





September 2019

Is Ageing Inflationary? Really?

"Ageing is an extraordinary process where you become the person you always should have been."

David Bowie

ARP+

Our new ARP+ service is now live. As I said earlier this year, new and stricter rules (known as MiFID II) do not allow financial services firms to provide research free of charge any longer, and the new rules are limiting my ability to write about investment opportunities without charging a fee for it.

For an annual subscription fee of £300, you get:

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All in all, a pretty exciting package, I think. We have had an early bird offer – £150 for the first year provided you sign up no later than the 1st September. As that was yesterday with many still away on holiday, we have decided to extend the offer until next Sunday (the 8^{th} September). If I can tempt you to join (assuming you haven't done so already), I suggest you click on $\frac{ARP+}{2}$. You will be asked a couple of questions and, provided you agree to those, you can sign up.

Chernobyl

Now to something far more serious:

"What is the cost of lies? It is not that we'll mistake them from the truth. The real danger is that if we hear enough lies, then we no longer recognise the truth at all. What can we do then?"

Those were the words uttered by Valery Alekseyevich Legasov (played by Jared Harris) seconds before he took his own life in *Chernobyl* – the TV drama about the nuclear disaster in Ukraine in 1986. If you haven't watched it yet, I strongly urge you to do so. TV rarely comes better than that. And if you think I have just given the storyline away, I can assure you I have not.

The link to today's soap opera

When I watched *Chernobyl* and heard those lines, I immediately thought of the soap opera unfolding outside our windows as we speak – the calamitous Brexit debate here in the UK which has led to lying, left right and centre, US President Donald Trump who likes to tell everyone they are guilty of fake news despite being rather liberal with the truth himself, the comedy unfolding in Italy where lies are frequently presented as facts, etc., etc.

I could go on and on but will stop here. Populists all over the world have invaded the political arena, and populists have a rather dodgy relationship with the concept of truth. However, the *real* reason these words have found their way into an Absolute Return Letter is because of something entirely different – something uttered by the Bank for International Settlement (BIS) a few years ago.

The BIS study

BIS ruffled more than a few feathers when it, in early 2015, published a research paper on the inflationary impact of ageing which you can find here. For many years, the consensus amongst economists was that ageing of society is at least disinflationary and possibly even deflationary and, before reading the 2015 BIS paper, that was also my view. Suddenly BIS argued otherwise. Could it be that we had been told a lie so often than we had started to believe it?

BIS argued in the 2015 paper that ageing is actually (modestly) inflationary and based its argument on relative shifts in demand and supply. Yes, aggregate demand falls when a cohort as large as the baby boomers retires, but supply falls even more, as retirees still consume *something* but produce *nothing*; hence the aggregate effect is rising inflation, or so BIS concluded in its 2015 paper.

I wouldn't say the BIS paper fundamentally changed my view, but it certainly raised one or two questions that made me rather uncomfortable with my earlier conclusions. If you read the Absolute Return Letter from June 2016 which you can find here, you will see that.

The Oxford Economics study

Then, over the summer, I received an email on the topic from Gabriel Sterne, the Head of Global Macro Research at Oxford Economics. I had discussed the topic with him before, and he wanted to alert me to the fact that Oxford Economics had just completed some additional research on the topic, and that they had decided to stick to their guns and argue that ageing is most

Sources:

definitely disinflationary — at least in the current environment. The following is very much a summary of their findings plus a few additional thoughts of my own. Thank you, Gabriel!

In their research, Gabriel and his team found that, at least more recently, there has been a significant inverse correlation between the share of 65+ year olds in advanced economies and the rate of inflation. As you can see in Exhibit 1, in the six years to 2018, no less than 44% of the cross-country variation in inflation can be explained by differences in the share of the elderly.

