

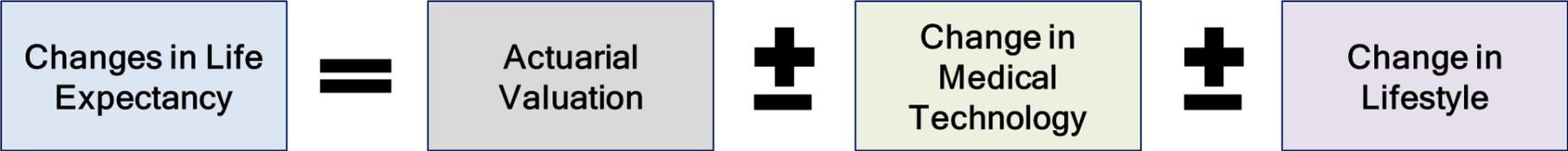


Developments in Global Longevity

November, 2017



Elements of Longevity Risk



Life Expectancy in U.S Drops for First Time in Decades

December, 2016

 NOW
NPR 24 Hour Program Stream

Source: www.npr.org

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PUBLIC HEALTH

Life Expectancy In U.S. Drops For First Time In Decades, Report Finds

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December 8, 2016 · 12:02 AM ET
Heard on Morning Edition



ROB STEIN



Image Source/Getty Images

One of the fundamental ways scientists measure the well-being of a nation is tracking the rate at which its citizens die and how long they can be expected to live.

Americans are Dying Younger, Saving Corporations Billions

August, 2017

Source: www.Bloomberg.com

Americans Are Dying Younger, Saving Corporations Billions

Life expectancy gains have stalled. The grim silver lining? Lower pension costs

By **John Tozzi**

August 8, 2017, 4:00 AM EDT

Steady improvements in American life expectancy have stalled, and more Americans are dying at younger ages. But for companies straining under the burden of their pension obligations, the distressing trend could have a grim upside: If people don't end up living as long as they were projected to just a few years ago, their employers ultimately won't have to pay them as much in pension and other lifelong retirement benefits.

In 2015, the American death rate—the age-adjusted share of Americans dying—[rose slightly](https://www.cdc.gov/nchs/products/databriefs/db267.htm) [for the first time since 1999](https://www.cdc.gov/nchs/products/databriefs/db267.htm). And over the last two years, at least 12 large companies, from Verizon to General Motors, have said recent slips in mortality improvement have led them to reduce their estimates for how much they could owe retirees by upward of a combined \$9.7 billion, according to a Bloomberg analysis of company filings. "Revised assumptions indicating a shortened longevity," for instance, led Lockheed Martin to adjust its estimated retirement obligations downward by a total of about \$1.6 billion for 2015 and 2016, it said in its most recent [annual report](#) <https://www.sec.gov/Archives/edgar/data/936468/000119312517036192/d290249d10k.htm>.

Mortality trends <https://www.bloomberg.com/graphics/2017-health-care-spending/> are only a small piece of the calculation companies make when estimating what they'll owe retirees, and indeed, other factors actually led Lockheed's pension obligations to rise last year. Variables such as asset returns, salary levels, and health care costs can cause big swings in what companies expect to pay retirees. The fact that people are dying slightly younger won't cure corporate America's [pension woes](https://www.bloomberg.com/graphics/2017-corporate-pensions/) <https://www.bloomberg.com/graphics/2017-corporate-pensions/> —but the fact that companies are taking it into account shows just how serious the shift in America's mortality trends is.

Americans are Retiring Later, Dying Sooner and Sicker In-Between

October, 2017

U.S. life expectancy is declining, new calculations show.

By **Ben Steverman**

October 23, 2017, 5:00 AM EDT

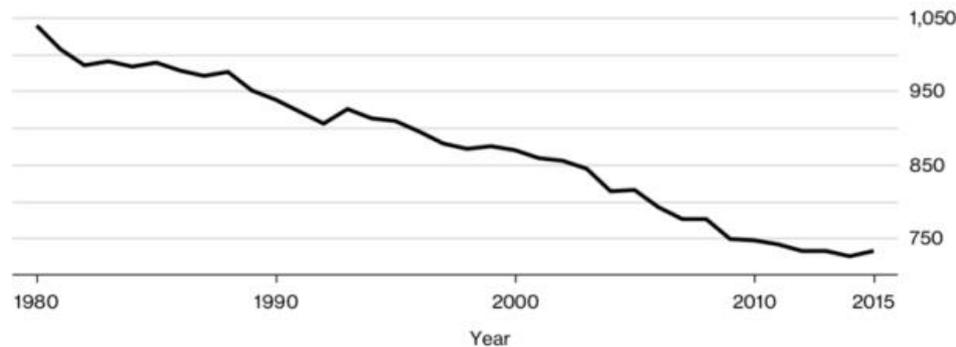
The U.S. retirement age is rising, as the government pushes it higher and workers stay in careers longer.

