

ASSET ALLOCATION

THE ECONOMIC AND INVESTMENT IMPLICATIONS OF AN AGEING POPULATION

# The age of risk

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What will be the consequences of an ageing population on the world economy, pension portfolios and financial markets? Higher-risk investing is one answer.

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# Overview

Live long and prosper. If this is society's marker for progress, we have scored only a partial success. Today's babies can indeed be expected to live 14 years longer than those born half a century ago thanks to improved healthcare, technology and other modern day advances. Increased prosperity, though, has proved much harder to achieve: living longer costs more. In this analysis, we consider how the seismic shift in longevity will affect the economy, retirement saving and the financial markets. Overall, we find that:

- Conventional wisdom that an ageing population means less risk taking will no longer hold
- To finance retirement in an era of increasing longevity, pension portfolios will need an average nominal return of over 7 per cent according to our model – more than double what is offered by government bonds
- Working longer and saving more will likely be part of the solution
- Emerging markets, growth stocks and stable dividend payers will be a bigger feature of investor portfolios, as will alternatives, such as infrastructure and private equity
- Demand for government bonds will ease
- Illiquidity risk premia will fall as investment time horizons increase
- Governments have a key part to play in supporting economic growth, encouraging savings and driving investments in the right direction

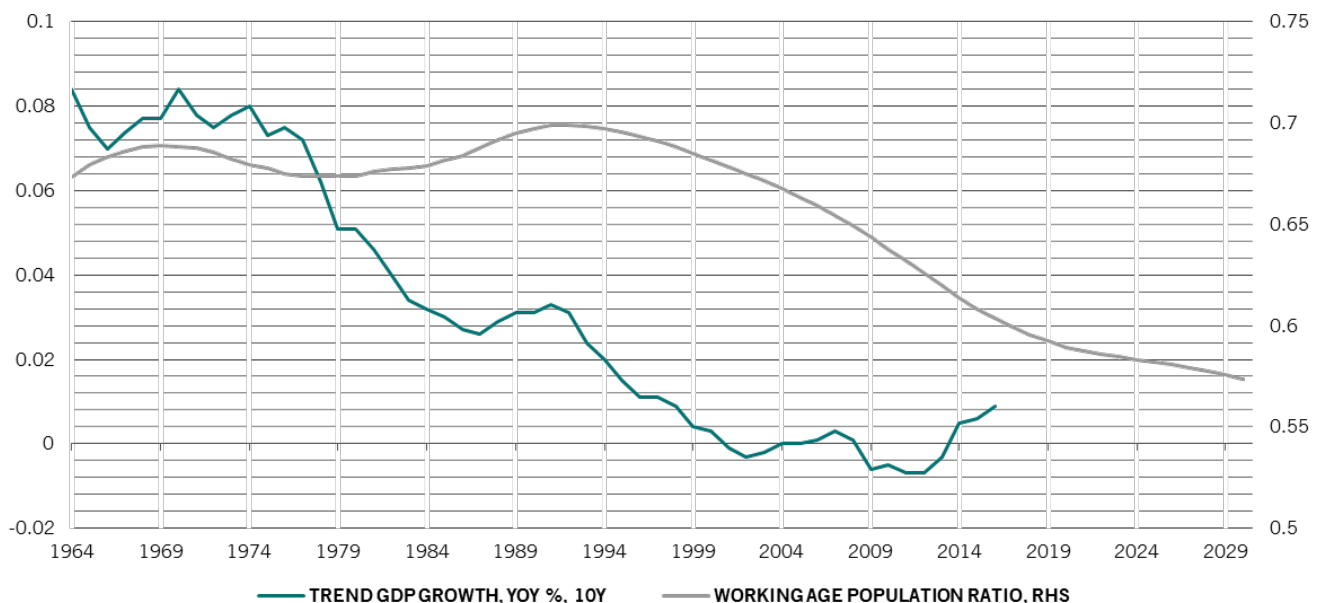
# Working longer, producing less?

## Fewer workers, slower growth

The country with the world's highest average life expectancy is Japan – at 84 years. However, one of the biggest increases in longevity since 1960 has occurred in China, where people now live nearly 33 years longer than they did back then; other major emerging economies – Turkey, India and Brazil – are not far behind.<sup>1</sup> So, while the challenge of an ageing population may currently be most acute in the developed world, the problem is building up in emerging nations too.

