FUNDAMENTALS

Ageing and wrinkles in public finances

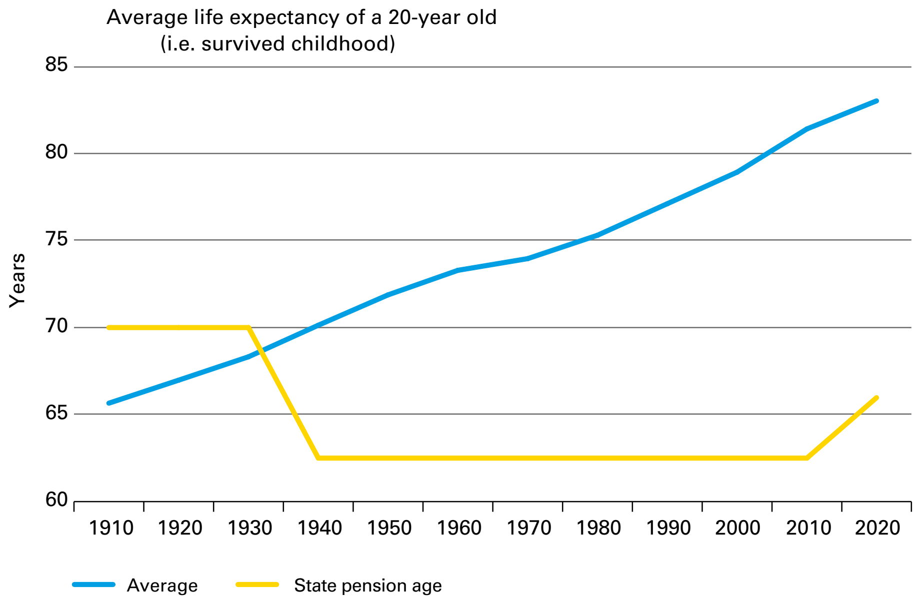
Pay-as-you-go pension and healthcare schemes are under increasing pressure from ageing populations. Recent elections suggest voters don't like tax increases, spending cuts, delayed retirement or higher immigration. So government borrowing is likely to rise until financial markets force politicians to face up.

PENSION AGE – NOT KEPT UP WITH LIFE EXPECTANCY

When the UK state pension was originally introduced in 1908, it wasn't designed to be widely used. The pension age was set at 70, but life expectancy for a 20-year old (i.e. someone who had survived childhood) was just 66. So most people were not expected to receive the pension!

Things changed in the 1940s (Figure 1). Not only had life expectancy increased to 70, but the state pension age was reduced to 62½ (60 for women and 65 for men). So on average, people were expected to spend 7½ years in retirement.

Figure 1: UK state pension age versus life expectancy



Source: ONS

Fast forward to 2010 and life expectancy has risen to 81, so people were expected to spend around 20 years in retirement. So the pension system has clearly become more generous over time, putting pressure on public finances.

But this is only half the story. Not only is age-related spending set to rise, but tax receipts are under pressure. The UK-born labour force is shrinking as babyboomers retire (see our previous **Fundamentals: End of the baby boom**). This begs the question, where is the money going to come from to fund the pay-as-you-go pension and healthcare system?

Legal & General
INVESTMENT MANAGEMENT

This article fleshes out the size of the problem and outlines some possible treatments (*increase immigration, delay retirement, reduce benefits, raise taxes, increase productivity*) in the context of the recent election.

