

Four Interest Rate Myths

Debunking the New Gospel of the New Normal

Bottom Line:

- The "lower for longer" case rests on four demonstrably false premises
- Advanced economies have de-levered since 2008, and QE has vaporized trillions of public debts
- Pension funds and insurers would benefit from higher rates (and will go bust if rates stay low)
- Technology is deflationary: a fall in productivity would cause inflation, not deflation
- Ageing is not unequivocally deflationary:
- The China-driven savings glut will turn into a deficit as global growth rebalances towards capital-hungry economies in India, Africa, and Latin America

As the French railway system warns, "one train can hide another": humans tend to focus on the most recent and most salient experiences and disregard risks they cannot immediately see. I believe the analogy applies to the current consensus of "lower for longer".

After ten years of persistently low inflation, disappointing growth, and ever-lower rates, the New Normal has become the New Gospel. Rates can never increase. Inflation will never come back. Growth will never rebound. Long-term Treasuries are always a BUY.

The "lower for longer" case rests on four arguments. Rates will never increase because:

- 1- There is too much debt out there, which will permanently stifle growth
- 2- Higher rates would bust the pension and insurance sector
- 3- Productivity gains have stalled, economic growth is over
- 4- Ageing will turn the world's economy into a giant Japan



Each of these arguments is demonstrably false. The private sector has deleveraged in most developed countries and the increase in public debt has been monetized by central banks. Adjusted debt-to-GDP ratios are at generational lows.

Higher rates are the best hope of survival for pension funds and insurers: lower rates would surely kill them.

Technology is deflationary. Permanently lower productivity gains would lead to inflation, not deflation.

Ageing is not unequivocally deflationary. What matters is the net balance between desired savings and desired investments. Based on the OECD's projection, growth deficit countries should outpace that of surplus countries by 2022, turning the global savings glut into a savings squeeze.



Rates Will Stay Low Because there is Too Much Debt Out There

According to the "lower for longer" Gospel, rates must stay low because an excess of debt stifles economic growth. Public deficits crowd out the private sector investment, and scarce resources are wasted in unproductive uses, such as pension payments and social benefits. Private sector debt simply pulls demand forward, with rapidly decreasing returns on leverage. After 20 years of credit card addiction and leveraged finance, Western animal spirits are tapped out and overdue for a severe deflationary hangover.

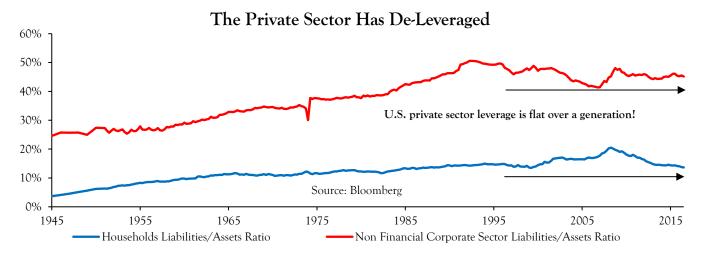
This theory is wrong on many levels.

First and most importantly, it flips the traditional supply and demand curves on their heads. Usually, excess supply of a good leads to a fall in its price - or a rise in rates in our case. The "lower for longer" school treats debt a <u>Giffen good</u>, whose prices rises when its supply increases. Economists have long struggled, and failed, to find such goods, so I am skeptical.

Second, this analysis ultimately follows the logic of Reinhart-Rogoff's paper, "Growth in a Time of Debt, which found that "a country's annual growth declined by two percent when gross external debt reaches 60 percent of GDP and that GDP growth was roughly cut in half for levels of external debt in excess of 90 percent". The two authors have been ridiculed for silly excel coding errors, and more comprehensive studies have showed that the relation claimed by Reinhart and Rogoff is statistically insignificant.

In my opinion, Reinhart-Rogoff's premise is sensible: at some point, excess debt levels should force economic agents to de-lever, which should be deflationary. But I doubt that one can draw one magical line in the sand that would tip indebted economies into deflation. If anything, I would think that societies' ability to take debt increases with economic integration, the development of financial markets, and general progress in the enforcement of contracts.

