

Larry Summers' interest rate conundrum

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Larry Summers has invoked old theories of secular stagnation to explain the persistence of low interest rates in the recent past. The German economist Carl Christian von Weizsäcker has pointed to a retirement savings glut as the cause for low rates.

Both theses, however – that of secular stagnation and of a retirement savings glut – are theoretically doubtful and not supported by empirical evidence. A more plausible explanation for sluggish growth and low interest rates in recent years is the fall-out from the recent credit boom-bust cycle.

Larry Summers' most famous predecessor as prophet of secular stagnation was Alvin Hansen. Against the background of the Great Depression of the 1930s, he published his thesis in a 1938 book, just one year before the US economy took off on a high, long-term growth path.

In a slightly rambling speech to the attendees of the IMF's Economic Forum on 8 November 2013, Larry Summers wondered whether theories of 'secular stagnation' were possibly relevant for understanding the performance of the US economy. In his view, the US economy has behaved as if "the short-term real interest rate that was consistent with full employment had fallen to -2% or -3% sometime in the middle of the last decade". If this were the 'new normal', Summers felt that "we may well need, in the years ahead, to think about how we manage an economy in which the zero nominal interest rate is a chronic and systemic inhibitor of economic activity, holding our economies back below potential".

One probably has to be Larry Summers to be able to trigger a debate with such vague comments, which were even qualified by the self-critical observation that "this may

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all be madness, and I may not have this right”.¹ But this is what he did. Fellow New Keynesian Paul Krugman in his New York Times column from 16 November joined in enthusiastically: “I’ve been thinking along the same lines, and have, I think, hinted at this analysis in various writings. But Larry’s formulation is much clearer and more forceful, and altogether better, than anything I’ve done.” And there were numerous blogs subsequently dedicated to this question. Clearly, Larry Summers has struck a nerve. If his musings were not “madness” the world would a very different place from what we believe it to be. An economic environment with negative real interest rates on a sustained basis would require very different economic policies and investment strategies from those we have become accustomed to. The experience of the last five years following the collapse of Lehman Brothers would no longer be a temporary aberration in the wake of a balance sheet recession but rather the dawn of a new economic era. Before we jump to drastic conclusions, however, the thesis of secular negative real interest rates deserves critical scrutiny.

The “old-age provision nightmare”

Apart from triggering predictable support by fellow New Keynesians such as Krugman, Summers’ thesis of negative real interest rates was well received by the German economist Carl Christian von Weizsäcker and his followers.² Von Weizsäcker has developed a more sophisticated argument for negative real interest rates based on population aging. He starts out with the observation that people in the industrialised countries and China today spend some two decades in retirement. Therefore, the pensioners need to cover consumption needs for about 10 years on average (with those beginning retirement needing funds to cover 20 years of consumption and those ending it 0 years).

Assuming that people wish to bequeath some wealth to their children, von Weizsäcker reckons that people require wealth covering about 12 years of consumption. At the same time, he estimates that it is technically impossible to build an economically efficient productive capital stock covering more than five years of consumption. As a result of the excess of the desired stock of savings over the economically efficient productive capital stock, von Weizsäcker expects substantial mal-investment leading to negative real returns on invested capital. He dubs the need to invest at negative rates so as to secure consumption in retirement as the “old-age provision nightmare”. In von Weizsäcker’s view, the only way to avoid capital waste leading to negative real interest rates is an increase in government borrowing. To stabilise real rates at zero, government debt needs to fill the gap between the desired stock of savings and the maximum possible economically efficient productive capital stock. The government’s ability to tax and redistribute income will cover the shortfall of consumption afforded by the productive capital stock below the desired level of consumption.

¹ This disclaimer may have been a bit coquettish. Summers repeated his thesis at the 2014 annual meeting of the American Economic Association, suggesting that he feels that he is right and not mad (“Stagnation -- The New Normal”, 4 January 2014).