From an economic point of view, this doesn't appear to be good news. An ageing population is associated with lower productivity – something already apparent in Japan.

WORKING AGE POPULATION GROWTH VS. TREND GDP GROWTH IN JAPAN



Source: World Bank, Datastream. Data and forecasts covering period 01.01.1964-30.01.2030

Historically, a one percentage point change in the working-age proportion of the population has had a 0.66 per cent impact on GDP growth in the same direction, according to our analysis.

Globally, the proportion of workers is forecast to drop to 58.5 per cent in 2050 from 65.2 per cent in 2017.<sup>2</sup> Taken in isolation, our models show that this should lead to a 4.4 percentage point drop in world GDP growth, pushing it into negative territory.

Fortunately, there are strong reasons to believe this won't come to pass. Firstly, we expect that people will on average work for longer, mainly for regulatory and financial reasons, but also because improved healthcare will enable them to do so. Across the world, the share of over-65s who are still working is already nearly 50 per cent higher than it was in the 1990s, and the rate is particularly high in ageing Japan.<sup>3</sup> The upper boundary of what counts as a working life will thus gradually drift higher.

Secondly – and more significantly – any productivity loss due to ageing is likely to be at least partially offset by technological advances, particularly automation. According to the consultancy firm McKinsey, for example, digitisation has the potential to expand annual productivity growth in developed economies by 2 percentage points over the next decade through increased operational efficiency, reduced costs, streamlined labour requirements and reshaped business models.<sup>4</sup>

Taking all this into account, we expect the world's trend economic growth rate to remain around 3 per cent.

Meanwhile, increased investment will ultimately benefit the economy, even if in the short term the associated rise in savings – ageing populations save more – could dampen output by reducing consumption.

[1] OECD data on life expectancy at birth, 1960-2015

[2] World Bank database, OECD average for population aged 15-64 as percent of total

[3] OECD, labour force participation rate for 65-year olds or more as percent of age group

[4] McKinsey Global Institute, Solving the productivity puzzle, February 2018

# Solving the return shortfall

## Bonds dominate - for now

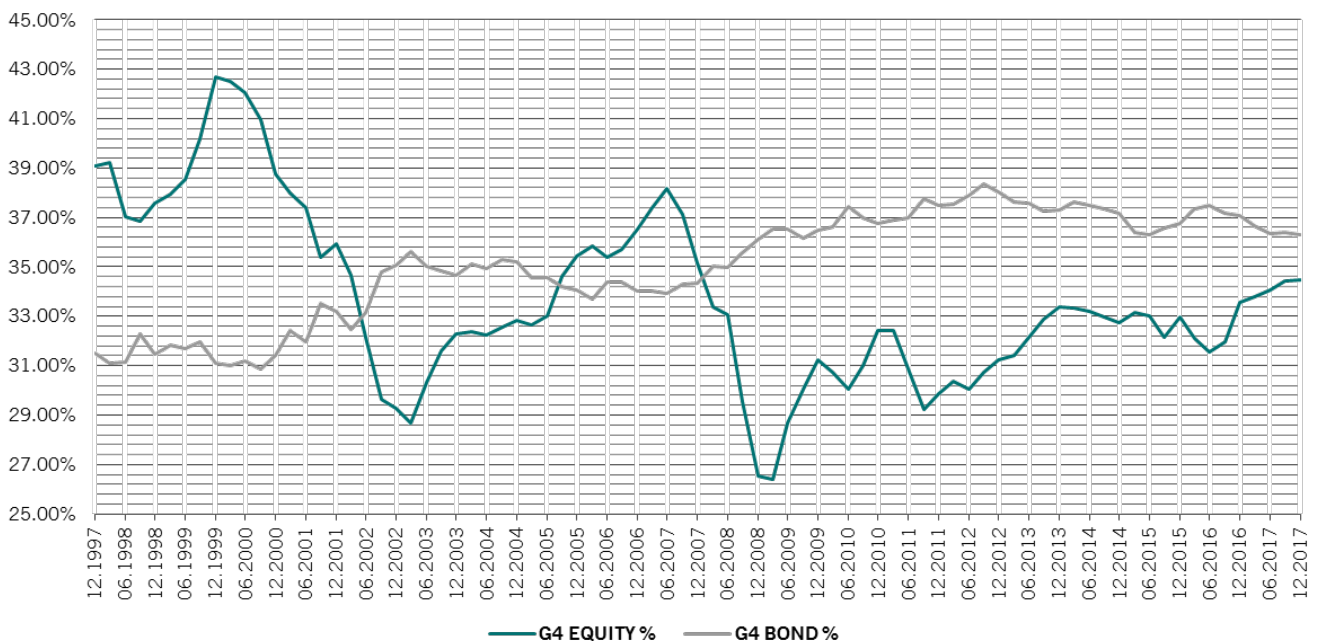
As long as the global economy is expanding – even if it's doing so at a modest pace – people should find it a bit easier to save for their retirement and to generate decent returns.

