

## Demand Side Secular Stagnation<sup>†</sup>

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The events of the last decade should precipitate a crisis in the field of macroeconomics. Textbook theories emphasize the business cycle as the central phenomenon to be explained. The emphasis is on understanding fluctuations around average levels due to various shocks. The experience of Japan in the 1990s and now that of Europe and the United States suggests the need for theories that explain a more important and troubling phenomenon—protracted stretches of growth that are well short of previous trends or estimates of potential along with incompatibility between full employment and financial stability. Even with the recent strength of the US economy, I believe that the concept of secular stagnation introduced by Hansen (1939) is highly relevant as has been further elaborated in Summers (2014a,b).

This paper is organized as follows. Section I describes why recent economic performance is of concern. Section II relates this very poor performance to the zero lower bound on nominal interest rates and the secular stagnation hypothesis. Section III responds to a variety of questions and challenges raised about the secular stagnation hypothesis. Finally, Section IV considers implications for macroeconomic policy.

### I. Disappointing Recent Economic Performance

It has been nearly six years since the US economy reached its trough in 2009, and over five since financial stabilization. Yet economic growth has averaged only 2.3 percent, despite having started from a highly depressed state.

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We have made almost no progress catching up to what was regarded as economic potential in 2007. Insofar as the output gap is smaller now than it was in 2009, it is only because we have revised our estimates of potential downward.

The situation in Japan is well known, with an economy that has been profoundly depressed for a generation. Perhaps slightly less clear is that Europe, seven years in, may be the “new Japan.” It is on essentially a Japanese path with an emerging gap between economic performance and previously judged potential, with the interest rate at zero, and with deflation setting in. Several years after European credit spreads had started to normalize, a third recession looms as a very real possibility. And so, stagnation cannot be attributed simply to a financial intermediation system that is not working in the immediate aftermath of the crisis, but instead requires something more profound.

To understand what is going wrong it is helpful to reflect on the years from 2003 to 2007 in the United States. A reasonable argument can be had as to whether performance was poor or adequate. No one will argue that performance was extraordinary or that capacity constraints were being seriously threatened even during a period featuring a housing bubble, low interest rates, the emergence of substantial budget deficits, and clearly unsustainable growth in household indebtedness. Going back further, the 2001 recession required a near brush with the zero bound. And prior to that, the boom of the late 1990s was propelled in part by the Internet bubble. So it has been over 15 years since the US economy enjoyed health growth along with financial stability. It is now clear that Europe’s apparently satisfactory performance between 2001 and 2007 rested on an unsustainable financial footing.

What is perhaps most striking is how far rates have declined in the previous year. Despite several quarters of above-trend growth and a decline in the unemployment rate of 1.4 percent from when I first discussed secular stagnation, the 10-year rate is a full 100 basis points (bp)

Five year/five year forward TIPS rates

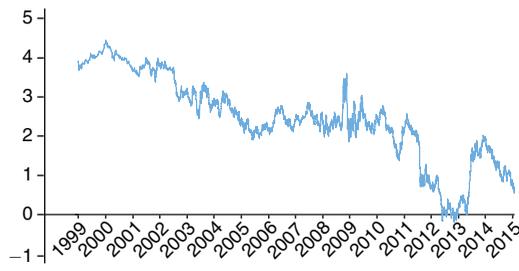


FIGURE 1. REAL RATES HAVE FALLEN DRAMATICALLY

Source: Gürkaynak, Sack, and Wright (2008).

lower<sup>1</sup> with the 5 year/5 year real Treasury Inflation-Protected Securities (TIPS)<sup>2</sup> yield down 122 bp, leaving it at barely one-third of its prior level of 1.8 percent.

## II. Secular Stagnation and the Zero Lower Bound

This brings us to the secular stagnation hypothesis put forward by Hansen (1939). Hansen's idea was that there was a shortage of impetus to invest such that there would not be adequate demand to absorb all of the saving. He foresaw that with a chronic excess of desired saving over desired investment, the economic future would feature "sick recoveries which die in their infancy and depressions which feed on themselves" Hansen (1939, p. 4). Hansen wrote before he knew there was going to be a Second World War, a baby boom, massive investments involved in creating modern suburbia, and a large-scale increase in the role of government. But to say that events exogenous to Hansen's model prevented secular stagnation is not to say it was implausible. The extraordinary events needed to pull the economy out of Depression as well as the recent weakness suggest that it is worth considering secular stagnation.