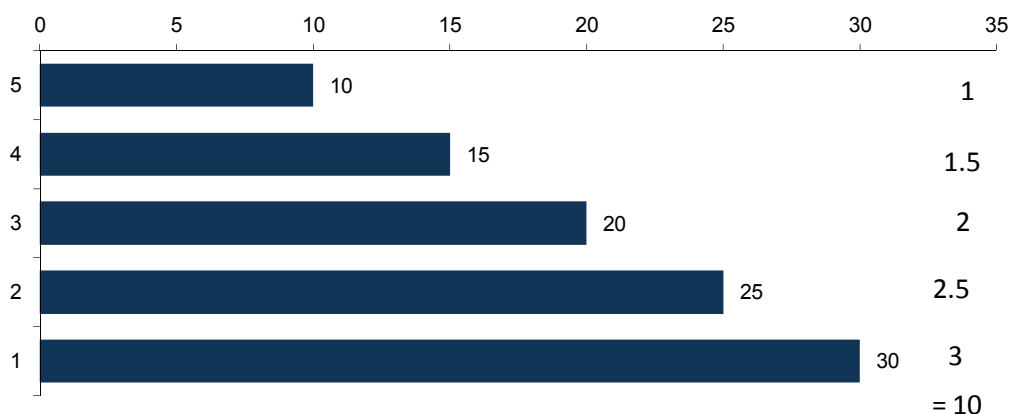
² See, for instance, “Der Vorsorge Albtraum”; *Wirtschaftsdienst*, 2013, pp. 7-15.

According to this view, it is the lack of government borrowing that has pushed real interest rates into negative territory. This does not mean that there is no upper limit to government borrowing. In case the government borrows more than is necessary to fill the gap between the desired savings and economically efficient productive capital stock, real rates could rise due to a risk premium for eventual government insolvency. Such over-borrowing may have occurred in some euro-area countries that recently have experienced difficulties in accessing capital markets.

A critical look at the von Weizsäcker thesis

Von Weizsäcker bases his argument on the capital theory of 19th century economist Böhm-Bawerk. In contrast to neoclassical theory, where capital is implicitly treated as a homogenous fund readily available for the investor, Böhm-Bawerk (BB) defines capital as goods “of higher order” required to produce “low-order” consumer goods. Thus, in his theory, the production of capital takes time and is specific with regard to the production of a defined set of consumer goods. Should this set change, a new capital structure may be required. The basic idea behind BB’s theory is shown in a simplified form in Figure 1. The horizontal axis gives the value of production, the vertical axis the order of goods and stages of production. In the first stage, 10 units of the capital goods of 5th order are produced using labour and natural resources. Assuming that 9 units are paid to the primary factors, the capital-goods producer keeps 1 unit, giving him roughly a 10% rate of return on his outlay (or more precisely $1/9$). The 10 units are sold to the producer of 4th-order goods who adds 5 units in value added and keeps a profit of 1.5 units, and so on. The total value of production is 100 units, value added is 30 units, profits are 10 units and the return to capital is roughly 10%.

Figure 1. Production structure in the Böhm-Bawerk model



Now assume that the production structure becomes more capital-intensive. This means in the BB model that the production process is extended by the addition of more higher-order goods, with a view to having more first-order consumer goods in the end. Von Weizsäcker now argues that the extension of the production structure will necessarily lead to diminishing profits at each stage and, when it is driven too far, to losses. In his view, the limit kicks in long before the level of first-order consumer goods production has been reached to feed the large group of retirees. He

bases his view on the observation that estimates of the productive capital stock are equivalent to more than five years of consumption while the required productive capital stock should be able to produce consumer goods worth twelve years of consumption.

But are these assumptions and estimates sufficiently robust to justify a prediction of overinvestment and negative real interest rates? For one thing, retirement periods may decline as more people grow older. Medical progress and less strenuous work will probably extend the working age life along with the total life span. For another, technical progress may allow the deepening of the production structure and an increase in the capital stock (in terms of years of consumption) without the feared decline in capital returns. In short, the uncertainty about key parameters in the von Weizsäcker thesis is too great to allow robust predictions of future real interest rates.

A theoretical argument against real interest rates below the real growth rate of the economy has been advanced by Stefan Homburg from Hannover University.³ Homburg draws on the 19th century French physiocrat Jacques Turgot, who argued that the rent on land would represent a lower boundary for real interest rates. Moreover, in a growing economy, the total real return on land (which is in fixed supply) must increase with the growth rate of the economy. If real interest rates are pushed below the real growth rate, it pays to take out credit to buy land. The price of land rises above the level consistent with a real return in line with real economic growth as long as the gap between the real interest and growth rates persists. The bubble bursts when real interest and growth rates are realigned.