HIGHER SPENDING, LOWER TAXES

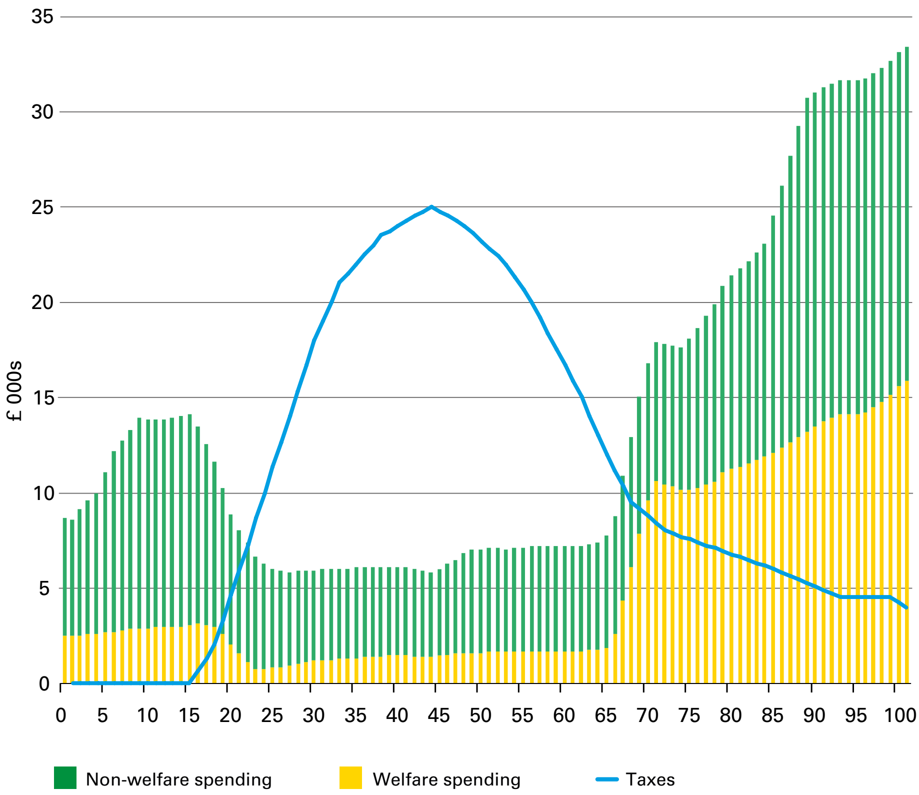
UK public sector debt is set to rise sharply from 87% of GDP today to 234% of GDP in 50 years' time, according to the Office for Budget Responsibility (OBR).

The key is the relationship between age, tax receipts and government spending (Figure 2, taken from the OBR):

- The **blue line** shows tax receipts by age. No tax is paid until people leave school. Receipts peak age 45 and then drift down
- The **yellow bar** shows welfare spending by age. Child benefits are paid in younger years but the main effect is pension payments as people hit their late 60s
- The **green bar** is non-welfare spending (health and education). This is high in the early years as children go to school. It then surges in old age as health and social care costs intensify, a point Theresa May emphasised in the recent election

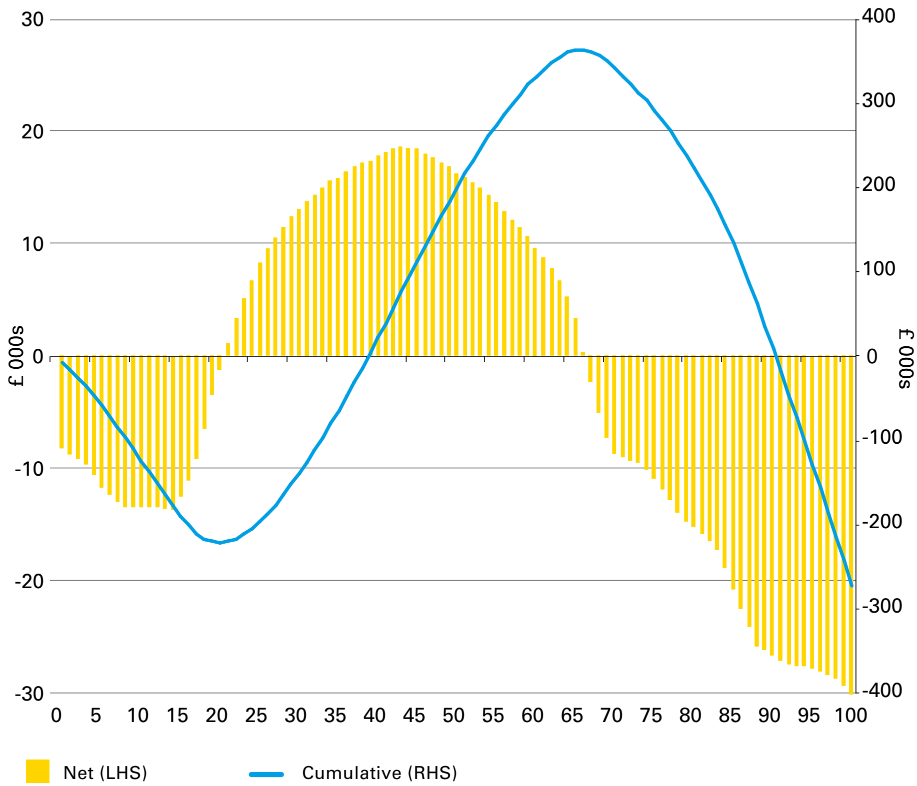
The NET effect of tax and spending is shown in the bar in Figure 3. People make a net contribution to the government when they start work but are net beneficiaries when they retire. The older they are, the bigger the financial cost due to sharp escalation of health and social care costs with age.

