
| **Sweden** | 80% | 57% | 76% | 29% | 14% | 27% |
| **United Kingdom** | n.a. | 50% | 64% | na | 8% | 15% |
| **United States** | 75% | 53% | 64% | 27% | 17% | 23% |

**Source**: OECD Data Explorer (2025) *Netherlands = 1971, France = 1975, Canada =1976

# Strategy: Reduce PAYGO Pension Costs

- Reducing the fiscal burden of rising old-age benefit spending is an obvious response to the aging challenge.
- Over the past few decades, many developed countries have raised full-benefit retirement ages and trimmed benefit formulas. Some have gone further and added automatic stabilizers to their state pension systems:
  - Ten countries in the EU have indexed their full-benefit retirement ages to life expectancy.
  - A few countries, including Italy, Norway, and Sweden, have adopted NDC systems in which benefits are indexed both to life expectancy and to the growth rate in taxable payroll.
  - Germany and Japan have added stabilizers to their traditional DB systems that have much the same effect.
- In some European countries, reforms have neutralized the impact of population aging on state pension systems.

## Government Pension Spending as a Percent of GDP, by Country, in 2022 and EC Projections for 2070




**Source:** *2024 Ageing Report* (EC, 2024)

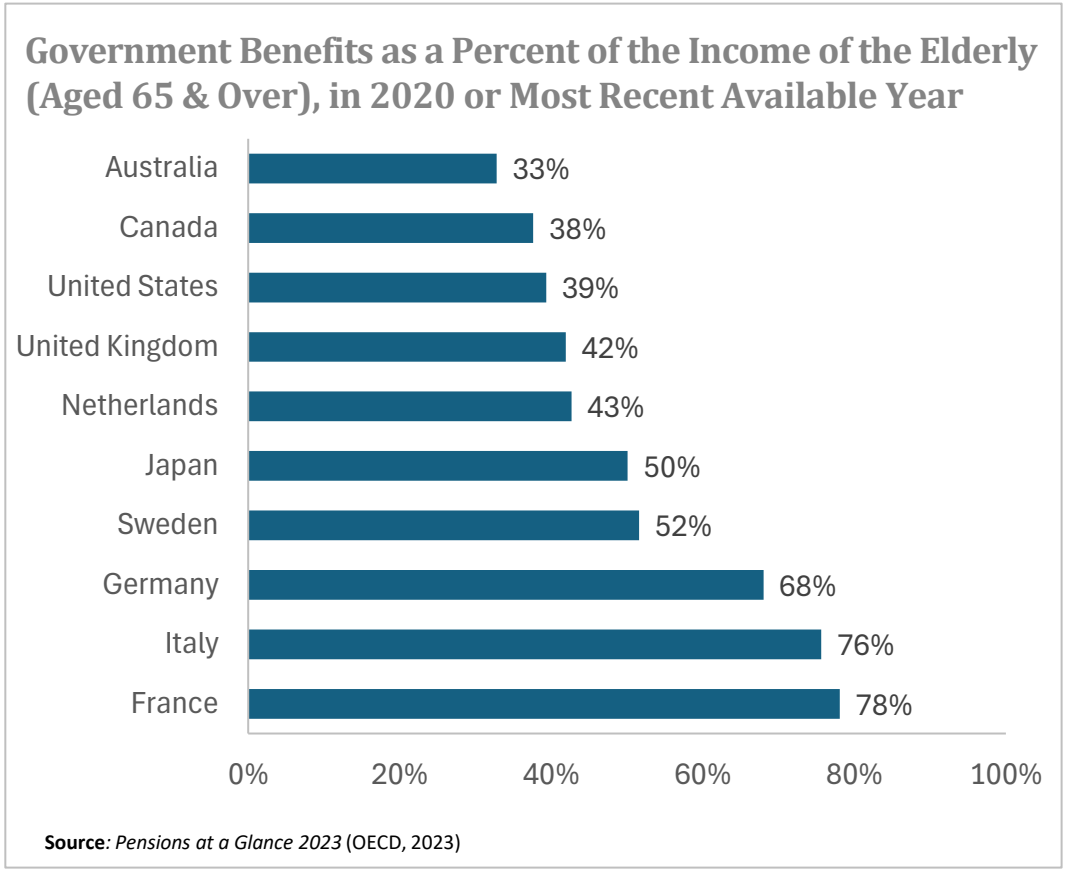
* The "Current Deal" projection assumes no change in relative benefit levels, retirement ages, and labor-force participation rates.