No smoking gun

Scepticism about theories of secular negative real interest rates is reinforced by the historical empirical evidence.

Summers inferred the possibility that the short-term real interest rate had fallen to -2% or -3% from the lacklustre performance of the economy and low inflation despite strongly expansionary monetary and fiscal policies. However, there is no evidence that real long-term rates in the US have been depressed recently in a way that is inconsistent with historical experience. Figure 2 shows the long-term (over 10 years) average US Treasury bond yield adjusted with the consumer price inflation rate. At 1.9% in the third quarter of 2013, the real rate does not seem to be unusually low by historical comparison. Between 1946 and 1952, there were phases of strongly negative real rates. Real rates were also negative, albeit not as much as earlier, between 1977 and 1981. In the first period, the economy grew strongly, in the second only weakly. In both periods, however, inflation was at elevated levels.

Real rates jumped in the early 1980s as the Volcker Federal Reserve raised policy rates to fight inflation. Subsequently, they eased again and dipped briefly into negative territory in 2008. But this episode was very short-lived and much milder than the earlier episodes of negative real rates.

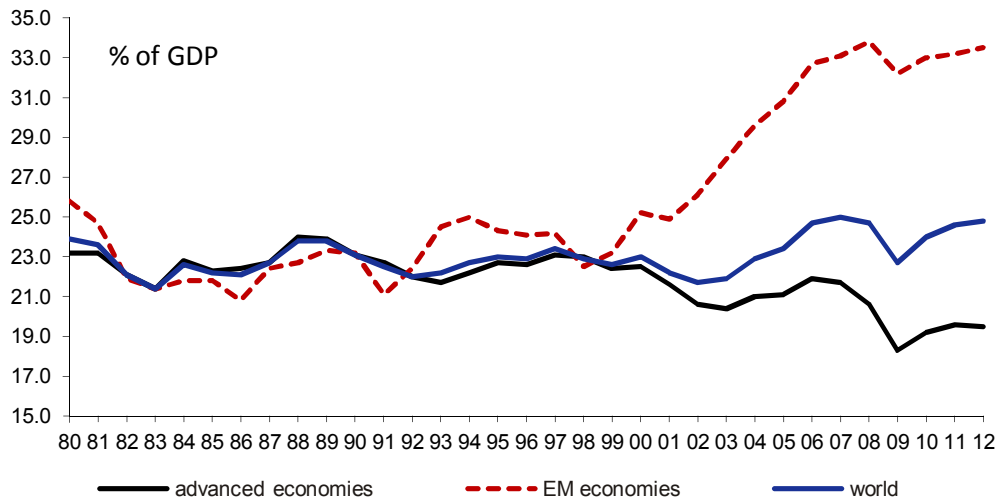
³ See <http://www.coll.mpg.de/Download/Weizsaecker/Debate%20Staatsschulden.pdf> for the entire debate.

Figure 2. US real long-term yield on Treasury bonds



Moreover, the von Weizsäcker thesis would require global savings (and investment) to run at increasingly high levels, especially in regions with a more rapidly ageing population. As Figure 3 shows, however, there is no evidence for this either. According to IMF calculations, aggregate savings have declined relative to GDP in the advanced countries since the end of the 1990s. At the same time, however, they increased sharply in the group of emerging market economies. With populations in the emerging market economies much younger than in the advanced economies during this period, the opposite should have happened, if von Weizsäcker's thesis would hold.

Figure 3. Global savings



An alternative view

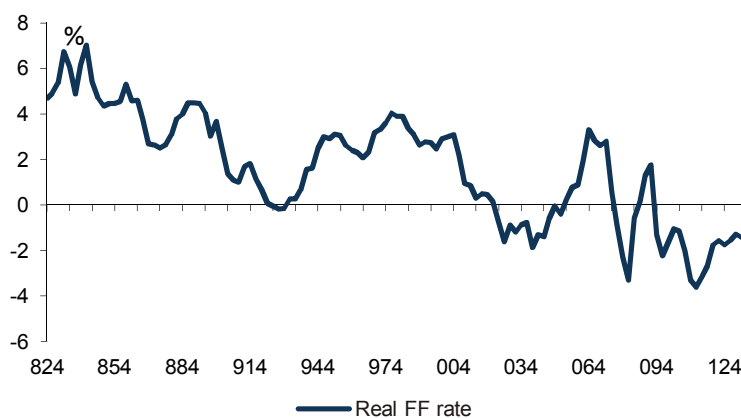
Let's return to Summers' conundrum that significant stimulus from macroeconomic policy even before the financial crisis of 2007-09 failed to produce more vigorous economic growth and inflation. Is not this the smoking gun in favour of the argument of secular stagnation and negative real interest rates? Followers of the New Keynesian economic model may well find no other explanation for the failure of the

economy to react more powerfully to expansionary economic policies. But another theory, the Austrian school, would predict exactly that.