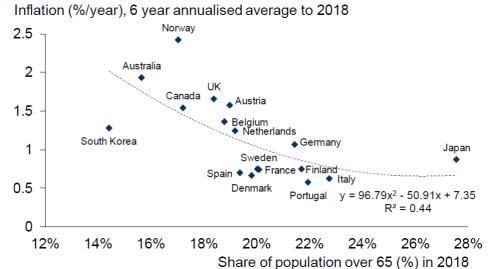


Exhibit 1: Cross-country correlation between ageing and inflation

Oxford Economics, United Nations, OECD

Societies all over the world will continue to age for many years to come. In other words, provided Oxford Economics' findings are robust, low inflation could be with us for *a long time* to come. When testing for robustness, Oxford Economics found that only in the 1980s did ageing (mostly in the UK, Norway and Sweden) lead to higher inflation. Otherwise, its findings are very robust (Exhibit 2).

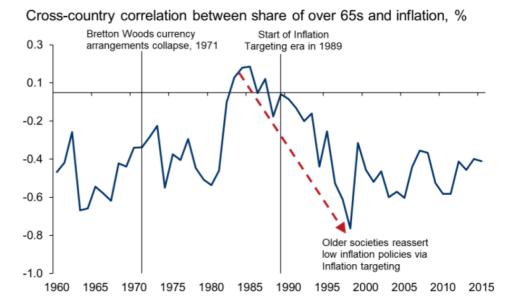


Exhibit 2: Correlation between age and inflation over time

Note: The blue line represents the correlation in each year, based on 21 OECD economies.

Excluding Japan makes little difference, according to Oxford Economics.

Sources: Oxford Economics, United Nations, OECD

BIS vs. Oxford Economics

So who is right and who is wrong? They *cannot* both be right. A simple test provides an equally simple answer. By breaking the 1978–2018 period into three shorter periods (1978–1998, 1988–2008 and 1998–2018 respectively), Oxford Economics found that, in the most resent 20-year period (1998–2018), the relationship that BIS identified in 2015 quite simply broke down (the blue line in Exhibit 3).



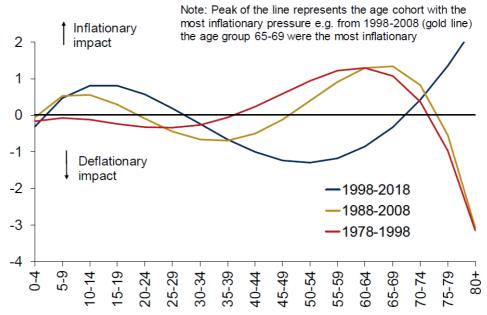


Exhibit 3: Age cohort effects on inflation
Sources: Oxford Economics, Haver Analytics

Why is that? Oxford Economics came up with several reasons, and I can think of a few more. Let's begin with one of the key reasons listed by Oxford Economics — rising labour force participation, which is largely a function of more and more people continuing to work beyond traditional retirement age (Exhibit 4).

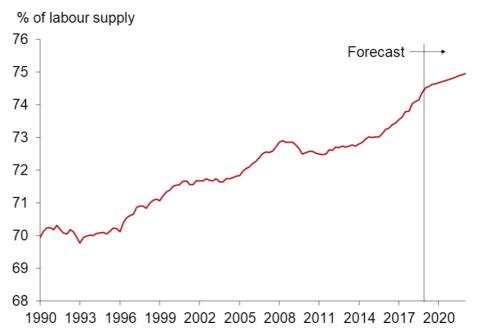


Exhibit 4: Labour force participation in advanced economies

Sources: Oxford Economics, Haver Analytics

When labour force participation increases, the dependency ratio (the number of dependents in a population divided by the number of working age people) drops, and that undermines BIS' argument. So do the facts that living standards continue to rise, that life expectancy continues to improve almost everywhere, and that fewer and fewer jobs are as physically demanding as they were during the years that formed the basis of BIS' data. Simply put, today's 70-year old is akin to yesteryear's 50-year old.

Having said that, in a handful of countries – most notably Italy, the UK and the US – life expectancy has actually started to decline amongst ordinary people, i.e. those who can't afford the best, but also the most expensive, treatment forms. Monaco is the country with the highest life expectancy, and that is hardly surprising when you think of the enormous amount of wealth accumulated by residents of Monaco.

Furthermore, I believe the widespread introduction of advanced robotics has had the effect of undermining BIS' argument. As bigger and bigger chunks of the workforce retire, robots will increasingly replace humans in the work process. Suddenly, the supply and demand curves behave differently, and BIS' argument becomes invalid. The number of industrial robots in action around the world has quadrupled since the Global Financial Crisis, and the number continues to grow briskly (Exhibit 5).