Figure 2: Tax receipts and government spending vary by age



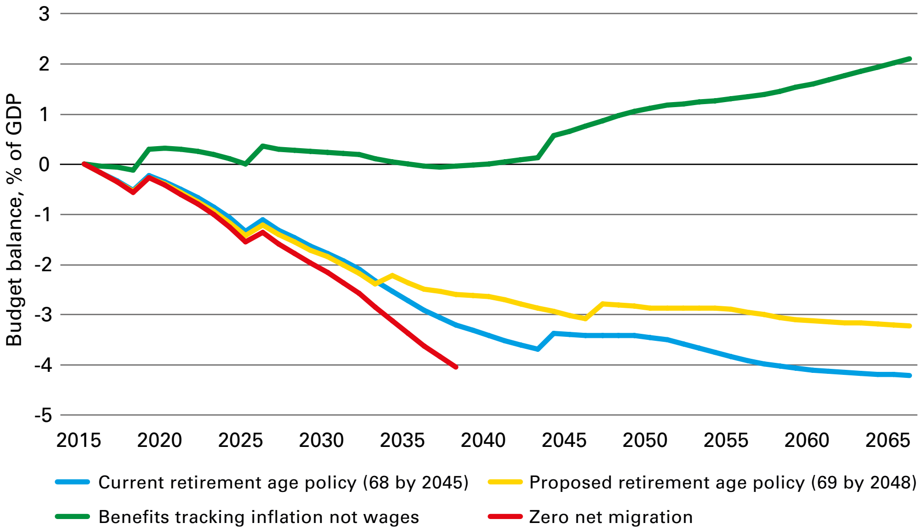
Source: OBR, LGIM estimates

Figure 3: NET and cumulative effect of ageing on public finances



Source: OBR, LGIM estimates

Figure 4: Scenario analysis for the impact on the public finances from ageing



Source: OBR, ONS, LGIM estimates

As the population ages, spending on health and pensions will increase while tax receipts from prime-aged workers will fall. We estimate the UK's budget deficit could deteriorate by around 4% of GDP per year between the next 20-50 years due to these ageing effects (£80bn per year in today's money). This is calculated by combining the UK's population projections by age cohort with the net contribution to the exchequer that each cohort makes (blue line in Figure 4).

The OBR is even more pessimistic. It expects the UK's public finances to deteriorate by even more than our analysis (8% of GDP over the next 50 years). This is because they also believe that healthcare costs will rise more rapidly than in the rest of the economy, partly because it's more labour intensive.

On top of this, they assume inflation-adjusted (i.e. real) interest rates turn positive again, so the economy enters a debt spiral as interest needs to be paid on the additional debt.

We will examine the impact of ageing on interest rates and inflation in future notes. However, it's clear that public finances are under significant pressure from ageing populations. In the following section we consider the options politicians could adopt with some sensitivity analysis.

IMMIGRATION

Immigration of workers can help bridge the gap between taxes and spending. This can be seen by going back to Figure 3 and looking at the cumulative cost/benefit to the taxpayer by age.

It costs the taxpayer £220,000 to 'produce' a 21-year old worker via education, health and child benefit costs (blue line in Figure 3). They then start contributing to the public finances as their career progresses. By contrast, importing labour from overseas saves on the cost of their upbringing.

Economic migrants can therefore boost public finances so long as they earn enough to make a net contribution to the tax system. However, this merely postpones, rather than solves the problem.

The problem is that we have a pay-as-you-go funding system for health, pensions and social care. This is equivalent to a pyramid or Ponzi scheme. It's fine when there are lots of people paying into the system to support a small number of beneficiaries. But it falls apart when you run out of new entrants.

Immigrant workers will eventually retire and need supporting, requiring even more immigrants to fund that. Politicians have been able to make spending promises to voters throughout the decades because a later generation of politicians will have to pick up the tab.

Moreover, the current political environment is not supportive of increasing immigration. The population projections embedded in the blue line in Figure 4 assume net migration continues at a pace of 180,000 (these are taken from the ONS - Office for National Statistics). By contrast, the government's objective is to cut immigration to 'the tens of thousands' and the Brexit vote should encourage this.

