Back to the Future: Revisiting the Scourge of Secular Stagnation

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KEY TAKEAWAYS

- The global recovery has seemingly progressed mostly in fits and starts and many fear the prospect of little or no growth for a prolonged period of time.
- There are no easy answers as to what's going on, whether the global economy is indeed in a state of secular stagnation, or if there are other reasons for its current sorry plight.
- It is much too early to evaluate the Negative Interest Rate Policy (NIRP) experiment, but there is reason to look at it skeptically. We doubt the Fed will use NIRP anytime soon.
- Investors too will find a low-growth economy challenging, because in such a world, both short-term and long-term interest rates are likely to be low, and equity returns not as exciting as they were in the early stages of the recovery.

"This is the essence of secular stagnation—sick recoveries which die in their infancy…"

— Harvard economist Alvin Hansen, December 1938

Do economist Alvin Hansen's 1938 remarks sound familiar? They should. Of late, the World Bank, the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD) have all recently described the current faltering state of the US and global economies in somewhat eerily similar terms.

Early this June, the World Bank cut its global economic outlook for the second time this year, having also trimmed its estimates in the previous three years. Said World Bank chief economist, Kaushik Basu,"the global outlook faces pronounced risks of another stretch of muted growth. A wide range of risks threaten to derail the recovery."

And warned OECD chief economist Catherine Mann, also in June, "the need is urgent" for governments to take action to stimulate their economies, adding "the longer the global economy remains in the low-growth trap, the more difficult it will be to break the negative feedback loops."

JUMPSTARTING THE GLOBAL ECONOMY—A SISYPHEAN TASK?

So what's going on? Since emerging from the 2007-2008 Global Financial Crisis (GFC), the global economy has arguably remained stuck in a state of "secular stagnation," despite massive, at times seemingly Sisyphean, efforts to spur growth with quantitative easing and like stimuli. The global recovery has seemingly progressed mostly in fits and starts and many fear the prospect of little or no growth for a prolonged period of time.

There are no easy answers as to what's going on, whether the global economy is indeed in a state of secular stagnation, or if there are other reasons for its current sorry plight. In this paper, I discuss the many aspects of secular stagnation, as well as other explanations for the problem such as supply side stagnation, the debt overhang or questionable policy moves. I also look at central banks' "new abnormal" and try to answer where we go from here.

But first, a step back in history may help explain where we are today.

Secular Stagnation, Stage One

The decade of prolonged slack in the 1930s was a major challenge for the economists of the age. The puzzle was why the economy did not rapidly return to full employment, as had been the norm after most previous recessions. This puzzle preoccupied the famous English economist John Maynard Keynes, and it was taken up by one of his followers, the eminent Harvard economist Alvin Hansen.

At the annual meetings of the American Economic Association in December 1938—when the unemployment rate exceeded an awful 16%—Alvin Hansen delivered a Presidential Address entitled "Economic Progress and Declining Population Growth," where he coined the phrase "secular stagnation."[i] Hansen, like Keynes, focused on investment spending as the center of the business cycle. Recessions are largely driven by substantial declines in fixed investment spending. What drives investment? Hansen cited three drivers and a dismal outlook for each:

WHAT DRIVES INVESTMENT?

1. Population growth
2. Technological Advancement
3. Opening up of new territories and resources

- **Population growth:** More people means a greater need for new housing, stores, offices, factories, and public utility infrastructure. Population growth was much slower in the 1930s than in earlier decades because of a combination of very low immigration and a low birth rate. Moreover, Hansen believed population growth would slow further. Less population growth meant less investment was desired.
- **Technological advancement:** Businesses are often more eager to invest when new capital embodies better technology, which promises to boost productivity and profits. But Hansen believed that technological advancement was also slowing, diminishing the incentive to invest.
- **The opening up of new territories and resources:** In the America of the eighteenth and nineteenth centuries, vast open lands to the West provided abundant opportunities for population movement, investment and exploitation of resources such as farmland, forests and minerals. By the early twentieth century, the frontier had closed, and opportunities for investment in new lands diminished. Hansen gloomily concluded that "there are no important areas left for exploration and settlement."