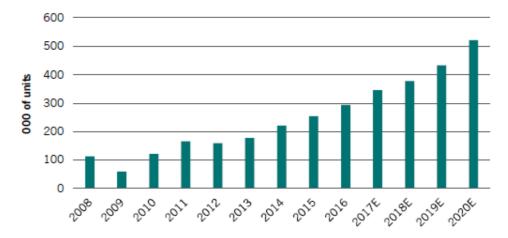


Exhibit 5: Annual supply of industrial robots, worldwide (thousands of units)

Sources: Pictet Asset Management, IFR

Other factors could have impacted BIS' findings as well, e.g. migration. In the US, a substantial number of Mexicans have 'infiltrated' the US workforce, and the same is the case here in Europe with workers coming in from Eastern Europe.

I also note that, whilst many blame migrants for taking their jobs, the naked numbers tell a very different story. If migrants do all that damage to job security, how come more people are in work than ever before? And why is the unemployment rate near an all-time low?

Longer-term implications

Assuming the findings of Oxford Economics are robust, for many years to come, demographic forces will keep a lid on inflation in many countries. Within the OECD, Austria, the Czech Republic, Estonia, Germany, Greece, Hungary, Italy, Japan, Korea, Latvia, Lithuania, Netherlands, Poland, Portugal, Slovakia, Slovenia and Spain can all expect their workforce to shrink in a meaningful way with a few more countries facing a more modest

drop. Even those countries that can expect it to rise (most notably Australia, Canada, the UK and the US) can only expect a relatively modest increase.

If you combine that with all the other disinflationary forces at work in today's global economy, I find it very hard to build a bear case on interest rates. The OECD country most affected by a shrinking workforce, Japan, can expect it to decline 1.2% *annually* between now and 2050 (Exhibit 6), meaning that, unless Japanese productivity increases by at least 1.2% per annum over the next 30 years (which it hasn't done for many years), Japanese GDP will be lower in 2050 than it is today. How do you think the Japanese equity market will respond to that?

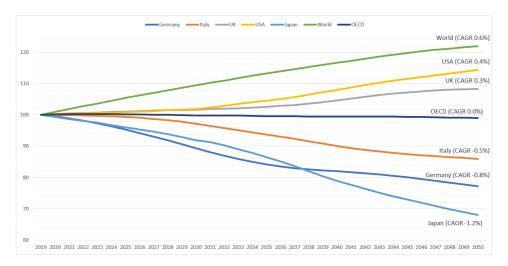


Exhibit 6: Growth of working age population (2019 = 100)

Sources: OECD

Concluding remarks

I almost hope BIS's projection — that ageing is inflationary — turns out to be correct. Not that I disagree with Oxford Economics or that I hold anything against them — absolutely not — but there are some very powerful deflationary forces at work throughout Europe at the moment, and we could do with a bit of inflation. Should ageing further reduce inflation, the last few years is only the beginning of much worse to come.

Worse? Isn't low inflation and low interest rates good? To a degree, yes, but negative interest rates certainly aren't, and neither is outright deflation. More than \$15 trillion of government bonds now trade at negative yields around the world, most of which is in Europe. In Denmark, only a few weeks ago, the first ever 10-year mortgage was on offer at a negative rate of interest (see the story here), and we are still in the early stages of the ageing process.

In early 2018, when 20-year UK government bonds yielded 1.9%, I entered into a bet that, by 1 January 2023, UK government bonds will yield less than they did then. A year and a half into the bet, the yield has dropped to 0.85%, and the only thing that has surprised me so far is that bond yields didn't rise much in the modest cyclical upswing that unfolded in late 2018.

If bond yields do what I expect them to do over the next few years, we will eventually end up with negative interest rates in the UK. Knowing Boris Johnson, I am sure he will somehow find a way to portray that as good news and then take the credit for it.

I hope you had a great summer, because the next few months won't be easy – particularly for those of you living in Britain.

Niels C. Jensen
2 September 2019

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