In order to achieve these returns, however, they need to change their investment approach. Traditional theory dictates that, as retirement nears, workers should not only save more but allocate a greater proportion of that saving to lower-risk assets such as government bonds.

Prospective retirees are following that advice. Older investors are funnelling a growing share of their capital to low risk-branded equity funds, bonds and other fixed income strategies; they are also exhibiting a strong preference for domestic assets, which are perceived as “safer” than foreign investments.

Moreover, pension funds and insurers still tend to allocate a higher proportion of their assets to bonds rather than equities.

AVERAGE EQUITY VS. BOND ALLOCATION FOR US, UK, JAPAN AND EURO ZONE PENSION AND INSURANCE FUNDS  
% of total investment portfolio



Source: BOE, Federal Reserve, Bank of Japan, ECB Data covering period 01.10.1997 - 31.12.2017. Note that US equity totals include mutual fund shares, and Japanese totals are domestic only.

Our research suggests this is the wrong approach – it is not sustainable in the long term as it will not deliver the necessary returns to fund retirement, particularly given the low levels of real bond yields in most major markets.

In order to secure a retirement income equivalent to 50 per cent of their final salary, today's 30-year-olds would need to generate an annual real return of at least 5.3 per cent on their pension pots. While historically such performance has been possible in a half bonds-half equities portfolio, bond yields are now very low. Add in modest economic growth and we expect long-term returns on a 50/50 portfolio from today's levels to be about 2 percentage points short of the required level.<sup>5</sup>

One way to solve this problem would be to invest in higher-risk assets, including developed market equities, emerging markets, illiquid assets and private equity. As longer lifespans prolong investment horizons, we believe that investors' attitude to less liquid assets will change, potentially making them more tolerant of the risks associated with such investments. However, this could in turn drive down required illiquidity risk premia.

Realistically, the quest for higher returns will probably be combined with longer working lives and rising savings rates – behaviours governments will undoubtedly encourage as they try to contain the growing drain of an ageing population on the public purse.

## **A helping hand from the state**

Governments have a key part to play in nudging investors and businesses in the right direction to avoid a major pension crisis. Pension scheme auto-enrolment and later retirement are some of the obvious measures, but yet more can be done.

To boost economic growth, policymakers can help reduce the corporate savings surplus – which currently exists in all the countries we track – in favour of households. The simplest way to do this is through higher wages, both by paying government employees more and by encouraging companies to follow suit through tax rules and other legislation, such as the minimum wage. Japan is, arguably, already moving down this road with plans for corporate tax cuts which only apply to businesses that raise wages aggressively and boost domestic capital spending.

[5] Pension projections based on UK market, using long-term return forecasts for UK equities, UK bonds and global alternative in line with inflation, retirement at 65, life expectancy of 85, savings rate of 8 per cent on a GBP25,000 salary and a pension replacement rate of 50 per cent

# Re-evaluating valuations

## Loss-making safe havens

So, what does the changing demographic landscape mean for asset prices? To begin with, it will be necessary to dispense with the idea that asset class valuations revert to the historical mean.

If, as we expect, appetite for riskier investment grows, there could be scope for valuation gauges such as price-to-earnings or price-to-book ratios to rise beyond what investors have come to accept as reasonable levels. Assets that look expensive relative to history, therefore, may yet turn out to be cheap relative to the future.

