

Global Economics View

Secular Stagnation: Only If We Really Ask For It

- There is *some* evidence consistent with the hypothesis that the equilibrium real interest rate needed to balance aggregate demand and aggregate supply at full employment has fallen in a number of advanced economies and may even be negative to the tune of -2% to -3%, as former US Treasury Secretary Summers suggests.
- When the nominal interest is at the zero lower bound, when inflation is low and the output gap is both negative and large, the real interest rate consistent with saving-investment balance and full employment cannot be achieved without appropriate policy support.
- Cyclical stagnation – a large negative output gap – can reduce the future level of potential output if it is persistent, by reducing capital expenditure and by depreciating human capital. Thus even when the output gap closes eventually, potential and actual output will be lower than they would have been if the output gap had been closed promptly: cyclical stagnation becomes secular stagnation.
- Policy tools exist to address the secular stagnation threat: removing the zero lower bound on nominal interest rates or ‘helicopter money’ (a combination of a temporary fiscal stimulus financed through a permanent increase in the monetary base).
- The risk of ‘secular stagnation’ through a failure to adopt appropriate policy measures is absent in EMs, low in the US and UK, somewhat higher in Japan and highest in the euro area.

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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Secular Stagnation: Only If We Really Ask For It

A debate is raging among macroeconomists as to whether a global saving glut (even predating the financial crisis) has heightened the risk of secular stagnation in many economies

Former US Treasury Secretary and head of the US National Economic Council Larry Summers argues that the short-term real interest rate that is consistent with full employment may have fallen to -2% or -3% sometime in the middle of the last decade. The proximate determinant of this decline in the short-term real interest rate at full employment was an ex-ante global saving glut, possibly reinforced by a decline in ex-ante capital expenditure. With the short-term risk-free nominal interest rate close to the zero lower bound (ZLB), or effective lower bound (ELB), the only way to get the short-term real interest rate down to -3% is by generating 3% inflation and getting market participants, households, workers and enterprises to expect 3% inflation. However, the unpleasant equilibrium the economy settles in when the short-term nominal interest rate is constrained by the ELB following the saving glut is likely to be one where the level of output is below potential. Such a negative output gap creates disinflationary, perhaps even deflationary, pressures – not the higher actual and expected inflation required to drive the short-term real interest rate down to the level consistent with full employment and a high degree of capacity utilisation. With the spontaneous forces driving a private demand-led recovery impaired, what policy measures can get the economy out of this dysfunctional equilibrium, which could easily become a persistent recession?

Monetary policy loses much of its effectiveness at the ZLB: large-scale asset purchases (LSAPs) by the central bank, including quantitative easing (QE), qualitative easing (QE) aka credit easing (CE), enhanced credit support (ECS), whether monetised or sterilised through the issuance of non-monetary central bank liabilities, slightly negative nominal interest rates on excess reserves held by commercial banks at the central bank, and forward guidance or other monetary mood music, are a poor man's monetary policy instruments. As the experience of the US, the UK, Japan and the euro area (EA) since the recession that followed the eruption of the North Atlantic financial crisis in late-2007 shows, relying on monetary policy alone at the ELB (that is, when risk-free rates are stuck at zero as far as the eye can see and when open-ended central bank balance sheet expansion is occurring) means that private domestic demand and external demand will be boosted mainly through higher prices of financial assets, starting with the most liquid ones (debt, equity, foreign exchange, credit) and ultimately also feeding through to land and real estate. Boosting demand by inflating another asset and credit boom/bubble would definitely be second-best policy. So the only way out, barring a miraculous exogenous boost to private sector animal spirits and a spontaneous recovery in private consumption and investment (or, for an open economy, in external demand), is a fiscal stimulus. The fiscal stimulus will raise the short-term real interest rate at full employment and will have to last until the target inflation rate of the central bank and the nominal official policy rate set by the central bank produce that new, higher real interest rate at full employment, without requiring negative nominal interest rates.

One way out of secular stagnation, it is argued, is through fiscal stimulus

Without a fiscal stimulus, Summers argues, we are faced with the choice between waiting to see whether the central bank can create another asset and credit bubble to boost private domestic demand and external demand and the risk of recession turning into secular stagnation, with a persistent negative output gap, high unemployment and/or low labour force participation rates for years to come. A large negative output gap and persistent unemployment will in turn depress the path of potential output, both by discouraging capital expenditure and through the 'hysteresis' effects of high unemployment, through which a high actual unemployment rate turns into a high natural unemployment rate and labour force participation rates suffer long-term declines.

In this publication, we make five points:

To the extent that secular stagnation is a real threat, we argue that policymakers have the tools to combat it

First, there is fairly convincing evidence that there remains substantial slack in most advanced economies and that the real interest rate has fallen significantly.

Second, identifying whether a global or country-specific shift in planned saving or desired investment has taken place is much harder and requires making untestable identifying assumptions that may not be convincing or even plausible to some observers. We nevertheless go ahead and do just that.

Third, to the extent that desired saving has increased or desired investment has fallen, the 'shock' or 'shocks' driving these developments are probably not entirely new or recent, but may have been concealed by other past developments, such as the emergence of unsustainably easy credit conditions in the pre-crisis period.

Fourth, if unaddressed, demand deficiency is a serious problem, not only because of the unemployment and lost production it causes in the short run, but also because it depresses potential output and therefore also actual output in the long run.

Fifth, policymakers have the tools to eradicate demand insufficiency. Incredibly, some appear to be either unwilling to use them or unable to coordinate monetary and fiscal policies, in some cases across many countries (notably in the euro area).

