

Over-optimistic life expectancy projections?



“the rate of improvement appears to be slowing”
Stacey Wilen

Background

Until relatively recently, the media has regularly reported that people are living longer than previously anticipated, as mortality rates continued to fall; to put it another way, average life expectancy has been continuing to increase.

Evidence is now emerging which suggests that the rate of improvement in mortality rates is slowing down. Initially it was dismissed as a “blip”. However, what is turning out to be quite a long blip, is making many ask: *“Are we seeing the start of a new trend?”*

The Continuous Mortality Investigation (CMI)

The CMI (a body supported by the Institute and Faculty of Actuaries) carries out ongoing analysis of death data in the UK. The results feed through to the regular publication of updated mortality rates, and future improvement projections. The CMI’s latest projection model, which was published in March 2018, is referred to as “CMI 2017”. This showed that the mortality rates observed in 2017 were higher than predicted by the previous version of the projection model, CMI 2016. CMI 2016, in turn, showed that mortality rates in 2016 were higher than suggested by CMI 2015.

Reduction in mortality improvements

Over the period from 2000 to 2011, the rate of improvement in UK mortality rates was fairly stable from year to year, averaging around 2.7% pa for males and 2.2% pa for females. However, since 2011, the rate of improvement has been significantly lower than this, at around 0.5% pa for males and 0.1% pa for females.

What does this mean in practice?

Changes in projected mortality rates can best be illustrated by considering the impact on implied future life expectancies – that is how long, on average, someone of a particular age and gender is expected to live. The chart illustrates life expectancies at age 65 implied by the various versions of the CMI projection model.

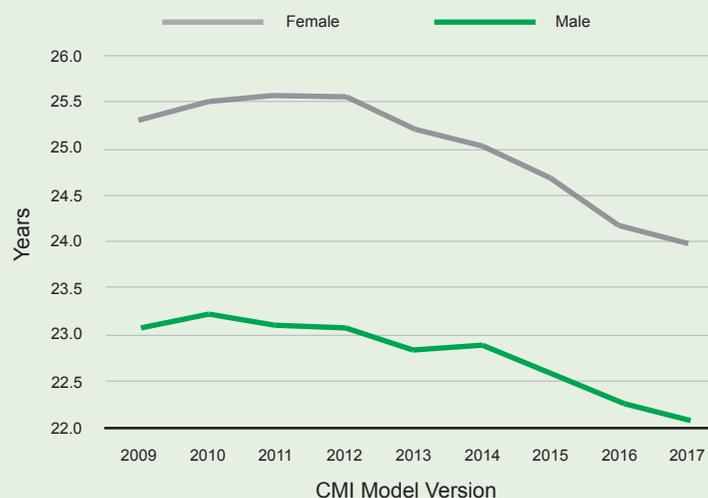
It demonstrates that, all else being equal, more recent versions of the projection model result in lower assumed life expectancies for both males and females. In particular, comparing CMI 2017 with CMI 2014, projected future life expectancy has reduced by 10 months for males and by 12 months for females.

Will this trend continue?

There is a lot of debate as to the cause of the recent reduction in mortality improvements; it is difficult to say whether the trend is likely to continue. However, there is some evidence to suggest that medium or long-term influences could be the reason. The general view among experts tends to be that mortality rates will continue to reduce, albeit at a slower rate than previously envisaged.

In other words, it is beginning to look like historical projections of future improvements in life expectancy may have been over optimistic. Life expectancy is not reducing currently, but the rate of improvement appears to be slowing considerably.

Life Expectancy at 65



Source: CMI March 2018 Briefing note on CMI 2017



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