But lifespans aren't necessarily extending to offer equal time on the beach. Data released last week suggest Americans' health is declining and millions of middle-age workers face the prospect of shorter, and less active, retirements than their parents enjoyed.

Here are the stats: The U.S. age-adjusted mortality rate—a measure of the number of deaths per year—rose 1.2 percent from 2014 to 2015, according to <https://www.soa.org/experience-studies/2017/mortality-improvement-scale-mp-2017/> the Society of Actuaries. That's the first year-over-year increase since 2005, and only the second rise greater than 1 percent since 1980.

End of a Trend?

Age-adjusted mortality rate (deaths per 100,000 people) from 1980 to 2015



Society of Actuaries Mortality Improvement Scale 2017

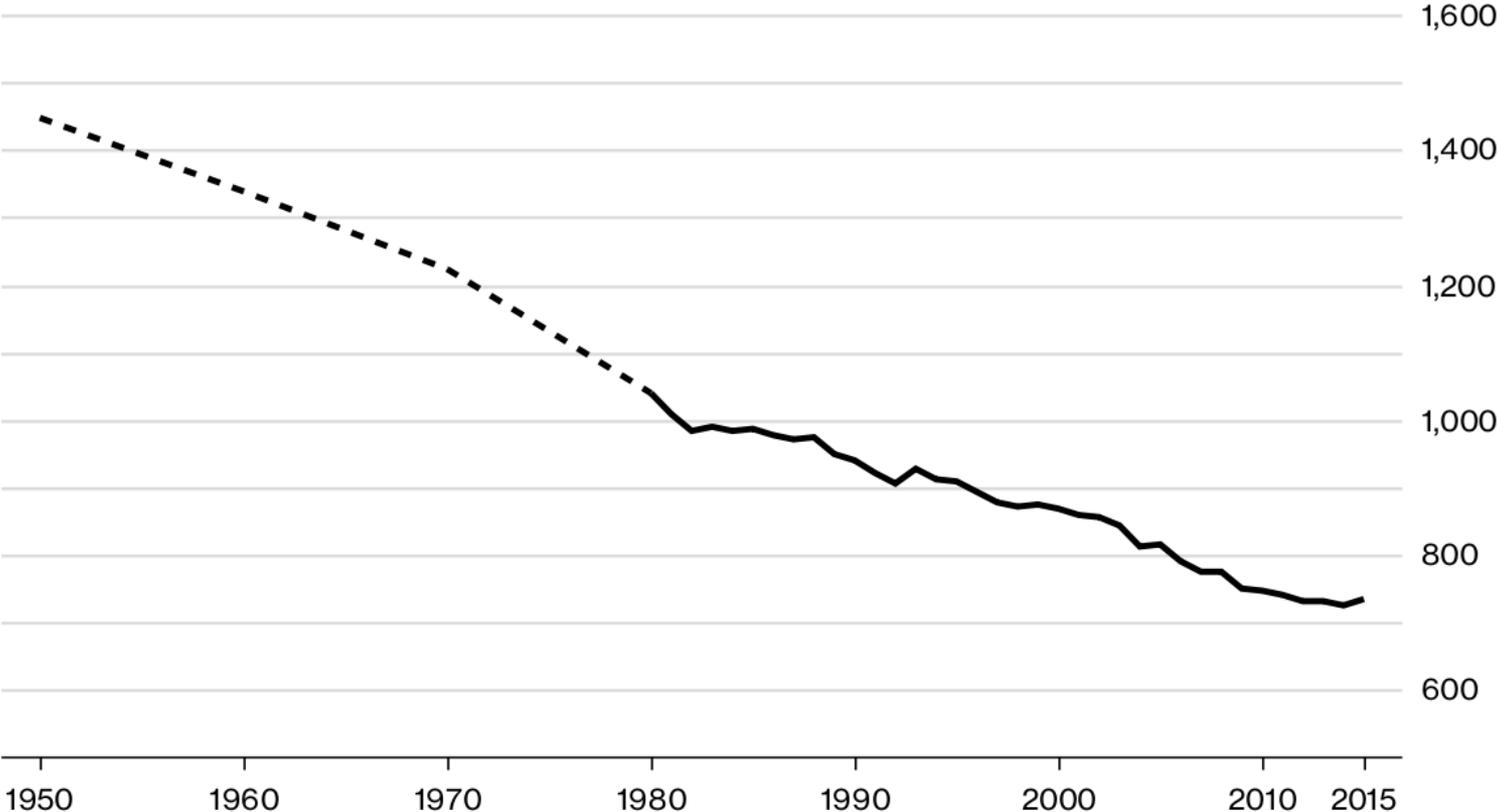
Bloomberg

Source: www.bloomberg.com