THE BIG WORRY: A CHRONIC DEFICIENCY IN INVESTMENT SPENDING

What Hansen was worried about was not that the economy went into periodic, short-lived recessions which were followed by a return to full employment. Rather, he worried about an inability of the economy to ever return to full employment, about a chronic shortfall of income and employment relative to potential, the cause of which was a chronic deficiency in investment spending. Interest rates had fallen very low in the 1930s—indeed, the short-term rate was essentially zero—but they weren't low enough to give investment the boost it needed.

THE LIQUIDITY TRAP

This is the situation that Keynes called "the liquidity trap": even with a zero nominal interest rate, an economy could be trapped with interest rates still too high.

The problem, as expressed in modern economic terms, is that the real (that is, inflation-adjusted) interest rate moves to balance desired savings and desired investment. If desired investment falls, or desired savings increases, the real interest rate must fall to bring them back into balance. Sometimes, the real interest rate must fall to a negative amount to balance savings and investment. By definition, the real interest rate is the nominal, or market, interest rate minus the inflation rate. The lowest the nominal interest rate can go is zero, the idea being that people would hold currency rather than bonds if interest rates were negative. If the nominal interest rate is zero, the real interest rate is the negative of the inflation rate. So, for example, if the nominal interest rate was zero and the inflation rate was 2%, the real interest rate would be -2%.

REAL INTEREST RATE

0%	Nominal Interest Rate
2%	Inflation Rate
-2%	Real Interest Rate

The problem is that the real interest rate, even if it were negative, might still be too high to boost investment sufficiently to restore full employment. And if the nominal interest rate was zero, the central bank could do nothing to reduce rates further. This is the situation that Keynes called "the liquidity trap": even with a zero nominal interest rate, an economy could be trapped with interest rates still too high. The result of being stuck in the liquidity trap is a chronic deficiency of aggregate demand, which causes chronic underemployment. The economy may grow, but likely not fast enough to restore full employment; businesses may invest, but not enough. Chronic slack produces ongoing downward pressure on inflation and may even produce deflation. As Hansen put it: "This is the essence of secular stagnation—sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment." Hansen's proposed solution was aggressive fiscal stimulus to boost aggregate demand and soak up excess savings.

WORLD WAR II TAKES HOLD: GOODBYE INSUFFICIENT DEMAND

Soon after his address, the Second World War started, and massive spending on the military effort, combined with short-term interest rates pegged near zero, pushed the unemployment rate down to a mere 1%, produced a surge in money growth, and drove inflation up considerably. There was no more talk of insufficient demand!

After the war ended, a long period of rapid gains in population and productivity produced robust growth in GDP and employment, thereby turning "secular stagnation" into a quaint and largely irrelevant topic. Hansen's address spent years as being little more than a curiosity for historians of economic thought.

A Revival of the Idea of Secular Stagnation, Stage Two

How things have changed.

The deep and long global recession of 2007 to 2009 was followed by a mediocre recovery, not only in the US but throughout many of the economically advanced countries. And in the past year, the emerging market economies, which had been booming, hit a slump, first in China and then in commodity exporters. Former economic stars like Brazil, Russia and South Africa slid into recession. The euro zone countries, the United Kingdom, Sweden, Switzerland and Japan have all cut monetary policy rates close to zero, as did the US until the end of 2015, in response to low inflation and excessive unemployment.

"THE GREAT MODERATION"

The period was called "The Great Moderation." It seemed that the problem of business cycles had been solved.

The time seemed ripe to revive the idea of secular stagnation.

Recessions have always happened, but economists believed they could be addressed with conventional monetary and fiscal policies. Recent history supported that belief. In the 25-year period ending in 2007, the US had only two short and relatively mild recessions, balanced with long expansions with solid job growth and a booming stock market, and accompanied by moderate inflation and low interest rates. The period was called "The Great Moderation." It seemed that the problem of business cycles had been solved.