Third, as I argued in my first report at INTL FCStone, <u>A Tale of Two Markets</u>, most advanced economies have reduced leverage since the Great Financial Crisis. The chart below, from the <u>Federal Reserve's latest Z1</u>, shows that the leverage of U.S. households (defined as liabilities / assets) is at a 30-year low. U.S. corporations stopped deleveraging in 2013, but their net leverage is still lower than it was in 2007 and during most of the 90s.



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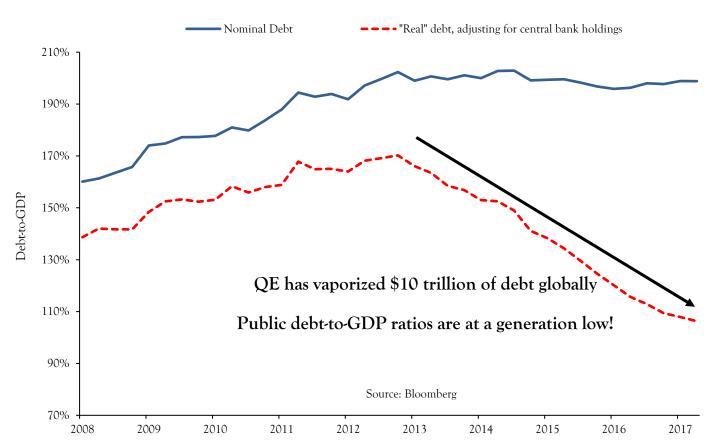


As for the public sector, I will repeat that total government debt must be reduced by the amount of held on central banks' balance sheets. The government does not need to service its debt when it is held by the central bank. The cash flows between the Federal Reserve and the Treasury are perfectly circular: every six months, the U.S. government pays interest on the notes and bonds that the Federal Reserve holds. And at the end of year, the Federal Reserve writes a big fat check to the Treasury, for the exact value of the coupons it has received.

As long as central banks' balance sheets do not shrink, principals are also rolled over indefinitely. When a central bankheld treasury note matures, it must be replaced with a new note. No cash flow ever changes hand. Despite the Fed's attempt to normalize its balance sheet, global central banks' balance sheets will keep increasing for the coming years so the debt monetization cycle is alive and well, thank you.

With this crucial and necessary adjustment, public sector debt levels are close to generational lows, which leaves plenty of room for re-leveraging. Judging by recent fiscal proposals in Japan and in the U.S., it seems that politicians have finally understood the magic of debt monetization.

Does Japan Still Have a Public Debt Problem?