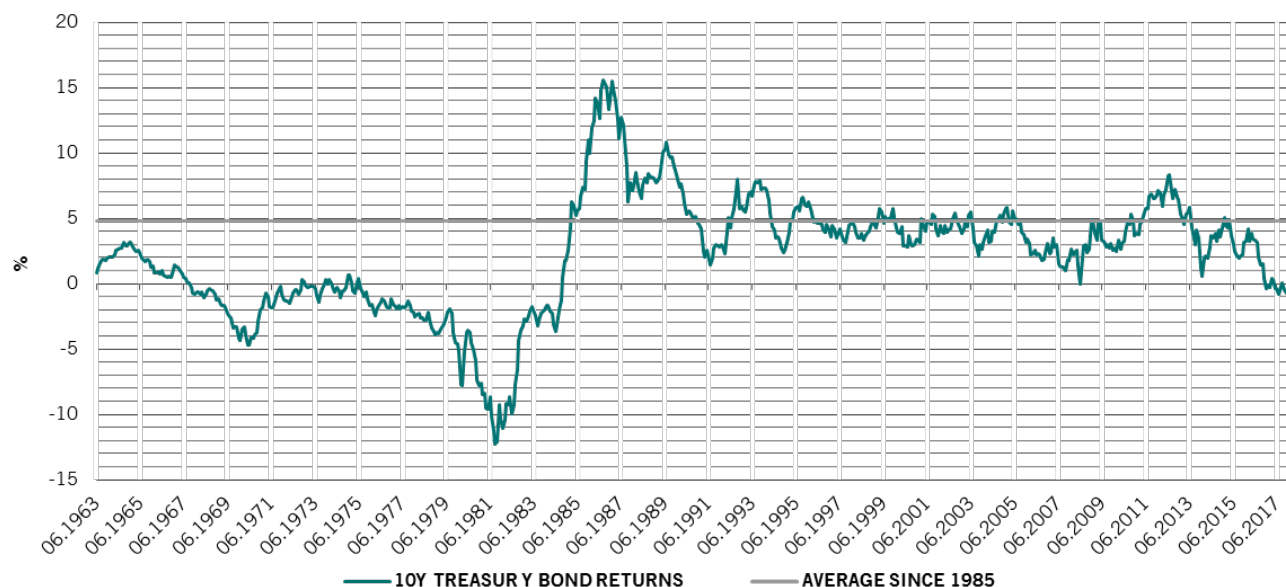
For instance, public and private companies with strong and consistent growth prospects should trade at a bigger valuation premium than has been the case historically. We also expect to see growing appetite for equity issued by businesses with a strong dividends track record, as well as for some growth stocks. Income will be important, but only if it is accompanied by a high and sustainable internal rate of return.

The quest for higher returns should also favour emerging markets over their slower growing developed peers, particularly euro zone and Japanese equities.

It's worth noting that the increase we envisage in aggregate demand for equities is likely to coincide with a decline in the supply of tradeable stocks.

As we have documented in previous research<sup>6</sup>, the number of listed companies has been in decline for some years, particularly in the US. A lopsided regulated regime that favours the formation of private firms and management's frustration with shareholders' short-termism has contributed to that trend. So if demand for equities rises to fulfil a higher aggregate equity portfolio allocation, then any shortfall in the supply of stocks can only drive market valuations higher still.

The picture for fixed income, particularly sovereign debt, is very different. It won't be too long before investors realise that government bonds' capital reservation powers are diminishing. Real returns on US government bonds turned negative in 2017 for the first time since the early 1980s while the scope for capital gains in future appears limited due to changes in monetary policy and an increase in public debt.



Source: Datastream. Data covering period 15.06.1963 - 15.5.2018

According to our projections, major central banks will shift from net bond buying of USD2.2 trillion in 2017 to just USD460 billion in 2018, and to net sales of USD80 billion in 2019. This will put upward pressure on real yields.

Making matters worse, governments will also need to borrow more to pay for increased costs of caring for the elderly. For example, the volume of US Treasuries outstanding is forecast to rise to 89 per cent of GDP by 2027 – roughly double the average of the last 50 years, with the Congressional Budget Office citing growing social security and healthcare costs as key factors.<sup>7</sup>

The upshot is that the attractive bond returns to which we have become accustomed over the past two decades are unlikely to be repeated over the next 20 years. Buying at today's prices for the long term could prove particularly painful, and we would expect global demand for bonds to start dropping.