<sup>1</sup> As of January 29, 2015 versus November 8, 2013 for 10-year rate and January 27, 2015 for TIPS.

<sup>2</sup> The 5 year/5 year forward refers to the interest rate paid over the five years starting five years from today. This rate can be inferred by comparing ten-year bonds to five-year bonds. The 5 year/5 year forward rate is sometimes used as a proxy for longer term interest rate expectations.

Consideration of such theories is outside the mainstream of current macro. Standard theories see recessions as temporary fluctuations. But there is a natural market imperfection that can account for protracted shortfalls in output—the zero bound on nominal interest rates. It in turn implies bounds on other interest rates that reflect term and credit premia. With demand a function of real interest rates which in turn depend on expected inflation or deflation, there is no guarantee that the real rate will be low enough for full employment. In the language of intermediate textbooks, at a zero rate the IS curve implies a level of output below full employment.

To put the point in a different and slightly less familiar way, if one assumes that investment is a decreasing function of the interest rate and that saving is an increasing function of the interest rate and that the level at which equilibrium with full employment takes place requires a negative nominal interest rate, then adjustment will take place in the form of a lower level of output, and that lower level of output may continue indefinitely.

I have been careful in this discussion to avoid the question of what determines inflation. Many in the Keynesian tradition hold that it is determined by some kind of Phillips curve. There are alternative views in which wages and prices moment by moment are in an equilibrium in the sense that no agent has an incentive to change their wage or price. All that is essential is the recognition that price flexibility is not sufficient to assure full employment. In particular, falling prices, by redistributing from high spending debtors to low spending creditors and by raising expected real rates, are likely to reduce rather than increase output as emphasized originally by Fisher (1933) and by Tobin (1947) and DeLong and Summers (1986).

So there is good reason to suppose that if the zero lower bound on the nominal interest rate is an important constraint on policy, then there is a real risk of protracted stagnation. But how important is the zero bound likely to be in practice? There are substantial reasons to believe that in the current economic environment it will frequently be an important constraint and certainly one that binds much more frequently than during most of the postwar period.

First, nominal rates have been at zero in the US, EU, and Japan for a number of years and are expected to remain very close to zero for the next several years in both the EU and Japan. Second,

TABLE 1—NOMINAL AND REAL INTEREST RATES, NOW AND A YEAR AGO\*

	USA		Japan		Germany		Italy	
	Year ago	Now	Year ago	Now	Year ago	Now	Year ago	Now
<i>Nominal</i>								
Five year	1.53	1.31	0.21	0.06	0.72	-0.02	2.43	0.78
Ten year	2.74	1.84	0.64	0.30	1.74	0.35	3.85	1.59
Five year/five year	3.97	2.36	1.06	0.54	2.77	0.72	5.30	2.41
<i>Real</i>								
Five year	-0.48	-0.22	NA	NA	-0.36	-0.10	1.48	0.46
Ten year	0.57	0.19	-0.54	-0.48	0.18	-0.64	2.61	0.78
Five year/five year	1.62	0.59	NA	NA	0.73	-1.17	3.75	1.10
<i>Market Implied (breakeven)</i>								
<i>Inflation Rate</i>								
Five year	2.01	1.53			1.08	0.09	0.95	0.32
Ten year	2.17	1.65	1.18	0.78	1.56	0.99	1.24	0.81
Five year/five year	2.35	1.77			2.04	1.89	1.55	1.31

Note: See footnote 2 for description of five year/five year forward rate. \*January 29, 2015 versus January 29, 2014.

Source: Bloomberg; Gürkaynak, Sack, and Wright (2006 and 2008).

even if US rates are increased from zero, it is quite likely that the zero bound will constrain again during the next recession. The Fed has typically cut rates by around 4 percent in recessions. Such cuts will likely be impossible given that current market pricing suggests that it will be 2020 before the Fed funds increase to even 3 percent.

Third, along with the clear evidence that inflation rates have declined throughout the industrial world, market evidence suggests that both inflation and global equilibrium real rates have been declining for quite some time. Mervyn King, former BOE Governor, has calculated that the global real interest rate has declined substantially and mostly continuously over the last 30 years (King and Low 2014).

It is possible that current low rates reflect the aftermath of the financial crisis rather than being a permanent structural feature. But I believe there are a number of fundamental reasons described in more detail in Summers (2014b) that suggest that equilibrium real rates may be lower on a sustained basis.