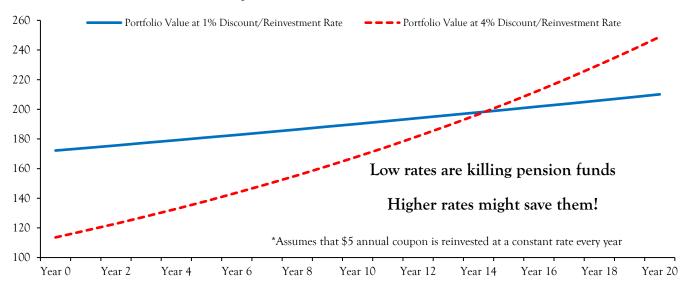




Higher Rates Would Bust Pension Funds and Insurers

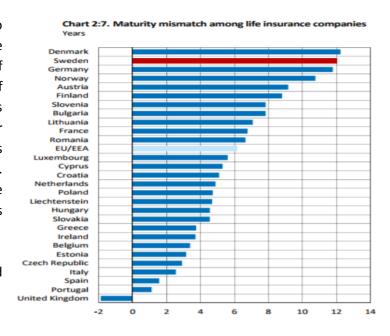
According to this theory, a rate shock would cause fatal losses to insurers and pension funds, which are already massively underfunded. While it is true that a rate shock would reduce the market value of long-term bonds, these short-term losses would eventually be offset by larger gains on coupon reinvestments. In the example below, I plotted the value of a 20-year bond and its reinvested coupons at different interest levels. Initially, higher rates reduce the value of the portfolio – that's the first duration effect. But as time passes, the bondholder benefits more from being able to re-invest coupons at a higher rate. By the time the bond matures, the bondholder would have more money in the high interest rate scenario, which is what ultimately matters for funds with defined liabilities. In reality, lower rates would surely kill pension funds and insurers, while higher rates could save them.

Reinvestments Matter!
Value of \$5 Coupon 20-Year Bond with Reinvestment at Different Rates



Second, insurers and pension funds' sensitivity to higher rates depends on the match between the duration of their assets and their liabilities. If duration is matched, there should be no impact. If assets are shorter than liabilities, pension funds and insurers would actually benefit from higher rates because the present value of their liabilities would drop faster than that of their assets. According to the Swedish Central Bank, the duration of European pension funds and insurers is six years lower than of their liabilities.

Again, higher rates could save the sector, and lower rates would surely destroy it.

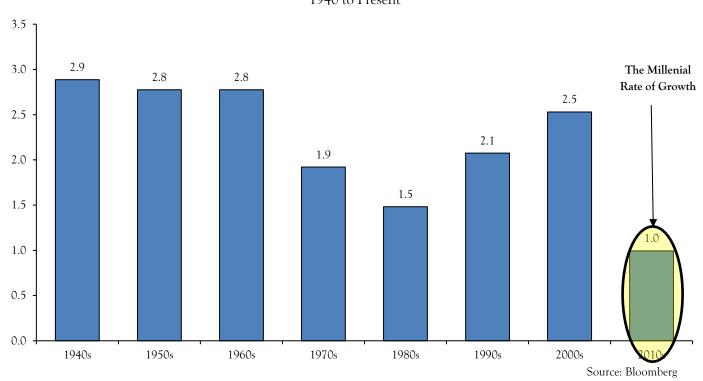




Rates Will Stay Low Because Economic Growth Is Over

According to this theory, productivity has hit a permanently lower plateau, with annual gains of less than 1% this past decade, against about 3% in the after-War period. "New Normal" proponents, such as L. Summers and R. Gordon have argued that <u>U.S. economic growth may be over</u>. In this view, the 60s were a golden age not just for music, free love, and drugs but also innovation. The productivity gains of electricity, the internal combustion engine, running water, indoor toilets (!), air-conditioning, petroleum products and the interstate highway were so massive that they will never be replicated. The wages of whinny millennials will stagnate forever because all we invented are new ways to waste productive time by anxiously checking Twitter followers and experimenting with new Instagram filters. As my Dad would say, music has gone from the Grateful Dead to Taylor Swift, and the world has gone to sh&!t

Average Yearly Gain in Labor Productivity by Decade 1940 to Present



Jokes aside, this analysis is wrong on at least two levels. First, because a collapse of productivity would be inflationary, not deflationary. Over time, technological progress is what keeps the overall CPI at reasonable levels despite the increasing cost of shelter, education, and healthcare. More stuff gets produced at a lower price: for example, the price of toys and computers has fallen by 6.1% and 9.8% annually since 2005. Conversely, the inflation in the prices of low-productivity goods, such as education and shelter, has exceeded that of the general CPI.