However, there will still be sizeable, structurally driven inflows into longer-dated bonds from insurers and pensions funds, which are partly driven by increasingly stringent regulatory requirements.

## Pension funds in action

Pension funds will increasingly seek to move their investment portfolios further up the risk curve and away from the domestic market. Regulation will likely be adjusted to allow them more freedom to do so.

There are some signs this is already happening. For example, the USD30 billion Malaysian Retirement Fund Inc – known locally as Kumpulan Wang Persaraan (KWAP) – announced last year that it will increase its overseas investments to 15 per cent from 12 per cent.

Globally, pension fund allocations to alternatives – including real estate – have risen to 25 per cent in 2017 from 4 per cent in 1997, according to Willis Towers Watson data.

Japanese corporate pension funds have been at the forefront of the shift, with nearly 60 per cent of schemes telling JP Morgan they plan to further raise alternative allocation – from already historically high levels – over the coming year. Japan's Government Pension Investment Fund, meanwhile, is looking at investing in private equity, infrastructure and real estate via funds of funds.





# New products for old age

If fixed income falls from grace, traditional stylised asset allocation is likely to underperform. A new approach to designing portfolios – and investment products – will therefore be needed.

According to our calculations, the current average UK pension fund mix (of 47 per cent equities, 36 per cent bonds, 17 per cent alternatives/other)<sup>8</sup> will return 0.5 per cent per annum less than would be required to reach a 50 per cent coverage of final salary at retirement.

A more growth-focused portfolio should serve investor interests better by replacing some of the traditional bond holdings with a greater allocation to equities and alternatives. A 50/30/20 split would, for example, achieve the target, as long as a higher-risk, higher-return alternative, such as private equity, is selected.<sup>9</sup>

Infrastructure should do well, not least as buildings and cities adapt to cater to the ageing population. Private asset classes should also rise in popularity, with more vehicles designed to give mainstream investors access.<sup>10</sup>

Even further up the risk curve, new types of investment – such as bitcoin, peer-to-peer lending or crowdfunded bonds – may attract a following from more adventurous investors.

**“ Increased demand for riskier assets, in turn, is likely to result in the development of new investment products. ”**

Increased demand for riskier assets, in turn, is likely to result in the development of new investment products. These could take the form of higher-risk, growth-focused pension wrappers for defined contribution (DC) savers, new outcome-oriented fixed income strategies, as well as products which lock capital away for relatively long periods of time.

In the face of growing demand, we think the rules on pensions will be relaxed to allow investment in a wider range of assets, including illiquid ones. At the same time, we expect that retail and wholesale investors will also gain access to a wider range of products, including ones which are currently reserved for institutions. In a decade or two, pension savings could well feature private equity and maybe even cryptocurrencies alongside government bonds.

There is also likely to be increased appetite for advice to better navigate the new investment landscape, particularly among the growing number of DC savers. More of that advice will come from robots of various forms. Betterment in the US and Scalable Capital in the UK are among those already offering robo-advice for individual pension scheme investors.

The longevity-driven shift in portfolio allocation is likely to crystallise as the first wave of DC pensioners approach retirement over the next two decades. US workers, for example, have an estimated retirement deficit of some USD4.13 trillion – more than a fifth of the country's GDP.<sup>11</sup>

[8] Willis Towers Watson, Global Pension Assets Study 2017

[9] Based on private equities achieving a 5 per cent return premium over listed equities

[10] See our [Secular Outlook](#)

[11] Employee Benefit Research Institute; aggregate deficit for US households with the head aged 25-64 in 2015

# Theory versus practice

## Who's ready for retirement?

By necessity, our research is based on a number of relatively narrow assumptions. In reality the problem is likely to be even more serious than we've outlined in this paper. For one thing, we have used a pension replacement rate of 50 per cent, thus assuming that people retire on half their salary. But this is short of the 66 per cent recommended by the UK Pensions Commission.

What's more, this official guidance may itself be too low. It is based on the optimistic assumption that most people have paid off their mortgages by the time they retire and thus have lower expenses than they did during most of their working lives.

With housing increasingly unaffordable, this may no longer be realistic for future generations, which means their pensions will have to cover housing costs, whether that's an as-yet-unpaid mortgage or rent.