Death Rate Improvements Have Stalled

The U.S. mortality rate leveled out since 2011 and increased slightly in 2015

■ Age-adjusted death rate per 100,000 population

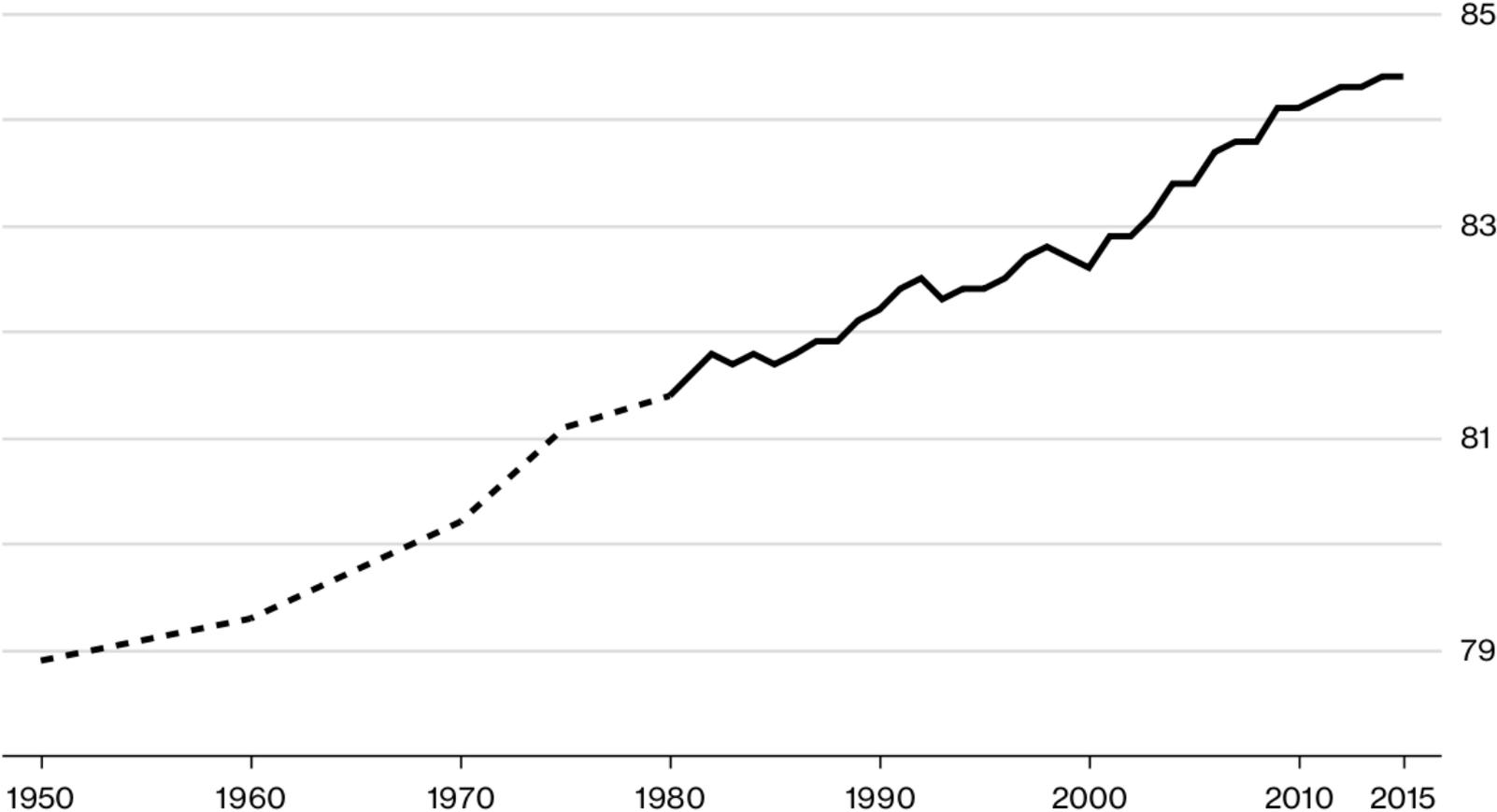


Source: National Center for Health Statistics

Bloomberg

Longevity Gains Slow For Retirement-Age Americans

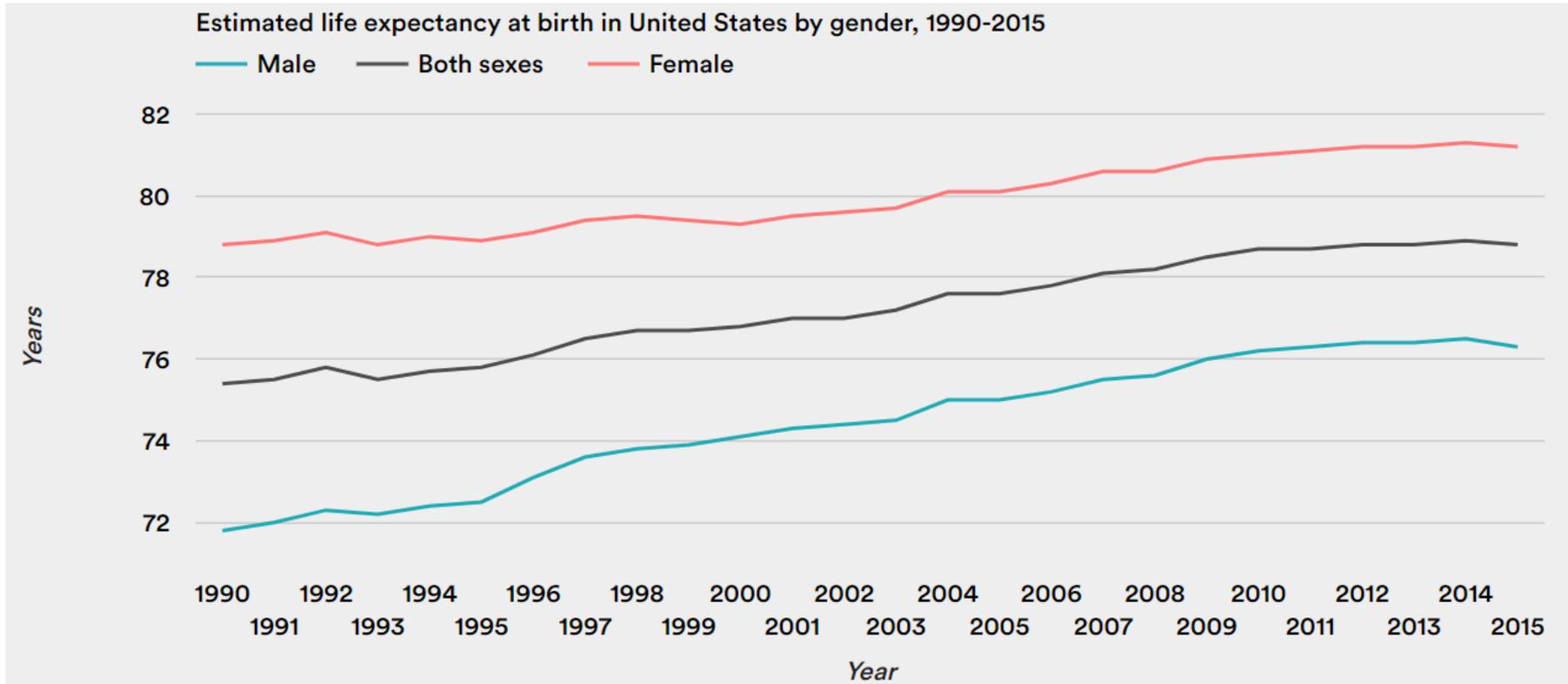
Improvements in life expectancy at age 65 have flattened out in recent years