Laying out the story

To understand the secular stagnation hypothesis, it helps to look at the basic relationships between saving (both desired and actual) and investment (both desired and actual)

The Summers hypothesis can be illustrated quite nicely with the help of a few simple diagrams of the supply of saving and the demand for investment. Assume that desired saving increases with the real interest rate, which is the opportunity cost of consuming today rather than tomorrow, so the saving curve is upward-sloping in our diagram. The investment curve decreases with the real interest rate. Except for measurement errors, realised, actual or ex-post saving always equals realised, actual or ex-post investment at the level of any closed economic system, including the global economy. This is because of the way actual saving and investment are defined and recorded. However, planned, desired or ex-ante saving need not equal planned, desired or ex-ante investment. In a properly functioning economy the real interest rate should adjust to equilibrate the two at levels of output that correspond to full employment and a high degree of capacity utilization.

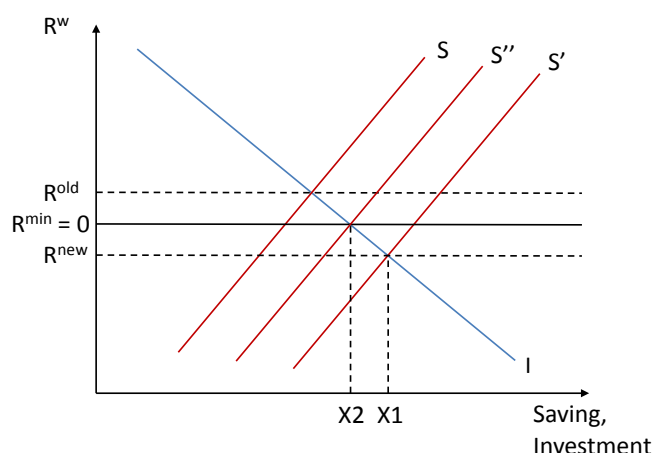
Desired saving increases with the level of economic activity (GDP, employment, etc.) as well as with the real interest rate. In addition it can be influenced by policy measures, by institutional features, by demographic factors, etc. In Figures 1 and 2 the S curves are drawn for the full-employment level of economic activity. Now assume that there is a shock to the saving curve, increasing the desired amount of saving at any level of the real interest rate (Figure 1): in Figure 1 the full-employment saving schedule shifts to the right (to S'). Now make two further simplifying assumptions: first that the nominal interest rate is bound from below at zero, and second that (actual and expected) inflation is also zero. Assume that the shift in the saving curve is so large that the real rate of interest that matches desired saving and desired investment at full employment is now negative, at the intersection of the S' curve and the investment curve or I curve. The real interest rate is, however, stuck at zero because the nominal interest rate is institutionally stuck at zero and because we assume actual and expected inflation to be zero – an assumption that will, ex-post, be validated, as we shall see. Equilibrium saving will be constrained by actual investment, and a new equilibrium is achieved at a level of activity below the level consistent with full employment. Actual saving in equilibrium therefore falls short of desired saving at full employment and the economy will be stuck at point X2, with activity short of 'potential' at X1. A decline in economic activity (a fall in GDP and an increase in unemployment) shifts the saving schedule

In principle, we can't determine whether secular stagnation (if true) is due to an increase in desired saving or a decrease in desired investment without making further identifying restrictions

to the left, from S' to S'' , until it intersects the investment schedule at the real interest rate floor.

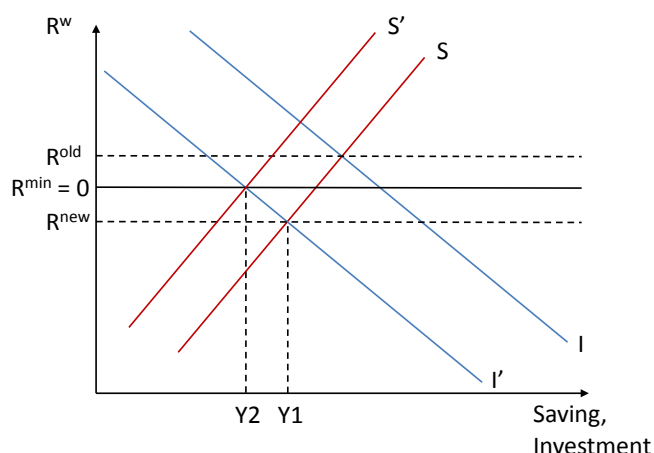
Let's now assume that instead of the saving curve, it was the investment curve that shifted, from the I to the I' schedule, lowering desired investment at each level of the real interest rate (Figure 2). If we now assume that the new equilibrium real interest rate at full employment is below zero again, the economy will again be stuck at a point where saving would be constrained by a level of desired investment that is too low to achieve full employment at a zero real rate of interest. The economy will now be stuck at point Y2 and short of 'potential', which would be Y1. The level of economic activity would fall, which would shift the saving schedule to the left (to S' in Figure 2) where it intersects the investment schedule I' at the zero real interest rate floor.

Figure 1. Outward Shift in Saving Curve



Source: Citi Research

Figure 2. Inward Shift in Investment Curve



Source: Citi Research

When the nominal interest rate is very low and actual and expected inflation are also subdued, the proposition that a large enough increase in desired saving relative to desired investment can make the (low or even negative) real interest rate required to achieve equilibrium at full employment unattainable is plausible. Assume the nominal interest rate is at the zero floor. If, following the ex-ante saving glut, the real interest rate cannot decline enough (through higher actual and expected inflation) to maintain saving-investment equilibrium at full employment, there will be excess capacity and unemployment. With excess capacity, inflation will be lower than in the initial equilibrium, validating the assumption that the real interest rate cannot be lowered through higher inflation.

Checking the facts

The evidence suggests that the risk of secular stagnation, where it exists, is mostly an advanced-economies story

What is the evidence for excess capacity, falling real interest rates (both the actual real interest rate and the real interest rate consistent with full employment) and nominal rates being stuck at the lower bound? Our reading of the evidence suggests that there is *some* supporting evidence, but it is mostly an advanced-economies story. Even among the advanced economies, there are material differences in the degree of plausibility of the secular stagnation story.