*Several factors are reducing investment demand.* Amongst them: (i) population growth across the developed world will continue to slow; (ii) the *relative price of capital goods has declined* reducing the amount of savings that are absorbed to satisfy a given real investment; (iii) cutting-edge technology companies like Apple

and Google seem to be wrestling with the problem of how to deal with their “excess cash.”<sup>3</sup>

At the same time investment demand is being reduced, *other factors are likely increasing the supply of savings.* Amongst them: (i) developing economies are accumulating *increasingly large reserves*; (ii) more stringent capital and collateral requirements in the wake of the financial crisis have increased the demand for safe assets; (iii) rising inequality increases the average propensity to save; (iv) *after tax real interest rates* move more than one-for-one with pre-tax real interest rates, increasing the attractiveness of a given pre-tax real interest rate as inflation declines; and (v) the increased costs of financial intermediation, associated with the legacy of the crisis, which drives a greater wedge between the returns to savers and the costs for borrowers.

So there are many reasons to expect that equilibrium real interest rates will be substantially lower than they have been in the past. Lower equilibrium real interest rates coupled with low rates of inflation means that the zero-lower bound is likely to be a constraint on achieving adequate aggregate demand much more in the

<sup>3</sup>Fifteen years ago it took \$5–\$10 million to start a Silicon Valley start-up. Today it takes \$500,000–\$1 million. The capital costs of giving everybody a telephone in the cellular era is much lower than it was in the land-line era, where wires had to be constructed into each home.

future than in the past. This is the essence of the secular stagnation hypothesis.

### III. Objections to Secular Stagnation

In the year that it has been a subject of active discussion, several questions and concerns have been raised about the secular stagnation hypothesis. Three questions capture the most pressing objections people raise. I think all are important, but none lead me to feel greatly reassured or to abandon the hypothesis.

First, people say, “Can it really be right that equilibrium real interest rates should be less than zero?” After all, there’s something productive to do—as Paul Samuelson has famously asked, “can’t you just flatten out hills?” If flattened-out hills yield permanent benefit, no matter how small, there should be infinite demand for investment at a zero long-term real interest rate.

Of course it’s not clear that the person who flattened the hill will capture the benefits, especially if they take place in a millennium. Even if guaranteed positive social return projects are in infinite supply there is no reason why real interest rates must be positive if property rights are imperfect or if there are other market imperfections. Further, if relative prices are changing, real interest rates are not unambiguously defined. They can easily be negative measured relative to overall inflation yet positive relative to capital goods if the relative price of capital goods is declining. As an empirical matter, negative real rates are not uncommon. During the 1970s world real interest rates were mostly negative. There was no issue of the zero lower bound because there was significant inflation. But real interest rates close to zero have been commonplace.

The second challenge is the challenge posed by Bob Gordon and others (Gordon 2012). They argue that growth is indeed slow but question whether the problem is on the demand side, as I have argued, rather than on the supply side. The adult population will be growing more slowly. Forecasting productivity growth is notoriously difficult so a slow-down is certainly possible. So it would be a wrong to dismiss the supply side in understanding slow-downs in growth. Indeed, slower population growth was at the center of Hansen’s original theory.

But relying entirely on supply factors to account for stagnation seems problematic.

Economists have a general approach to distinguishing demand and supply shocks. When quantity goes down and price does as well, shocks are thought of as coming from demand. Quantity going down and prices going up is suggestive of supply shocks. During the current episode, inflation rates both contemporaneously and prospectively have declined—suggesting the importance of demand.

Moreover there are substantial reasons detailed in DeLong and Summers (2012) for supposing that demand shortfalls have consequences for subsequent economic potential as investment in all types of capital is reduced. Such hysteresis effects give rise to what might be called inverse Say’s Law: “Lack of demand creates lack of supply potential.” Note that even if potential growth has declined substantially for supply-based reasons, the arguments made previously are sufficient to suggest that zero lower bound is a likely future constraint on the economic activity. And that is all that is necessary for demand side secular stagnation to be a pressing issue.

Third, it is natural to ask—given that the US economy grew at 5 percent in the third quarter—whether secular stagnation is still relevant as an issue. It certainly appears highly relevant to Europe and Japan. As for the United States, several observations seem pertinent. It would take more than five years of 4 percent growth to achieve a return to the 2007 estimate of potential. It remains to be seen how long the recovery will last and whether finances will remain stable. Given low prevailing inflation and real interest rates, there is a real prospect that the zero bound will again emerge as a constraint the next time the economy turns down.