ONE OF THE MOST MEDIOCRE RECOVERIES IN AMERICAN HISTORY

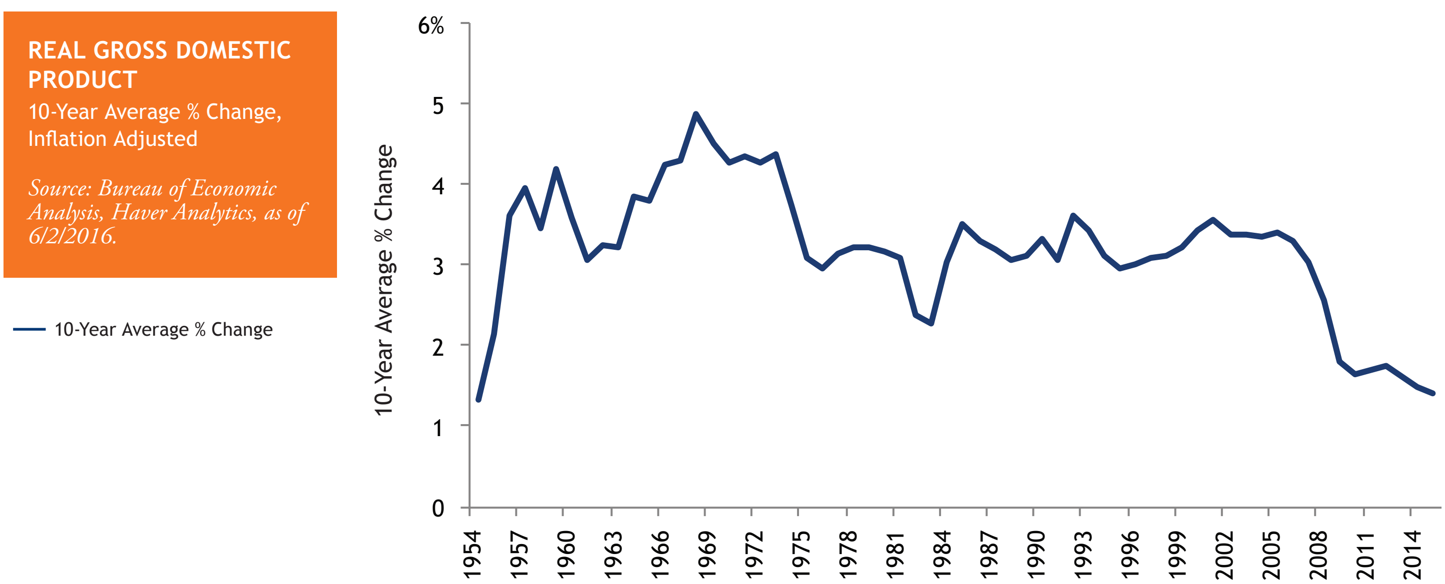
All that changed with the severe downturn of 2007-2009, dubbed "The Great Recession," which was the longest and most severe US recession since the 1930s. To make matters worse, while it is typical for severe recessions to be followed by strong recoveries, and mild recessions to be followed by mild recoveries, this time around, we got a severe recession followed by one of the most mediocre recoveries in American history.

The chart below shows the annual growth rate for real GDP on a 10-year moving average basis. The average for the last ten years was a mediocre 1.4%, the slowest pace since the period of the post-World-War-II demobilization. Recent growth has been notably lower than what the US experienced in the 1970s, the 1980s, the 1990s, or the first half of the 2000s.

REAL GROSS DOMESTIC PRODUCT

10-Year Average % Change, Inflation Adjusted

Source: Bureau of Economic Analysis, Haver Analytics, as of 6/2/2016.



Nor is the US economy the only economy having difficulties. After decades of boom, Japan's economy crashed in the early 1990s and has been recession-prone and sluggish ever since. Japan's dazzling growth of the 1980s was followed by ever-slowing real GDP growth, with an average of just 0.5% over the past ten years. By 2013, Japan's real GDP was little more than half of what the World Bank and IMF had forecasted in 1993. Neither is the performance of Europe much better: over the past ten years, average real GDP growth for the countries using the euro has been a bland 0.7%. The United Kingdom's growth averaged just a little below the US average.

LAWRENCE SUMMERS RESURRECTS ALVIN HANSEN'S CONCERNS

In this context, Harvard economist and former US Treasury Secretary Lawrence Summers gave a provocative talk at an IMF conference in November 2013, where he resurrected Alvin Hansen's concerns about secular stagnation.[ii] When he spoke, the US had had over four years of recovery from the Great Recession, and yet he could describe it only as a "dismal economic performance." For the first time since the 1930s, zero interest rates weren't low enough to restore full employment, and Summers suggested this could be a persistent issue. He concluded his speech saying: "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 their potential." Secular stagnation is back.