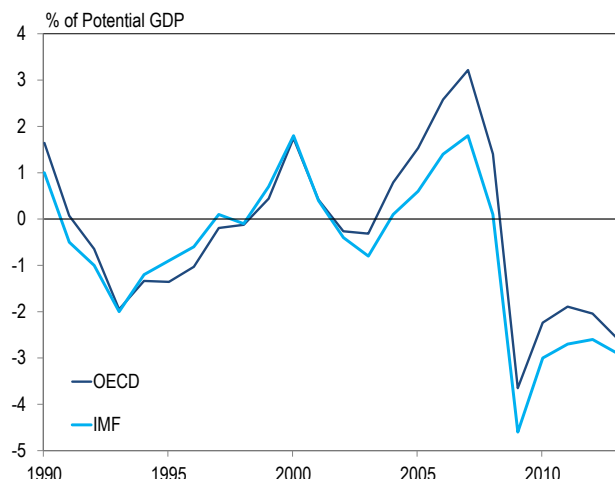
First, we need to define stagnation, and secular stagnation. Stagnation could be defined in terms of rates of growth of activity, such as real GDP or real GDP per capita. Or stagnation could mean persistent excess capacity, such as large output gaps or high unemployment. Our preferred definition has both elements. Secular

Output gaps and unemployment rates in the advanced world suggest large amounts of slack at present

stagnation starts with a period of excess capacity (a large negative output gap and high unemployment), which, unless it is addressed promptly and effectively, lowers the path of potential output, through a temporary or permanent fall in the growth rate of potential output. Even if the output gap is eventually closed (and the unemployment rate returns to its natural level), the long-term path of potential and actual output is below the level it would have been at if the initial excess capacity and unemployment had been tackled faster and more effectively.

Measures of output gaps in advanced economies remain large and unusually persistent. The IMF estimates the Advanced Economies (AE) output gap in 2013 at 2.9% of potential GDP, the 5th highest level in its series which started in 1980. It brings the 5-year average output gap to 3.2% of potential GDP, the highest 5-year average in the series. The OECD sees the output gap at 2.6% of potential GDP, which is the second highest level since 1985 and also has the 5-year average at the highest level. Of course, measuring output gaps can be a tricky business, particularly in real time. But unemployment numbers also suggest large amounts of slack in advanced economies currently. The average unemployment rate for the OECD and for the IMF's Advanced Economies aggregate both stood at roughly 8.0% of the labour force in 2013, the third and second highest values in the respective series (2010 was the peak year in both series).¹ Also unemployment, especially persistent unemployment, probably understates the underutilisation of labour, as labour force participation rates tend to decline when unemployment is high and persistent.²

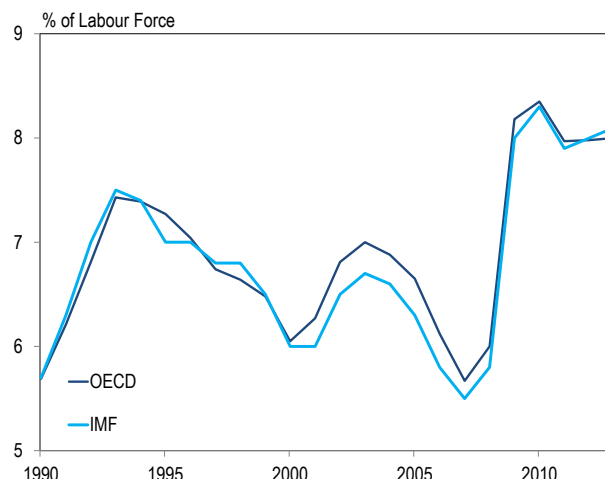
Figure 3. Advanced Economies – Output Gap (% of Potential GDP), 1990-2013F



Note: Endpoint at 2013 is a forecast, made respectively by the OECD and IMF.

Source: OECD, IMF, and Citi Research

Figure 4. Advanced Economies – Unemployment Rate (% of Labour Force), 1990-2013F



Note: Endpoint at 2013 is a forecast, made respectively by the OECD and IMF.

Source: OECD, IMF, and Citi Research

Of course, measures of actual (real GDP or real GDP per capita) growth in the advanced economies have been rather miserable in recent years, with the average

¹ Both IMF and OECD unemployment rates are measured as labour force-weighted average unemployment rates. The series start in 1960 for the OECD and 1980 for the IMF.

² There are potential supply-side or structural reasons for unemployment to be high, which could mostly be related to frictions of some sort in the labour market (i.e., mismatch between supply and demand of labour, lack of labour mobility, rigidity in wage adjustments, etc.). We are not aware of much evidence that these structural factors have played a major role in the level and persistence of unemployment in many AEs, even though the high concentration of unemployment among, say, former construction workers in a number of countries, including Ireland and Spain, does point to the presence of some potential frictions in the reallocation of labour.

Even within the advanced economies, there is plenty of variation, as some countries (the US and UK) are doing much better than others (the euro area and Japan)

AE real GDP growth rate (market-exchange rate-weighted) between 2007 and 2013 at 0.7%pa, compared to 2.4%pa in 2000-2007 or 2.7%pa in 1990-2007.

But even within the advanced economies, there is plenty of variation. The recovery in the US has been disappointing compared to previous recovery episodes. But there are more and more signs that the US recovery is gaining traction. That point may have come sooner if not for the abrupt fiscal tightening that occurred in 2013, which might have knocked about 1.5 percentage points off GDP growth for that year, or for various other mostly policy-related uncertainties that are likely to have weighed on investment spending in particular. Even so, private non-residential investment as a share of GDP in the US is only slightly below its long-term averages, and is showing first signs of picking up again recently.

