

Planning for a 100-Year Life

By Andrew Scott, DPhil

The investment management industry has as its central purpose helping individuals secure a good future livelihood. How can it do that in the face of so much discussion of disruptive forces? If artificial intelligence (AI) and robots are going to destroy jobs, how can people manage their long-term finances? Further, if one of the first places AI starts to destroy jobs is in the investment industry, how can existing practitioners serve their clients and earn a living?

There are three factors to bear in mind, however, about disruption. The first is that every age stands on the threshold between present and future and believes that they live in a time of unparalleled uncertainty, where old ways of working may no longer be appropriate. We have coped with change before and will do so again. The second is that truly disruptive forces actually take a very long time to build up and produce change. When the change happens, it happens quickly; but before then it takes much longer than people think for the underlying forces to build up. In other words, if we start preparing and adjusting now then we can navigate the change. The third fact is that although much attention is placed on technology, another fundamental force is disrupting how we live our lives—longevity.

LONGEVITY TRENDS

Longevity has been increasing at a remarkably constant rate over the past 150 years. Oeppen and Vaupel (2002) have documented that “best practice life expectancy” (that is, the country with

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the highest average life expectancy at any specific point in time) has been increasing two to three years every decade. That means if you base your life expectancy on the age of your parents or your grandparents, you could be out by around 10 or 20 years, respectively.

Most governments focus on period measures of life expectancy that abstract from this trend increase. The U.S. government’s main calculations of life expectancy at birth in 2017 assume that a child lives its life entirely in 2017.¹ In other words, when a newborn child of today reaches age 50 in 2067, it will face the same survival rate as a 50-year-old today. This seems conservative in the extreme. In 1922, a 65-year-old in the United Kingdom had a mortality rate of 4.3 percent; in 2016, that mortality rate had fallen to 1.3 percent. In fact, in 2016 it was 78-year-olds who had a mortality rate of 4.3 percent—so 78 actuarially is the new 65.

If best practice life expectancy continues to increase at the rate of two to three years every decade, then by 2067 children born today will have another 10 to 15 years on a current 50-year-old. In other words, these period measures of life expectancy may seriously underestimate

current expected life expectancies. If the historic trend continues, then a child born in 2007 in the United States has a 50-percent chance of living to 104. This is why the number of centenarians is the fastest-growing age group in the world.

LONGEVITY, MORBIDITY, AND INEQUALITY

No one knows if this longevity trend will continue. Throughout much of the past 150 years there has been skepticism that the trend would last and yet it has. The trend is not automatic and problems of obesity and diabetes clearly stand to drag it down. The rising problem of opiates in the United States is doing the same. Yet best practice life expectancy is likely to continue to increase even if not all countries or individuals follow best practice.

It’s also worth noting the growing scientific research into aging, the increasing investment monies flowing into biomedical research, and the growing belief among some researchers that aging should be considered a disease that we soon will be able to conquer. If true, these claims suggest a continued increase in life expectancy and, under the most optimistic scenarios, that we are on the verge of rapid breakthroughs

in longevity. Might it be possible that medical breakthroughs mean we can live beyond the 122 years and 164 days reached by Jeanne Calment, to date still the oldest person to have lived?

The evidence also suggests that, on average, a large proportion of these extra years of life are healthy years. There is still an end-of-life period where we are frail and dependent on others, but this is on average happening later. In other words, we are on average living longer and are healthier for longer. But, of course, averages can be misleading. As more people live longer, we are seeing more people suffer from Alzheimer's. We are also seeing, especially in the United States, a decline in life expectancy for those with low incomes and low education levels. Although in general people are living for longer and are healthier for longer, these are not necessarily benefits spread among everyone.

LIVE LONGER, WORK LONGER, SAVE MORE

The fact that we are on average living for longer and are healthier for longer should be good news. But it comes with a problem. How do we finance this longer life? Most people aren't saving enough for retirement already and if we are living longer the shortfall just got larger.

If we are living for longer we either have to save more or work longer. There isn't another solution. So if we are to save more, how much more do we need to put aside every year?

In *The 100-Year Life: Living and Working in an Age of Longevity*, Grattan and Scott (2016) perform some very simple calculations to see how longevity affects individual savings plans. We consider three personas—Jack, Jimmy, and Jane. Jack has life expectancy of 70 years and retires at age 62. He benefits from a company pension, a government pension, and his personal savings. We calculate how much he must save every year he works in order to finance a pen-

sion worth 50 percent of his final salary. We assume a portfolio that is 50-percent safe assets and 50-percent equity and we assume real rates of return based on the United States for the past 110 years; we use the same period to calculate the equity risk premium. In order to finance his pension Jack must save about 4 percent a year.

Jimmy by contrast has life expectancy of 85, is currently age 40, and doesn't have a company pension scheme. He has to do a lot more saving as a result. If Jimmy wants to retire at 65 and live to 85 and have a pension worth 50 percent of his final salary, he needs to save 17 percent a year throughout his career. Then we look at Jane, our millennial, who has life expectancy of 100. If she wants to retire at age 65 with a 50-percent pension, then she must save 24 percent of her money every year.

It's hard to see many people achieving the required savings rates of Jimmy and Jane. That means Jimmy and Jane won't be able to retire at age 65. If you assume they can manage 10 percent a year—still fairly impressive—then Jimmy can retire around 72 and Jane around 79–80. If Jimmy is in his early 40s then he has more years of work ahead of him than behind him. Jane faces a 60-year career.