ZERO INTEREST RATES

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What brought on this episode of secular stagnation? Summers offered a number of possible reasons. First, US population growth has been slowing, and the population is aging. The result is higher saving as aging households prepare for retirement, but also less need for investment as the number of workers rises less rapidly. Second, the demand for debt-financed purchases of durable goods for businesses or households has fallen. That partially reflects the cycle of balance sheet repair after the financial crisis, but it may also reflect tougher bank lending standards and tougher regulations.

Third, the capital intensity of the economy has changed. The old economy of auto factories and steel mills and railroads required massive capital investment to create a vibrant economy. The new economy appears to need less tangible capital. Large-cap companies like Alphabet, Apple and Microsoft have relatively little capital, at least in the US. The new social media company WhatsApp has a greater market value than Sony, with little capital investment (compared to Sony) needed to produce that value. The US doesn't need as much investment to grow, meaning the demand for investment goods is relatively soft.

Fourth, durable goods have become cheaper, relative to broad measures of prices. That is certainly true for high-tech capital goods, which have become so important, but it is also true for a wide range of consumer durables. The result is a subdued demand for durable goods. Fifth, it is not news that the distribution of income and wealth in the US and elsewhere has become more unequal. The wealthy tend to save more of their income than lower income households, so this change in distribution has boosted desired saving. Sixth, around the world, central banks have been, and still are, accumulating substantial reserves, as have various sovereign wealth funds. Such accumulation adds to global desired savings.

The combination of greater desired savings and softer desired investment pushes the real interest rate down. Central banks accommodate that trend with monetary easing. But when central bank policy rates are close to zero, it may seem that central banks are out of ammunition. If desired savings exceed desired investment even at a zero policy rate, the economy could suffer from chronic insufficiency of demand and chronic underemployment.

The International Dimension: Stagnation Can Be Contagious

Once a country slips into secular stagnation, it can take other countries down with it. Stagnation can be contagious. Consider the situation with Japan and the US.

Japan went through the 1980s with a huge economic boom, accompanied by stock market and real estate bubbles, fueled with surging bank lending. In the 1990s, both the stock market and real estate bubbles collapsed, the banks got in trouble, and the economy weakened. The private sector tried hard to repair its overleveraged balance sheets.

Suddenly, this economy had excessive savings, and the interest rate needed to fall to help bring desired savings and investment into balance. Japan's short-term interest rates fell close to zero in late 1997 and have pretty much stayed there ever since. Japan has experienced virtually nonstop deflation since late 1998, aside from spurts of inflation associated with higher VAT taxes. And since 1997, unemployment has been chronically higher than in the pre-1997 era. The boom of the 1980s turned into the secular stagnation of the 1990s.

Japan was able to offset some of its economic weakness by exporting its excess savings through a trade surplus, which widened in the late 1990s and 2000s until the Great Recession started. A stronger trade balance in Japan must be accompanied by a weaker trade balance elsewhere, in particular, in the US.

TRADE BALANCE

In a secular stagnation world, any attempt by a country to boost its trade balance will come at the expense of its trading partners.

"BEGGAR-THY-NEIGHBOR" POLICIES, PROTECTIONISM AND IMMIGRATION ISSUES

The US responded to the drag from a widening trade deficit with lower interest rates. In normal circumstances, lower interest rates would support more investment, as happened in the late-1990s' tech boom or the mid-2000s' housing boom. But the circumstances after 2008 were anything but normal. After the Fed cut its policy rates to zero, it had little ability to neutralize the impact of a deteriorating trade balance. In a secular stagnation world, any attempt by a country to boost its trade balance will come at the expense of its trading partners. There is excess savings in the global economy and not enough investment to soak it up.

In such a world, trade policies tend to become "beggar-thy-neighbor" policies, in which each country tries to export its woes to other countries. Countries can use strategies such as export subsidies, barriers to imports, or currency manipulation to boost exports and limit imports to stimulate their own economies, with unfortunate consequences for their trading partners.

It is not surprising that the world is seeing increasing discontent with trade liberalization, which is increasingly perceived as a ploy by foreigners to gain at our expense. It used to be that the US had a bipartisan policy supporting trade liberalization, but in the current presidential election year, major leaders in both parties have condemned further trade liberalization. Similarly, leaders in both parties have expressed concerns that major countries could be "artificially" keeping their currencies weak relative to the dollar to boost their trade balances at the expense of the US.