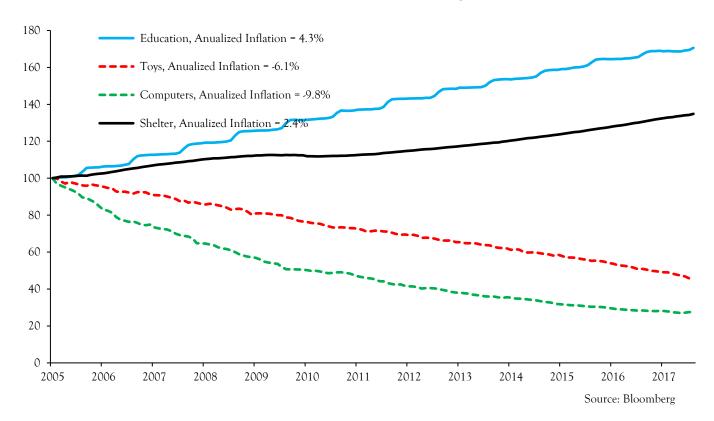


Luckily, I do not think the pace of technological progress is slowing, or at least I do not believe that anyone can make such a blanket statement. Living in the Bay Area, I am surrounded with wannabe disrupters who believe in the dawn of a <u>Second Machine Age</u>, where advances in artificial intelligence and robotics will cause an inflection point in productivity. If this were true, then my case for higher rates would be postponed as economies could increase output without much less capital.

I am not smart enough to make such a bold call. On the one hand, the "end of growth" story seems to ignore the reality that knowledge is cumulative, that good ideas spread, and that the boomers' generation may not represent an insurmountable peak in human intelligence. On the other hand, today's excitement over AI and robots is reminiscent of the "New Growth Paradigm" of the late 90s. People who actually understand machine-learning do not seem too concerned that Skynet's robots are about to replace humans. Hence, my middle-of-the-road guess is that productivity will neither collapse nor take-off and stay around 2% annually in developed economies.

The Productivity Deflator

Urban Consumer Price Index for Selected Categories

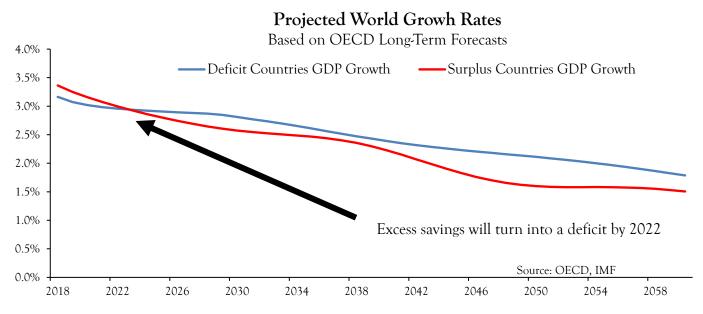




Rates Will Stay Low Because the World Is Ageing

I debunked this theory last month in "<u>A Demographic Case for Higher Rates</u>" so I will just summarize the main arguments here.

- Ageing is not unequivocally inflationary: as the proportion of retirees increase, net savings diminish.
 For example, Japan's savings rate has fallen to zero as the country's 10 million plus octogenarians draw down their nest eggs.
- Demography is destiny, but humans are adaptive: birth rates are recovering Japan and Russia. Maybe
 populations will react to global ageing by increasing natality? For example, a quicker-than-expected
 demographic transition in most developing countries confounded Malthusian predictions in the 70s.
- Growth is rebalancing towards capital-hungry countries. For now, surplus countries are growing faster
 than deficit countries, but that will change as India, Africa, and the Latin America replace China as the
 economic engines of the world. Based on the OECD's growth projections, desired investment will
 exceed desired savings by 2022.
- The recent savings glut was caused by just two countries: Germany and China have accumulated surpluses of \$6 trillion in the past 15 years, or 50% of the borrowing needs of all the deficit countries combined. This exceptional behavior can be explained by unique demographic and historical circumstances. Both countries had abnormally large baby boom generations (post-WW2 in Germany, post-Cultural Revolution in China). In both countries, this large generation repressed its desire for children, leading to a big bulge of net savers. I also believe that the experience of totalitarianism had a traumatic effect on spending patterns and increased precautionary savings. Both Germany and China pursued mercantilist policies of surplus accumulation to protect themselves against the risk of another collapse of social order. As the memories of these traumas recede, German and Chinese savings should normalize, progressively ending the global savings glut.



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