In any case, US growth close to (or even above) 3% in 2014 and beyond (as we currently predict) is hardly stellar, but certainly better than secular stagnation. Similar arguments apply to the UK, which is likely to grow at or even above 3% in 2014, after an admittedly much worse performance than the US in the years since the global financial crisis. In both countries, unemployment rates are falling relatively fast, even though they still remain high by historical standards.³

The secular stagnation scenario holds most relevance for Japan and the euro area. Of course, Japan has already had two decades of substandard performance that may deserve the label of secular stagnation. But even in Japan, the Abe government and the BoJ under the leadership of Governor Kuroda have breathed some life into the economy. It remains to be seen if the combined fiscal and monetary measures under the new government and BoJ leadership will prove to be sufficient to escape from secular deflation. The first serious test of this will be the way the upcoming sales tax increase in the spring of 2014 will be handled. In any case, without structural reforms on a substantial scale, it is probably only a question of time until Japan's growth rates return to their sub 1% levels.

The euro area (EA), which has performed worst of all major AE regions and which has low and declining inflation, is the most plausible candidate for secular stagnation among the AEs. Even in the EA, the recession is now officially over (in the sense of the arbitrary convention that defines a recession as two consecutive quarters of negative real GDP growth), but output has yet to regain its pre-crisis peak, and the growth outlook still remains subdued, with the output gap unlikely to close during the next two years.

The secular stagnation story clearly does not apply to the world as a whole. Most of humanity lives in the emerging markets, which now account for close to 50% of world GDP (PPP-weighted). Growth in emerging markets has slowed, but was still 4.5% in 2013. In the coming years, EM growth could well exceed 5% again.

Slack and growth measures for emerging markets do not suggest secular stagnation

For emerging markets, production-function-based measures of output gaps are not generally available. Unemployment rates in EMs do not indicate that slack is unusually large: a population-weighted average unemployment rate for 58 different emerging markets around the world (calculated using IMF data) stands at 6.4% in 2013, well below the average rate seen in the 2000s (of around 7.2% in 2000-10).

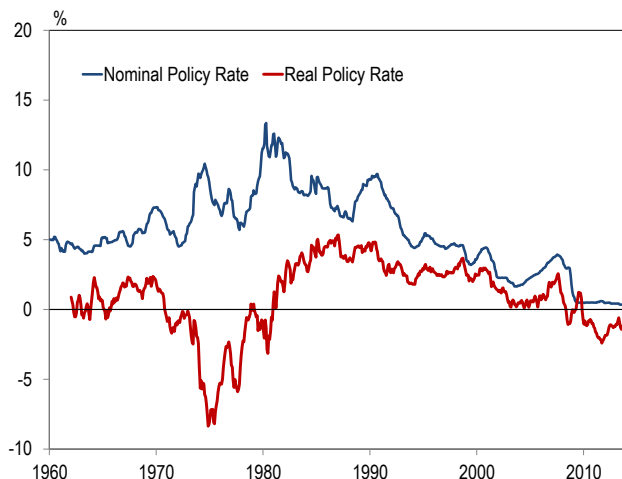
³ In both countries, elevated levels of underemployment imply that measured unemployment rates understate the scale of labour market slack, a flattering which in the US case, may be exacerbated as labour force participation rates continue to be low.

Interest rates and inflation in AEs are very low

What about low nominal interest rates and inflation in the advanced world? The average nominal policy rates of all four major advanced economy central banks are now indeed very low (at 0.3%, both for the simple average or GDP-weighted), the lowest level since the 1960s and almost at the zero lower bound.

Inflation rates are also low in advanced economies. The simple or GDP-weighted average of CPI annual inflation in Q3 2013 was 1.3-1.4%, compared to 3.4-3.7%pa since 1970. If nominal interest rates were stuck at the zero lower bound, the lowest real interest rates that could be achieved at current inflation rates would thus be little lower than -1%. Low inflation rates are one of the key differences to earlier periods with large amounts of slack (the global recessions of the mid-1970s or early 1980s). Back then, inflation was substantially higher, so lowering nominal interest rates could translate into substantially negative real interest rates.

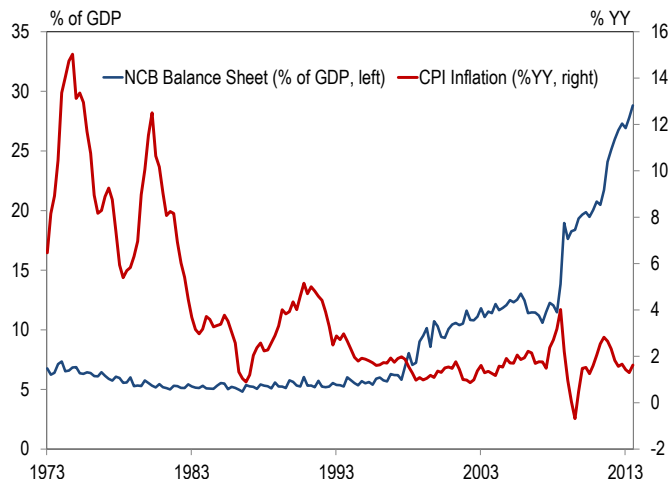
Figure 5. Advanced Economies – Average Policy Interest Rate (%), 1960-2013



Note: Simple average of policy rates of ECB, Fed, BoE and BoJ. Real rates are CPI-deflated.

Sources: National Central Banks, National Sources, and Citi Research.

Figure 6. Advanced Economies – Average National Central Bank Total Assets (% of GDP) and Inflation (%YY), 1973-2013



Note: Simple average of balance sheets of Fed, BoE, BoJ, and ECB (from 1999). BoE balance sheet is for the banking department. CPI is a simple average of CPI inflation rates in the US, UK, Japan, and the EA.

Sources: National Central Banks, National Sources, IMF, OECD, and Citi Research.