Finally, politicians in both the US and Europe are expressing dismay with immigration. In normal times, immigration can boost economies, but in a world of secular stagnation, it may do nothing more than raise the unemployment rate: aggregate demand won't rise fast enough to provide jobs for everyone, so immigrants are perceived as "stealing jobs." The way to solve the contentious issues of "beggar-thy-neighbor" policies, protectionism, currency manipulation and immigration is to solve the problem of secular stagnation. In a booming global economy, everyone wins.

IMMIGRATION

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Central Banking: The New Abnormal

The idea of secular stagnation has made life difficult for central banks, and it has important implications for investors.

In late 2007, as the GFC was emerging, no central bank of an advanced economy, aside from Japan, took seriously the idea that policy rates would fall to zero. Few grasped how profound and persistent the crisis would turn out to be.

Prior to the GFC, only Japan had implemented a Zero Interest Rate Policy, or ZIRP, cutting its overnight rate to just 0.50% in 1997 and to zero in 1999. Following the GFC, the US Federal Reserve (the Fed) adopted ZIRP in December 2008. The European Central Bank (ECB) adopted ZIRP in mid-2014. The Bank of England is close to ZIRP, with a bank rate of 0.50% since March 2009. The Bank of Canada eased to a bank rate of 0.50% in July 2015. The Swiss National Bank cut its policy rate to zero in August 2011.

Central banks seem to dislike the idea of a very low rate, and especially a zero rate; it seems abnormal. A few central banks have made attempts to escape ZIRP. In 2000, the Bank of Japan made its first attempt to raise policy rates, only to have to restore ZIRP during the global recession of 2001. It tightened again in 2006, only to have to ease again during the GFC, restoring ZIRP in 2009.

In the first half of 2011, the ECB raised its main refinancing rate from 1.00% to 1.50%, only to have to reverse course and ease for the next three years, ending up with ZIRP. Sweden's central bank raised its repo rate from 0.25% in mid-2010 to 2.00% in mid-2011, only to have to reverse course by the end of the year, eventually cutting it to zero.

The Fed started an attempt to escape ZIRP with a 25 basis point tightening in December 2015, on the seventh anniversary of implementing ZIRP. The Fed has been cautious since then, and we expect a very gradual cycle of tightening. We think the Fed does not want to suffer the embarrassment of other central banks which had to quickly give back their tightening.

WITH POLICY RATES AT ZERO, WHAT TOOLS DO CENTRAL BANKS HAVE LEFT?

Once policy rates are essentially zero, what tools does a central bank have? One tool is called "quantitative easing," or QE. Even at a zero policy rate, a central bank can buy bonds on the open market, expanding its balance sheet. On the asset side, bonds increase, and on the liability side, commercial bank reserves increase. QE is a policy guided more by economists' intuition than rigorous theory: it seems to work without anyone being quite sure why. Its aim is to reduce credit spreads in the bond market and reduce the term premium in long-term bonds (that is, flatten the yield curve).

QUANTITATIVE EASING

QE is a policy guided more by economists' intuition than rigorous theory: it seems to work without anyone being quite sure why.

Lower credit spreads and term premiums reduce private sector borrowing costs and boost asset prices, which expand aggregate demand. The Fed started its QE program after the Lehman bankruptcy in September 2008, and has extended QE a few times since then, as did the ECB, the Swiss National Bank and Sweden's central bank. The Bank of Japan started an aggressive QE program in 2013. None of these central banks show any inclination to unwind their QE programs in the near future.

Another central bank tool is forward guidance, which might be called "open mouth operations." Theories of bond pricing emphasize the importance of market expectations of future short-term interest rates in setting current long-term bond yields. If central banks can credibly persuade markets that they will hold policy rates low for longer than markets currently expect, the result could be a drop in bond yields.

The Fed has long used broad qualitative forward guidance to guide expectations. For example, in March 2009, the Fed stated it would maintain low rates "for an extended period," but did not specify how long "extended" was. In August 2011, the Fed made forward guidance more explicit, signaling "exceptionally low levels of the federal funds rate at least through mid-2013." The message had an impact; the yield on the 10-year Treasury note fell from a high of 3.75% in early February 2011 to a low of 1.72% in late September 2011.