Source: National Center for Health Statistics



Estimated Life Expectancy in US Falls

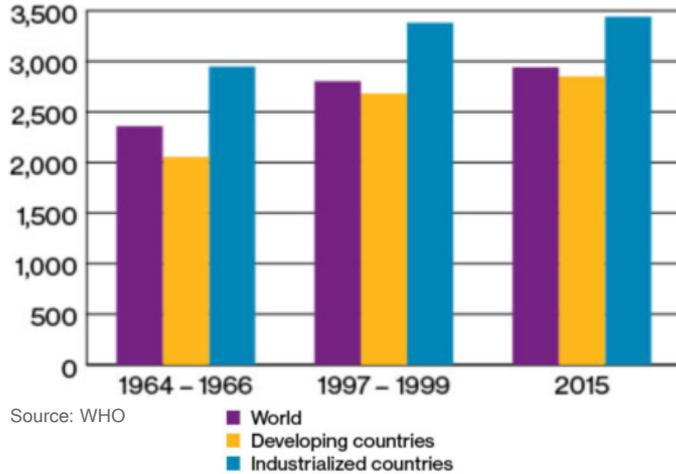


Infants born in 2015 are expected to live on average to age 78.8 – a decline of 0.1 year from 2014. A decline in nationwide life expectancy at birth hasn't happened in the US since 1993.

Summary of Causes

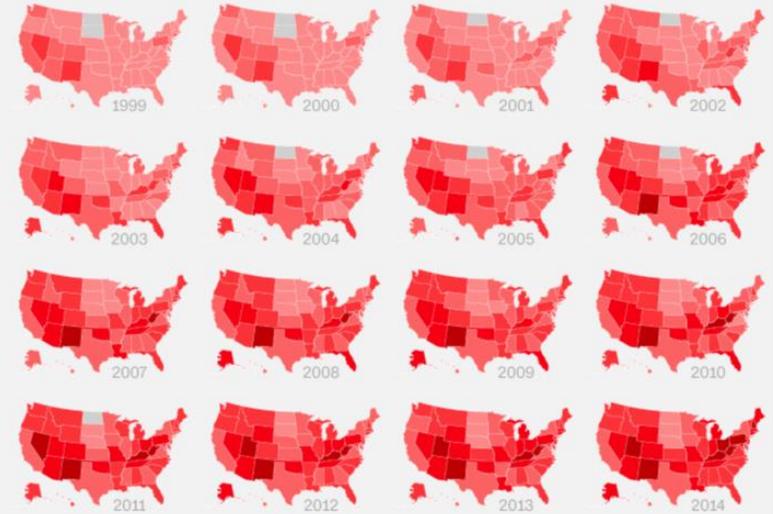
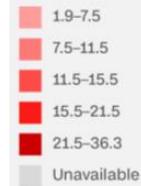
1. Lifestyle

Global & Regional Per Capita Food Consumption
(kcal per capita per day)



2. Drug Deaths Rising in all 50 States

Drug and opioid overdose deaths per 100,000 people (age-adjusted), 1999-2014



Source: [CNN](#)

3. Alcohol Deaths Reach 35-Year High

Deaths from alcohol-induced causes (excluding homicides, drunken driving and other accidents indirectly related to alcohol), 1979-2014, per 100,000 people



Source: [Washington Post](#)

Industry Implications

- Mortality deterioration impacting different segments of the population differently
- Lifestyle issues driving decrease are not impacting the top economic segments of the population
- Pension funds with a broad base of beneficiaries likely to become more solvent as the long-time increase in life expectancy slows down - this is a function of population
- Life insurers unlikely to become more solvent - US life insurers take more mortality than longevity risk; purchases weighted toward more affluent consumers less likely to be impacted by lifestyle issues
- Affluent consumers may see slowdown in mortality improvement as they approach “maximum lifespan.”
- Longevity creep has been a longstanding source of value erosion to life settlements - slowdown may stabilize life settlement assets (often involve larger policies from higher net worth policyholders), who are less impacted
- Long-term care value has a complex relationship to longevity and is generally a higher net worth product, less likely to be impacted by the slowdown

HSCM Bermuda Opportunities

- Runoff blocks of life insurance are generally becoming less valuable as mortality improvement decelerates or reverses - we will take account of that in valuation
- Life settlements may become more valuable, though other longstanding considerations for this asset segment must also be diligenced (sales practices, insurance interest)
- Life contingent structured settlements may also warrant revaluation

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