The level of nominal interest rates and inflation is also one of the key differences between AEs and EMs. In most EMs, official policy rates are substantially above zero, while inflation is much higher, resulting in mostly negative real policy rates but still leaving scope for lowering the short real rate a lot further by cutting the official policy rates.

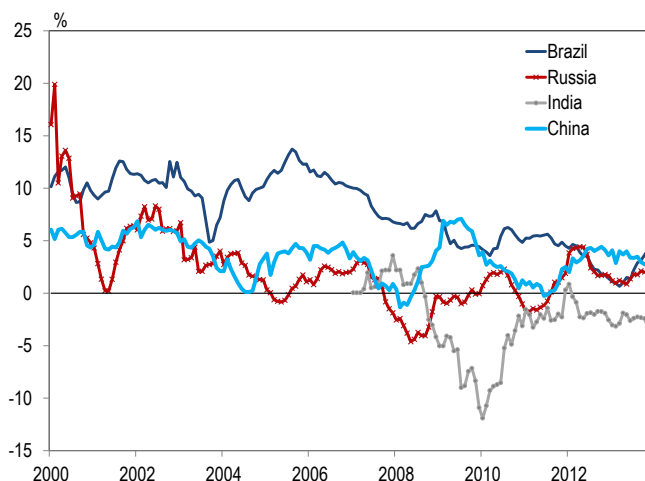
Measuring the risk-free short real interest rate, ex-ante (using inflation expectations) and ex-post (using realised inflation) is reasonably straightforward as long as you can agree on the appropriate price index. Using CPIs or HICP indices, it is clear that in the US, the UK, the euro area and Japan, ex-ante short real interest rates have been negative for a while and ex-post short real interest rates have also been negative in the US, the UK and the euro area but not, until recently, in Japan.

Real interest rates in advanced economies (and in the world as a whole) have generally trended lower, even before the global financial crisis

The real interest rate had fallen in recent decades even before the financial crisis, both in AEs and the world as a whole. In the average of US, UK, EA and Japan, the average real interest rate (measured as the official policy rate deflated by realised CPI inflation) was 0.1% (GDP-weighted) to 0.4% (for the simple average) since 2000 versus 2.9-3.0% in 1980-2000.⁴ If the version of the secular stagnation hypothesis of Figures 1 and 2 is correct, the short real interest rate required to balance saving and investment at full employment has fallen more than the observed rates. Because we are not at full employment, however, the equilibrium real interest rate at full employment is unobservable.

Nevertheless, in summary, there is substantial evidence that the real interest rate in advanced economies has fallen and that substantial slack remains, suggesting that the real equilibrium interest may be substantially negative now, too. In EMs, real interest rates have of course also fallen, but, as mentioned, available measures of slack in EMs do not appear to be alarming.

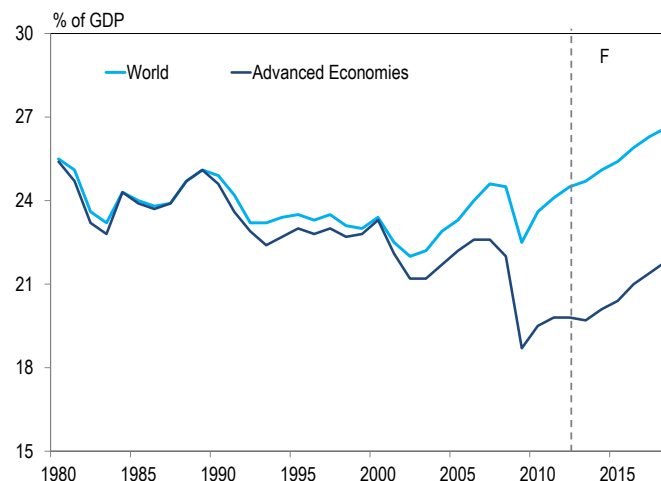
Figure 7. Selected Countries – Real Policy Interest Rates (%), 2000-2013



Note: CPI-deflated.

Sources: National Sources and Citi Research.

Figure 8. Selected Regions – Investment (% of GDP), 1980-2018F



Note: Forecasts from IMF WEO

Source: IMF and Citi Research

However, it is not at all straightforward to attribute this decline in the real interest rate to an increase in desired saving, a fall in desired investment, or, at the most general level, an increase in desired saving relative to desired investment. The reason is obvious: planned saving and planned investment are unobservable, and realised saving in any financially closed system (like the world economy) is equal to realised investment. We therefore need *a-priori*, non-testable identifying restrictions to determine what caused the change in the real interest rate. As an example, consider the explosion of China's current account surplus in the 2000s, that is, the explosion of the excess of Chinese actual saving over Chinese actual investment. This is matched precisely (give or take measurement errors) by the explosion of the excess of actual investment over actual saving in the rest of the world outside China. Whether what we observed in the 2000s was the result of an ex-ante saving glut or an ex-ante investment shortage cannot be determined by referring to actual saving and investment data, which are always glutless, regardless of whether they are global, regional or national.

⁴ The real interest rates adjusted for unconventional monetary policy actions are even more negative. For instance, the Bank of England estimate that £100bn of QE have similar effects to 100bp cuts in Bank Rate in terms of stimulus, which implies that the QE-adjusted real Bank Rate is about -5%.

Desired saving and investment are never observed, unless they coincide with actual saving and investment, in which case they are necessarily equal in closed systems, so it's generally very difficult to distinguish their movements without making untestable identifying assumptions about the movements of endogenous variables as a result of exogenous shocks

Does the fact that the real interest rate fell provide evidence in itself that the driver was an ex-ante saving glut? In our simple interest rate model that is indeed the case, as long as the only endogenous variables are the real interest rate, saving and investment. Even in our simple model, this requires us to assume that output equals full-employment output and that the level of full employment output is exogenous. But if saving depends on variables other than the real interest rate that are also endogenous, that is, if our little model is part of a larger model that determines not only saving, investment and the real interest rate, but also full-employment output, employment, prices and wages etc., it is possible that an exogenous shock results in a lower equilibrium real interest rate and higher saving and investment despite the exogenous shock resulting in a saving deficiency (desired saving below desired investment) at the initial values of the endogenous variables (the real interest rate, real GDP, the real exchange rate, etc.).