So the red line in Figure 4 shows what happens to the deficit under an alternative scenario of zero net migration. You can see that the deficit widens by an additional 1% of GDP over 20 years (The Office for National Statistics does not project the population beyond 2039 in a no immigration scenario). This is because there are fewer taxpayers to pay the health and pension costs of the old than in the baseline scenario.

DELAYING RETIREMENT

If we cannot import more people, we can make the existing population work longer. Previous governments have introduced reforms to delay retirement, particularly for women. Not only has the female retirement age been harmonized with males at 65 from 60, it has also been legislated that the joint retirement age will rise to 66 by 2020, 67 by 2027 and 68 by 2045.

This has two positive effects for the public finances. If people work longer, they pay more taxes. It also reduces age-related spending. However, while legislation can delay when people receive a state pension, it cannot affect people's underlying health, and so has little effect on health costs.

Our analysis suggests a one-year delay in the retirement age could boost the public finances by just under 1% of GDP over the long term. This can be seen by looking at the yellow line in Figure 4, where we simulated the effect of the 2013 Autumn Statement proposal to bring forward the rise in the retirement age to 68 to 2035 (from 2045) and also increase the retirement age further to 69 by 2048.

Additional increases in the retirement age to 72 might well be required to 'balance the budget'. However it remains to be seen if politicians are able to implement such changes in sufficient time to prevent the finances from deteriorating.

The government recently published its first "State Pension age review". Although it recommended bringing forward the rise in the retirement age to 68 (similar to the 2013 Autumn Statement), it does not intend to legislate on this. Instead it will do further analysis ahead of the next review to be held by 2023. Moreover, it made no recommendation for an increase in the retirement age to 69.

Legislation is required to change the retirement age but the opposition Labour party campaigned against increasing the retirement age. Moreover, the DUP party (which is supporting the minority Tory government) also wanted an "end to the unfair treatment of women pensioners" in its manifesto.

REDUCE PENSION BENEFITS

An alternative way to improve the public finances is to reduce the generosity of pensions. The OBR assumes all benefits are indexed to wages (which should grow by inflation plus productivity). However, if we assume all benefits were indexed to just prices instead of wages, we find this significantly boosts the public finances (green line in Figure 4). However, the OBR argues this is not a sustainable policy in the long run as it results in a sharp drop in relative living standards for pensioners and other benefit recipients.

Modest changes to indexation could be introduced, however, and discretely if the effects build over time. Indeed, the Conservative party promised to change the 'triple lock' (pensions going up in line with the greatest of wages, prices or 2½%) to just a 'double lock' (wages and prices) ahead of the election. However, this was dropped as part of the deal with the DUP party. Similarly, means testing could be extended, but again, the DUP party forced the Conservative party to keep the 'winter fuel allowance'.

INCREASE TAXES

If governments cannot cut spending, can they raise taxes? Theresa May's backtracking on the so-called 'Dementia tax' suggests not. Similarly, the strong student support for the Labour party was due to its policy on scrapping tuition fees. Not only are taxes hard to raise, but there is a danger of killing the goose that lays the golden egg if higher taxes disincentivise innovation and hard work from those that pay the bills.

PRODUCTIVITY

Instead, the government needs to boost productivity. This is the 'get out of jail' card that magically solves all public finances problems. Of course, this 'magic productivity tree' is not easy to find. We would encourage the government to facilitate innovation and disruption to allow cheaper firms and technologies to succeed. However, as has been the case since the Luddites, innovation typically hurts a particular group of society, even if it benefits the economy as a whole. So politicians can be lobbied to resist change, slowing productivity.

HIGHER BORROWING

Previous governments have made admirable but unfunded promises to pay pensions, health and social care for the elderly. But this pyramid pay-as-you-go scheme is coming under pressure as the ratio of benefit recipients to taxpayers increases. If politicians don't do anything, government borrowing will inevitably rise. Politicians could choose to try and balance the books by raising taxes, cutting spending, increasing immigration or delaying retirement. Or they could choose to do nothing and allow public borrowing to rise. The recent election suggests this is the direction we will be heading.

Recent experience in Europe (e.g. Greece and Italy) suggest politicians can make painful reforms, but only when forced to by financial markets. We will review the broader implications of demographics for inflation and interest rates in forthcoming notes.

Legal & General Investment Management Ltd, One Coleman Street, London, EC2R 5AA www.lgim.com

Authorised and regulated by the Financial Conduct Authority.

M1469