### IV. What Is To Be Done?

What is to be done? There are essentially three plausible strategies. The first is *structural reform*. Increase the economy’s potential; make the economy more flexible. There is much to be said for making economies more dynamic. It has almost nothing to do with responding to secular stagnation. Structural reform has been tried for many years in Europe, which is now likely approaching its third recession. It is not even clear that this reform works in the right direction. If supply increases without a concomitant demand increase, deflationary pressure increases. And more deflation means

higher interest rates, means less demand, and means more deflation.

It is at best an open question whether recession and the associated pain operates as a successful inducement to structural reform or operates as an inhibitor of structural reform. To the extent that it brings populist governments into power, recession discourages structural reform. To the extent that it makes it more difficult for those who lose jobs to find jobs, it makes undercutting employment security more difficult, not easier. And to the extent that the focus of structural reform is on increased competitiveness, it is likely to be a zero-sum game.

So I see very little prospect that structural reform can respond to secular stagnation. Perhaps it can encourage some private investment, but there are risks. That is not to say that structural reform is a bad thing or should not be substantially encouraged. But the idea that structural reform will help area-wide secular stagnation can be supported by neither theory nor evidence.

A second strategy is to operate to *increase the level of spending by promoting public or private investment*. Notice that successful measures to promote borrowing and spending respond directly to the market failure that I have identified by raising the equilibrium level of real interest rates. Notice also that public investment, that would have been irrational at a high real interest rate, becomes rational at a lower rate.

The International Monetary Fund (IMF) has recently concluded that well-planned fiscal expansions will more than pay for themselves (IMF 2014), a conclusion in accord with my prior work with DeLong (DeLong and Summers 2012). Specifically, the IMF found that infrastructure investment would have substantial positive impacts on gross domestic product (GDP) and that those impacts would be large enough to reduce debt burdens. A 1 percent of GDP increase in public investments would reduce debt burdens five years out by 6–7 percent of GDP. If one wants to consider intergenerational morality, deferring maintenance puts the burden on future generations just as surely as does borrowing money. The cost of deferred maintenance goes at a much faster rate than prevailing interest rates.

I find it hard to make a rational case against a substantial increase in public investments in Europe and in the United States. If I am right about secular stagnation it is potentially the key

to restoring reasonable growth. If I am wrong it is merely borrowing money at zero to invest in projects that can be expected to earn a return of 5–10 percent.

What about monetary policy? Directionally, concern about secular stagnation makes a case for more expansionary policy because the risks of deflation exceed those of inflation, the risks of stagnation exceed those of overheating, and quite likely the risks of too little credit growth exceed those of too much credit growth. The questions go to the efficacy of expansionary policy when short rates are near the zero bound and its possible adverse side effects. Starting in Europe at a 30 bps Bund, how much efficacy to expect from policy that brings down that interest rate by 10 or 20 basis points? How much can commitments with respect to future interest rate policy really impact expected real interest rates today? If they take place, how large will the impact be, and to what extent will the impact operate through a weaker currency? It may operate to move demand between one country and another. But in a world where secular stagnation is the challenge in many places, that's not a strategy that is open for everyone.

The second issue about monetary policy is the financial stability consequences of protracted periods of zero interest rates, all the more with substantial government intervention in asset markets. We are simply in uncharted territory and do not know what the consequences are for risk-seeking behavior or financial intermediation. They may be benign, or they may well make asset bubbles more likely. And in any event, the investments that are stimulated are the investments that were not worth undertaking at a 1 percent Bund and only became worth undertaking at a 10 bp Bund, and those investments are unlikely to be as socially beneficial as the best selected investments achievable in the public sector or by appropriate regulatory targeting. So I have no objection to using monetary policy. I suspect an instinct to easier monetary policy in an era of secular stagnation is probably a warranted one. But it seems to me that what we know suggests that it is very much a second best to spurring private spending and public investments.

## V. Conclusion

The prospect of secular stagnation remains troubling. I will have served my purpose if I

have underscored the seriousness of our current economic predicament, reminded you that the process of re-equilibration has happened only through the mechanism of lowering our sights, suggested the centrality of the zero lower bound on interest rates in understanding this phenomenon, and suggested that finding ways to increase the demand to spend, no matter how counterintuitive they may be, is likely to be an important part of the way forward. Economics is not a morality play. The fact that various kinds of profligacy may have contributed to our current situation does not constitute an argument for austerity as the primary strategy for its resolution.

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