An example would be a shock that boosts planned saving at a given real interest rate and a given level of full employment output and that also lowers full employment output. A war would be an example, perhaps, which could increase the propensity to save at a given real interest rate and a given level of full-employment output (because of the precautionary motive) and which could reduce full-employment output through the draft and through war-time destruction of plant and equipment. Assume for simplicity that planned investment at a given rate of interest is unchanged. Then there is an ex-ante saving glut. However, if full employment output were to fall by enough, the interest rate may have to rise to boost saving, which is negatively impacted by the decline in full-employment income.

Notwithstanding the problems of determining causality at the macro level, we think that the hypothesis of a global desired saving glut emerging in recent decades is plausible

These fundamental problems of identification and causality notwithstanding, we believe a plausible argument can be made that in the beginning of the past decade global desired saving grew faster than global desired investment. The spectacular saving rates of some emerging markets, especially China, and of the leading oil and gas producers probably exceeded the increase in public sector dissaving in many advanced economies. Post-financial crisis, we appear to have witnessed a rise in planned saving (private and public) and a reduction in planned investment in AEs. Oil and gas exporters, however, have significantly reduced their planned saving propensities, as fragile governments faced with the consequences of the Arab Spring and similar manifestations of popular discontent have spent heavily on purchasing domestic political support. China's still exceedingly high saving rates have since 2008 been approached more closely by near-50%-of-GDP investment rates (an almost 10%-of-GDP increase since 1990) – the result of China's countercyclical fiscal and credit policies.

One argument in support of weak consumption demand (high saving propensities) that applies globally is that in almost every country in the world, notably in the US and the UK, income and wealth inequality has increased. This is not inconsistent with income inequality between countries, perhaps even global income inequality, going down and absolute poverty being significantly reduced, especially in China. The greater income inequality within countries may lower consumption.⁵ But of course, lifting hundreds of millions out of poverty in EMs and witnessing the growth of an urban middle class from China to Nigeria boosts consumption demand.

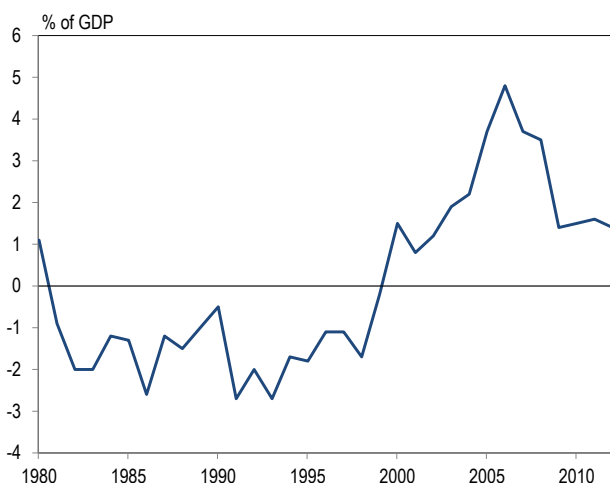
⁵ See e.g. Stiglitz, J. (2013) "Inequality Is Holding Back the Recovery", New York Times Opinionator, 19 January 2013, http://opinionator.blogs.nytimes.com/2013/01/19/inequality-is-holding-back-the-recovery/?_r=0

Did these shocks hit recently?

The efforts of many emerging markets, particularly those in developing Asia, to run high saving rates so as to accumulate reserve buffers probably explains a portion of the global saving glut if it exists

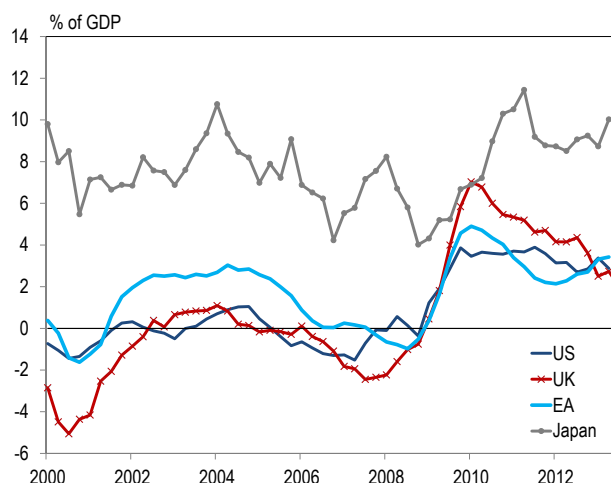
In our view, there were two distinct episodes where desired saving is likely to have increased relative to desired investment. The first was at some point in the 1980s or 1990s with the greater engagement of a large number of EMs with the global economy, through the liberalisation of international trade and capital flows. This episode also came with increasing investment rates in EMs. However, realised saving gradually exceeded realised investment and current account balances eventually soared in EMs, with most of the increase in EM current account balances materialising in the 2000s. Increased desired saving in a large number of EMs following the sudden stops many of them suffered in the 1990s probably played a role. Neoclassical theory says that EMs should be capital importers from AEs, because rates of return to capital formation are higher in capital-scarce and labour-rich EMs. That we have seen the opposite outcome reflects in part a policy choice by EMs to run high realized saving rates to reduce external vulnerability. Part of this increased EM saving took place in the public sector, including in the central banks through increased accumulation of foreign-exchange reserves. Increased reserve buffers were a means of self-insurance against the risk that, following another sudden stop, domestic macroeconomic policymaking would once again have to be subcontracted to the IMF.