Of course, we already are seeing people respond to these forces. In the United States the number of people older than 65 and older than 70 who are still working continues to increase, reversing the downward trend of the past 100 years. As a consequence, the concept of retirement, where everyone comes to a hard stop at work when they reach a certain age, has disappeared.

INTRODUCING THE MULTI-STAGE LIFE

Just take some time to consider being in your early 20s with the prospect of working until your late 70s. It's clear you are going to make different choices than your parents. *The 100-Year Life*

articulates how the three-stage life that emerged in the 20th century—education, followed by work and then retirement—cannot survive this increase in longevity. Instead we are seeing the emergence of a multi-stage life.

Why can't the three-stage life survive? It's true that working until your late 70s means that Jane can manage her financial assets over her 100-year life. However financial assets aren't the only assets we have to manage. We also have to invest in our intangible assets. These are made up of three groups—productive assets, such as skills or knowledge or your professional peer group; vitality assets, including your mental and physical health and your close relationships; and finally, your transformational assets—your ability to navigate change.

Working until you are in your late 70s may preserve your financial assets, but your productive assets will have long disappeared. There is very little you can learn at 20 that will still be relevant in your 70s. If our careers are to last longer we will have to reinvest substantially in education through lifelong learning. This holds all the more if technology really is ready to cut a swath through the jobs we currently do. Working for 60 years nonstop also will not be good for your mental and physical health or your close relationships. Over a 60-year career you will need to structure a multi-stage life with perhaps two, three, or even four different stages. One stage may be aimed at accumulating financial assets, another seeks a better work-life balance or something entrepreneurial or possibly is aimed at putting something back into society. Each of these stages will require a period of transition, preparation, and reskilling, all of which will require us to work on our transformational assets.

The shift to the multi-stage life reveals the following: First, longevity is not the same as aging. Aging is about end of life but longevity is about all of life. In response to living longer we are set to

restructure life. Every decade life expectancy is increasing by two to three years. That's like finding another six to eight hours at the end of every day. If your day was suddenly changed from 24 to 32 hours you would live it differently. You would get up at a different time, go to bed differently, structure your meals differently. The same thing is happening with longevity. In the 20th century we saw the creation of two new stages of life—teenagers and retirees. In the 21st century we are seeing further new stages being created. Whereas previously people got married, had children, and bought a house in their early 20s, now they are doing this in their early 30s. As life lasts longer, options become more valuable and people commit later. In the United Kingdom for the first time ever a woman is now more likely to have a baby in her 40s than in her teens. We are seeing retirement transformed with more and more people working beyond age 65 often in a flexible manner or shifting into a new activity. We are seeing the creation of new stages of life.

Second, a multi-stage life means that people need to prepare for more stages and more transitions. They may need to finance a few years of more education or a spell between careers. Long-term wealth management isn't just about transferring finances to the third and final stage of life.

Third, we have to beware that certain numbers and ages no longer have the same meaning as they used to. Remember that 78 is the new 65. The rules and advice we used to give are less relevant as we live longer and certain ages—21, 65, etc.—no longer have the same resonance. What age is old now? What represents middle age?

IMPLICATIONS FOR INVESTMENT MANAGEMENT

If we are living for longer, then we need to finance a longer life so there should be more funds under management. That's the good news. However, longevity really is a disruptive force because it

undermines the three-stage perspective on life that underpins much of financial planning.

In a three-stage life with one main career stage, individuals look to transfer funds from Stage 2 to Stage 3. In a multi-stage life, they look to transfer funds across several periods in their lives and also finance transitions. Above all they will look for flexibility. Pensions emerged with retirement as a three-stage approach to life. If the three-stage life no longer works then we need to redefine pensions and long-term wealth management.

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There also will be major new risks that individuals will be interested in. The first is around longevity itself. I may be able to work for longer and cover a greater life expectancy. But if medical breakthroughs occur that push life expectancy dramatically higher then I will need to cover both these medical costs and the longer life. What products can I invest in that give me that longevity cover? The second is around incapacity. Because we are living for longer we have a new risk to worry about—that I live long but am incapacitated early. The famous British philosopher Thomas Hobbes noted that life was “nasty, brutish and short.” There is only one thing worse than that—a life that is nasty, brutish, and long. How can I buy insurance for health and social care in the event that at 50 I become incapacitated but live to 100?

Above all else as I plan my long-term finances I will want to think of my broad

portfolio of assets—my financial assets, my productivity assets, my vitality and transformational assets. AI advisors perhaps will be advising clients on how to make trades and doing so at the cheapest rates, but the most valuable service will be providing advice for individuals on how to manage these four assets including the non-financial.

The challenge is of course that none of us before have had to plan for a 100-year life. Those few individuals who have lived to age 100 did so because they were exceptional. The result is we don't yet know what works best. We are all embarked on a major social experiment. However, the life expectancy of children today truly means that longevity is set to disrupt our financial system. The life expectancy of the generation being born today is very different from that of their parents or grandparents and so too will be the structure of their lives, their career paths, and their financial planning. Like most disruptive trends, the impact of longevity has been building up for decades. We see change already around us as the three-stage life begins to fragment in response to the disruption. The investment managers and advisors who fail to anticipate this change will disappear with the three-stage life. ●

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ENDNOTE

1. See <https://www.cdc.gov/nchs/fastats/life-expectancy.htm>.

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