Popular age categories are also likely to change (not least because ever fewer people will retire at the age of 65, as currently assumed), which in turn will affect the economy and the models that try to forecast it.

If anything, the changes in the investment climate as a result of an ageing population may thus be even more pronounced than we suggest.

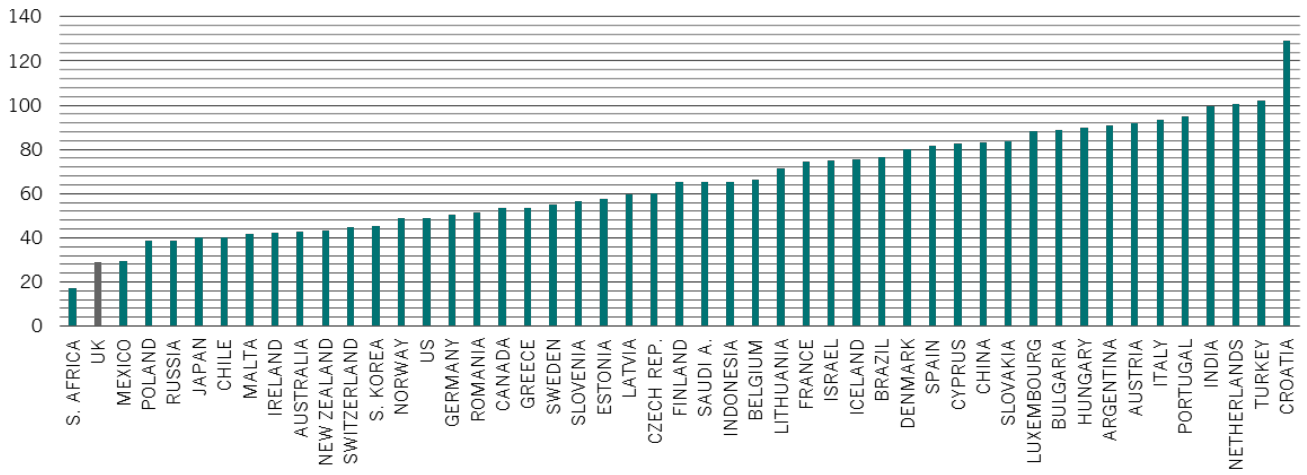
## A British example

The UK is a good example of a country that has woken up to the ticking pensions time bomb and is taking steps to address it – even if they don't go far enough.

One of these measures is the introduction of auto-enrolment in workplace pension schemes. However, the scheme does not apply to the self-employed, whose contributions have actually fallen,<sup>12</sup> nor to the lowest paid workers. For those who are included, the automatic level of contributions is likely to fall far short of what is needed for a comfortable retirement for 97 per cent of DC savers in the UK.<sup>13</sup>

Some 6.4 million DC members of private sector occupational schemes have a combined pension pot of just GBP410 billion, while 1.3 million of their DB peers share GBP1.8 trillion.<sup>14</sup> At the same time, the UK's state pension fund is forecast to run out within two decades, unless levels of contributions and/or pay outs are altered.<sup>15</sup> Given that the UK already has one of the lowest gross and net pension replacement rates in the world, according to OECD, the problem is only like to get worse.

NET PENSION REPLACEMENT RATES, %



Source: OECD, Pensions at a glance, 2017. Based on % of pre-retirement earnings for men as at 2016.

[12] PLSA, December 2017 <https://www.plsa.co.uk/Press-Centre/Press-Releases/Article/PLSA-comments-on-AE-Review>; ONS, "Trends in self-employment in the UK: 2001 to 2015"

[13] PLSA, Retirement Income Adequacy, Generation by Generation, 2016

[14] ONS, Occupational Pension Schemes Survey: UK, 2016; The Investment Association, Asset Management Survey 2016-17

[15] Government Actuary Department

# Conclusion

In conclusion, longevity risk is looming large over the global economy in general and the investment world in particular. To adapt our portfolios for longer lives and longer retirements, we will need to take on more – not less – risk. But we will also need to work for longer, save more and base our investments on a much longer time horizon. Both individual investors and the asset management industry as a whole will need to adapt. Governments, too, have a part to play in encouraging the necessary mind shift through education, regulation and tax reform.

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