Figure 9. Emerging Markets – Current Account Balance (% of GDP), 1980-2012



Source: IMF and Citi Research

Figure 10. Selected Countries – Private Non-Financial Sector Financial Balance (% of GDP), 2000-2013



Note: Private non-financial sector includes households and non-financial corporations. Data correspond to 4-quarter moving sums.

Source: National Sources and Citi Research.

During this period, real interest rates did fall globally. But what kept them from falling even more was that demand in AEs was propped up by what we now know was unsustainably easy credit.

Since the global financial crisis, desired saving in many advanced economies (in both the private and public sectors) has increased

In the more recent period, AEs themselves were probably subject to shocks that increased desired saving relative to desired investment. Once the AE credit bubble burst, expected real income growth across advanced economies probably fell markedly (which probably tightened credit constraints further). Together with large outstanding debt burdens that were the result of the decades-long sequence of credit booms, this led to a rise in desired private and public saving. Actual increases in, say, median household earnings had already been relatively weak for some time leading up to the North Atlantic financial crisis, but the marked easing in the cost and availability of credit and rising asset prices (including house prices in many

countries) probably meant that future expected income growth became excessively optimistic. The increase in private desired saving after the global financial crisis was at first offset to some extent, in the US and in most European countries, by countercyclical fiscal stimuli involving large fiscal deficits. This public sector dissaving then ran either into market resistance (in the fiscally weak countries of the EA periphery) or was reversed for domestic political reasons: either political and ideological objections to public-sector deficits (in much of the EA core) or political and institutional dysfunctionality (in the US during 2013). The result was a significant increase in desired public saving.

When and How does Stagnation Become Secular? Does secular stagnation matter?

Secular stagnation, if not addressed, is dangerous, as it can lead to a lower future path of potential output than what would have been the case had output gaps been appropriately addressed

A recession or cyclical stagnation – output below potential and less than full employment – means underutilisation of human and physical resources and causes a double waste. First, there is the immediate loss of production and working time caused by deficient aggregate demand. Second, there is the effect of today's underutilisation of resources on the future path of potential output. Potential output is driven by human capital (normal working hours, skills, aptitudes for work and attitudes towards work), by physical capital, by natural resource inputs and by total factor productivity. Secular stagnation drives down investment; through hysteresis effects, it destroys the quantity and quality of human resources, meaning that today's high actual unemployment rate becomes tomorrow's high natural unemployment rate or NAIRU. And, by lowering R&D (often the first victim of both corporate and government austerity), it lowers the growth of total factor productivity. Lower growth of potential output in turn is likely to depress investment and consumption, deepening cyclical stagnation. This destructive feedback loop between cyclical underperformance and lower long-term growth of potential output is particularly pernicious. Secular stagnation does not mean that we are perennially stuck with an excess of desired saving over desired investment. More likely, both will chase each other downward until eventually they settle at a level that is much below that which is achievable with better policies and institutions.

So even when planned saving and planned investment again balance at full employment, the 'full employment' level of employment itself is likely to be lower than it would have been without a prolonged recession.

How can we respond to the threat of secular stagnation?

Policymakers do have the tools to address secular stagnation; the question is whether they have the willingness to use those tools

The prospect of secular stagnation would be extremely worrying if we did not have the tools to address it effectively or if policymakers were unable or unwilling, for reasons of ideology, ignorance or both, to use them. We are more worried about the latter than the former.

There is a range of policies, both unilateral policies at the national level and regionally or globally coordinated policies, that can chase the spectre of secular stagnation.

- (1) Eliminate the ZLB/ELB on nominal interest rates.

If the problem is the floor under nominal interest rates, that floor only exists because of the existence of that most pernicious financial instrument, currency, aka bank notes. These are zero nominal interest rate negotiable bearer bonds. Because the holder of currency has anonymity, paying interest on currency (positive or negative) is difficult (although not impossible). Elsewhere we have elaborated on three

alternative ways of eliminating the ZLB/ELB, making a -5% nominal interest rate as easy to achieve as a +5% nominal interest rate.⁶

- (a) Abolish currency. Base money will consist of overnight reserves/deposits held by eligible institutions at the central bank.
- (b) Tax currency holdings. This is a way of paying negative interest on currency. It would be intrusive and require random spot checks and fines or other penalties for enforcement. This was first proposed by Gesell (1916), after which Irving Fisher became an advocate.⁷
- (c) End the fixed exchange rate between currency and bank reserves held with the central bank. Set the interest rate on reserves held with the central bank is set at -5%. Provided reserves appreciate vis-à-vis currency (which has a zero interest rate) at a rate of 5%, there is no arbitrage possibility. This idea was first developed by Eisler in 1932.⁸

For reasons that are hard to credit, no central bank has been willing to eliminate the zero lower bound, even though this would be technically and administratively simple, especially in economies with advanced financial systems where many alternative means of payment and exchange are available – many of which either are based on or take advantage of the internet and decentralised electronic funds transfer. The expression ‘conservative central banker’ is a pleonasm.

- (2) Create an inflation rate sufficiently high to have a suitably negative short real interest rate despite the nominal interest rate being stuck at the ZLB. This is always possible in a fiat money economy when the monetary and fiscal authorities cooperate. It is probably easier in the US, Japan and the UK, and more difficult in the euro area, where too many on the Governing Council of the ECB interpret central bank independence as meaning you don’t answer the telephone when a Minister of Finance (or the head of the Eurogroup) calls.