## Automatic Stabilizers in Swedish Pension System

- The notional return on account balances equals average wage growth.
- Annuities are calculated based on cohort life expectancy at retirement.
- An "automatic balancing mechanism" adjusts indexation of annuities if the system drifts out of long-term actuarial balance.

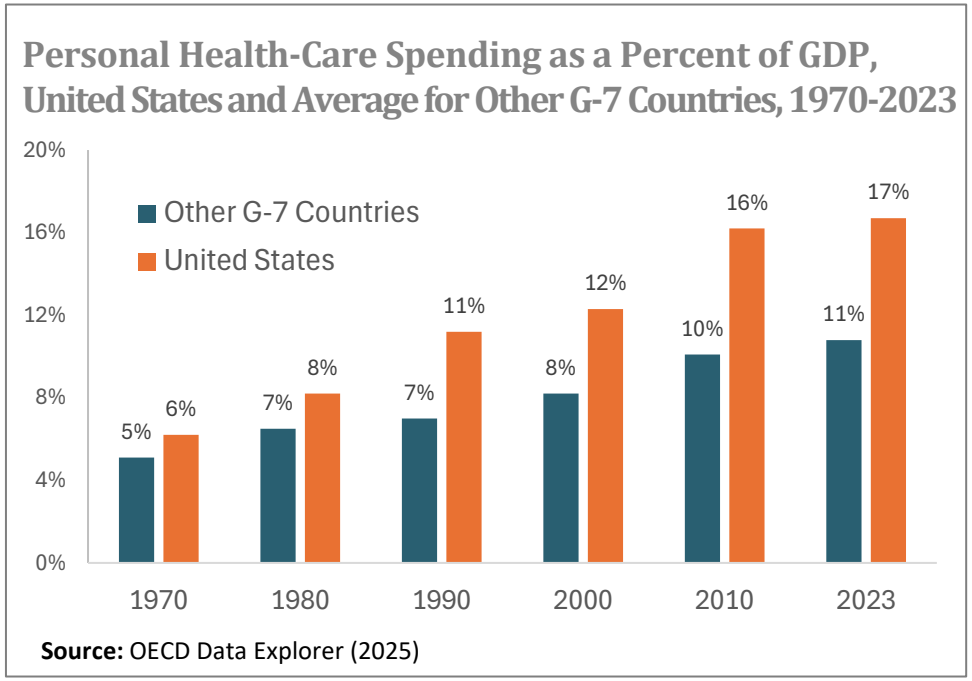
# The Importance of Maintaining Income Adequacy

- Given the high level of elderly dependence on government benefits in many developed countries, scheduled state pension reforms could result in deep reductions in the relative living standard of the elderly.
- To forestall this, some countries that have relied almost exclusively on PAYGO pension systems are jump-starting new supplemental funded systems (e.g., Germany and Italy), while others with well-established funded systems are trying to expand them (e.g., Australia, New Zealand, Sweden, and the UK).
- Ensuring a decent standard of living for the elderly is not just a matter of good social policy. In the end, reforms that achieve fiscal sustainability at the expense of income adequacy will face push back from aging electorates and are unlikely to prove lasting.



# Strategy: Slow Health-Care Cost Growth

- All developed countries face intense pressure on health-care costs from aging populations, medical advances, and rising public expectations about care and cure. Most of them, however, have been far more successful than the United States at controlling costs.
- Many factors have contributed to more rapid U.S. cost growth, including higher administrative costs, greater fragmentation of the payer side of the market, and the worse health profile of the U.S. population.
- The most critical difference, however, is that other countries set health-care budgets and enforce them through some combination of global and/or clinical spending ceilings, provider rate caps, service volume limits, and the application of cost-effectiveness analysis.
- As America's population continues to age, it will become ever more urgent to rethink a finance and delivery system which, despite some progress in recent years, is still primarily based on open-ended fee-for-service billing and third-party payment.



# Strategy: Leverage Globalization

- The differential pace and timing of population aging across the world creates important economic opportunities.
- Open global capital markets can mitigate the costs by allowing savings in older and more slowing growing developed countries to be more profitably invested in younger and faster growing emerging markets.
- Open global labor markets can allow workers in countries where labor is abundant and capital is scarce to be matched with job opportunities in countries where just the opposite is true.
- As the world ages, globalization will become ever more critical to maintaining growth and prosperity. The danger is that protectionist pressures in aging, slow-growth economies will push the other way.



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