According to two of its most prominent proponents, F.A. Hayek and Ludwig von Mises, an investment and asset price cycle is started when economic policy pushes the real funding rate below the real natural rate, which balances savings and investment in the long term. Low interest rates raise the price of existing capital goods and induce investors to expand the production of new capital goods (adding more goods of higher order to the production structure, as shown in Figure 1). At the same time, lower funding rates discourage savings and encourage consumption and the production of consumer goods. Both consumer and capital goods industries begin to expand. However, after a while, primary resources and funds become scarce so that wages, prices for intermediate goods and interest rates rise. Capital asset prices decline and a lack of resources and funding leads to the failure of marginal projects. Economic growth resumes only after capital asset prices have fully corrected and mal-investment has been eliminated. If economic policy counters the necessary adjustment by lowering funding rates and pumping new funds into the system, the production structure remains inefficient and the economy will not be able to return to healthy growth. Thus, continuous economic policy stimulus will achieve little more than keeping the economy in a state of stagnation.

Since the late 1980s, monetary policy has been the instrument of choice to counter economic downswings in the wake of asset price crashes. The series began with the equity market crash of 1987, which was countered with aggressive monetary policy easing by the US Federal Reserve and other important central banks. The US savings and loan crisis and subsequent recession of the early 1990s and the emerging market and LTCM crisis of the late 1990s triggered further rounds of monetary easing. More easing followed the burst of the technology stock price bubble in 2000 and, of course, the burst of the credit bubble in 2007. As a result, the Federal Funds target rate adjusted for inflation declined on trend between the early 1980s and 2013. During the entire period, the real Fed Funds' rate averaged +1.6%. From 2008, the second year of the financial crisis, to end-2013 it averaged -1.5%.

Figure 4. US: Real Fed Funds' target rate



To Larry Summers' puzzlement, year-on-year GDP growth averaged 3.7% during the recovery of the 1990s, 2.4% during the recovery in the first half of the 2000s and only 1.8% since the trough of the Great Recession in the first half of 2009. An increasingly more expansionary monetary policy has been accompanied by an ever-weaker economic recovery. Larry Summers concludes from this that the economy has entered a phase of secular stagnation, characterised by excessive savings and too few investment opportunities. Others might conclude that the medicine against hangovers may have become less effective after so many wild parties.

Conclusion

Larry Summers' theory of secular stagnation is not new. As mentioned in the introduction, the US economist Alvin Hansen argued in the late 1930s, against the background of the Great Depression, that the American economy would never grow rapidly again because all the growth ingredients had played out, including technological innovation and population growth.⁴ "Secular stagnation" had set in. The only solution, he found, was large-scale deficit spending by the federal government, just as Summers argued in a follow-up article to his earlier secular stagnation thesis.⁵ Secular stagnation was in Hansen's view just another name for Keynes's underemployment equilibrium. Hansen's book appeared in 1938, two years before the US economy embarked upon a powerful expansion, with real GDP growing at an annual average rate of almost 5% between 1938 and 1973. Growth in the early 1940s was related to a surge in government spending due to WWII and seemingly in line with Hansen's theory. What went against Hansen's thesis was the continuation of growth in the post-war period.

With hindsight, it seems that Hansen mistook the 'hangover' during the 1930s from the roaring twenties that culminated in the stock market crash of 1929 for secular stagnation. It seems likely, that Larry Summers is making the same mistake. Policies based on such a mistaken view could prove quite dangerous.

⁴ Alvin Hansen, *Full Recovery or Stagnation?*, New York, NY: W.W. Norton & Co., 1st edition, 1 January 1938.

⁵ See Larry Summers, "Washington must not settle for secular stagnation", *Financial Times*, 6 January 2014.



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