The most straightforward way to address secular stagnation would be through a fiscal stimulus (the composition of which should be country-specific), financed permanently by base money issuance

The classic solution is a temporary fiscal stimulus (where temporary can mean quite a long time - long enough for inflationary expectations of the right magnitude to become imprinted on all private economic players) funded permanently by base money issuance. This is popularly known as ‘helicopter money’. Unlike pure helicopter money, the logic of an effective stimulus does not require that the fiscal component takes the form of cash transfers to households. For the US, Larry Summers wants the fiscal stimulus to take the form of infrastructure investment by the state. The right composition of the stimulus – tax cuts, transfer payments, public consumption increases or boosts to public sector investment – is country-specific. It would be helpful if the helicopter money were supported by credible forward guidance on the official policy rate, guaranteeing that this will not be raised until actual and expected inflation reach certain thresholds. If the central bank were to purchase long-dated fixed rate nominally denominated sovereign debt at very low interest rates – which would imply capital losses for the central bank should interest

⁶ Fisher I (1933) *Stamp scrip*. Adelphi, New York. See also [Global Macro View - Don't Raise the Inflation Target, Remove the Zero Bound on Nominal Interest Rates Instead](#)

⁷ John Maynard Keynes summarized the work of Gesell (and Fisher's support) in his famous book, *The General Theory of Employment, Interest and Money*. See Maynard Keynes, J. (1936), *The General Theory of Employment, Interest and Money*, Palgrave Macmillan, Book VI, Chapter 23.

⁸ Eisler R (1932) *Stable money: the remedy for the economic world crisis: a programme of financial reconstruction*. In: International conference 1933, with a preface by Vickers VC. Search Publishing, London.

rates rise prematurely – this would be a way for the central bank to put its money where its forward-guidance mouth is. The same objective could be achieved through long-term fixed rate repo operations at or near a zero rate of interest.

It is important that the money financing a stimulus be monetised rather than raised in public debt markets

It is important that the deficits resulting from the fiscal stimulus be monetised rather than funded by borrowing through the issuance of interest-bearing, non-monetary debt instruments. Even if nominal (and real) sovereign rates are often quite low now (at least for sovereigns perceived as solvent), they will ultimately rise again and could saddle the sovereign with a debt burden and debt service burden that is at least uncomfortable and possibly crippling. With the public spending commitments associated with rapidly ageing populations rising in nearly every AE, compounding the fiscal burden through the issuance of interest-bearing debt when a permanently non-interest-bearing alternative is available would not be wise.

Note that in the circumstances that Summers describes, the central bank alone may not be able to do the full job through monetised public debt purchases alone. There has to be a further temporary fiscal stimulus, together with the monetary financing of that stimulus, to restore full employment at a feasible and sustainable nominal and real interest rate.

Even in the euro area, difficult does not mean impossible. The threat of secular stagnation should probably, one hopes and expects, sooner or later focus the minds of the ECB Governing Council somewhat more and push it to 'live a little dangerously' from the viewpoint of the teutonic monetary hawks among it. Although monetising government debt and deficits is anathema to the teutonic wing of the Governing Council, it is not, of course, in violation of the Treaty on the Functioning of the European Union (TFEU), which only forbids central bank lending to the sovereign and outright purchases of sovereign debt in the primary markets. The Securities Markets Programme (SMP), which involved outright purchases of periphery sovereign debt in the secondary markets (without any conditionality), passed muster at the German Federal Constitutional Court. We expect that Outright Monetary Transactions (OMT), which involves outright purchases by the Eurosystem of sovereign debt in the secondary markets subject to suitable policy conditionality, will likewise pass muster as well.

The threat of secular stagnation is probably most serious in the euro area, where the political hurdles to boosting demand are, unfortunately, also the most challenging...

It would, however, be desirable in our view to simplify the conduct of effectively coordinated monetary and fiscal policy in the euro area by doing away with Article 123 of the Treaty on the Functioning of the European Union (TFEU), the article commonly but incorrectly referred to as "the prohibition of monetary financing". Monetary financing concerns the composition of the liability side of the ECB's and Eurosystem's balance sheets. Article 123 only deals with the asset side of the ECB's and national central banks' balance sheets, when it refers to purchases of debt instruments. An undrawn overdraft facility operated by the central bank is an off-balance sheet credit of the central bank; an overdraft actually extended by the central bank is a central bank credit, effectively a loan to the government, like the Ways and Means Advances of the Reserve Bank of India and the (residual) Ways and Means Advances of the Bank of England. It is 'on balance sheet'.

...but they are not insurmountable, in our opinion

Permitting the ECB to make advances to governments and to purchase securities directly from governments in no way undermines central bank independence, as long as the decision on whether to engage in such advances or purchases is a decision of the central bank alone – without political influence. The ECB does not need belts and braces for its independence, especially when the superfluous independence protection comes at the expense of central bank effectiveness.

Conclusion

The tools to respond to the threat of secular stagnation originating from a shortfall of demand relative to potential output thus readily exist, even in the euro area and even if Article 123 remains on the books. In that sense, secular stagnation, if it really were to raise its ugly head, is a policy choice – one we should avoid and have the means to avoid. The need for such policy action seems most urgent in the euro area and in Japan. Over the longer-term, there are questions about the sustainability of growth models even in the UK and US, notably as diverging distributions of income and wealth may necessitate sustained policy interventions for aggregate supply and demand to balance.

However, closing output gaps does not necessarily equate to high future growth, as Japan is likely to discover, even if it does not fall back into recession as a result of the sales tax increase in April 2014, unless it fires the third arrow of Abenomics (see [Citi GPS: WHAT TO EXPECT FROM ABENOMICS](#)) and engages in deep structural reform. Sustained high growth requires high future potential output growth. Even without the depressing effect of a persistent negative output gap on the future path of potential output, future global potential output growth is likely to disappoint unless deep structural reforms ('supply side' reforms) are undertaken in AEs and EMs. It will take more than the avoidance of secular stagnation through appropriate expansionary demand management to achieve a satisfactory, sustainable growth path for real per capita income.

Appendix A-1

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