A recent radical policy innovation is replacing ZIRP with NIRP, Negative Interest Rate Policy. Economists used to think it could not be done, but central banks have pushed policy rates in relation to the interbank funds market into the negative zone. Denmark's central bank set a negative policy rate in July 2012, the ECB in June 2014, Switzerland's central bank in December 2014, Sweden's in February 2015, and Japan's in February 2016.

To a large degree, it seems the purpose of NIRP is to prevent an overvalued exchange rate in smaller countries, and it also could be instrumental in pushing commercial banks to lend more aggressively, thereby boosting private sector spending. It is a device to get out of a liquidity trap. It is much too early to evaluate the NIRP experiment, but there is reason to look at it skeptically. Perversely, by damaging bank profits it may hurt bank lending. We doubt the Fed will use NIRP anytime soon.

DESPITE AGGRESSIVE EASING, HIGH INFLATION NOT AROUND THE CORNER

Aggressive monetary policy easing, including huge increases in central bank balance sheets, accompanied by huge government budget deficits, led some traditional economists and market participants to worry that high inflation was right around the corner. No such thing has happened; sometimes the opposite happened. Japan has experienced nearly continuous consumer price deflation since 1998 (adjusting for hikes in VAT taxes).

Consumer price inflation in the euro zone has been easing over the past three years and has been below 1% for more than two years. British inflation has been easing for almost five years and has been running below 1% for the past year. Switzerland has suffered outright consumer price deflation for about four years. As for the US, consumer inflation has undershot the Fed's 2% target for almost the entire time period since the Lehman bankruptcy. After the harsh inflation experience of the 1970s, who would have ever thought that it would be hard to increase inflation? But such is life in secular stagnation.

To the disappointment of many investors and savers, yields on relatively "safe" bonds have been low in nominal and real terms. Consider sovereign 10-year bond yields in the US, Japan and Germany as tracked by Haver Analytics. US yields have been below 2.5% for most of the past five years. In Japan, these yields have not exceeded 2.0% since late 1997, with the exception of one month; they decreased steadily in the wake of the GFC until they turned negative in March 2016. Germany's yields have trended down from just over 4% at the time of the Lehman bankruptcy to close to zero currently.

SOVEREIGN 10-YEAR BOND YIELDS

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A LAST RESORT: HELICOPTER MONEY TO THE RESCUE

Central bankers worry about low inflation, even deflation. Savers wonder when they may get a decent return on their fixed income investments. In a world of secular stagnation, low inflation or deflation can be a permanent feature, along with low interest rates. For pensions and life insurance companies, and middle-aged people saving for retirement, a world of low returns has become a major challenge. One response is to save more, which, ironically, would simply push interest rates down further and make secular stagnation more of a problem.

Central bank experimentation may not yet be done. In some quarters, including in Japan, there is talk of "helicopter money." That odd expression originated with the famous economist Milton Friedman, who facetiously suggested that deflation could be fixed by dropping currency out of helicopters. Ben Bernanke in 2002, then a fresh governor on the Fed Board, referred to helicopter money in a speech on how to prevent deflation. Bond traders laughed at the speech at the time, but they aren't laughing now.

Helicopter money is short-hand for fiscal stimulus (tax cuts, transfer payments, or spending) financed by money creation instead of by taxes or bond sales to the public. It is similar to QE in the sense that the central bank would buy bonds issued to cover the government deficit, but the difference is that the central bank would commit to never sell the bonds: the new currency stays forever, whatever the consequences. In effect, a central bank would be targeting the money supply rather than the inflation rate. The idea is that when people receive freshly printed currency, they would spend it quickly, thereby pushing up aggregate demand. Helicopter money is an extreme policy that risks creating excessive inflation, but it may be among the only options left for countries facing relentless deflationary pressures.

Maybe the Problem Isn't Insufficient Demand

While the facts of a slow recovery, low inflation and low interest rates cannot be denied, theories trying to explain them are controversial. Insufficient aggregate demand is not the only possible explanation. There are three distinct alternative explanations. The first is that slow growth is not a result of insufficient aggregate demand, rather a problem of sluggish gains in aggregate supply related to slowing population growth and a slower pace of innovation. The second is that the slow recovery in the US and other advanced economies is the result of working out a debt overhang. And the third is that slow recoveries result from flawed economic policies and the uncertainty and pessimism that accompany them. We will examine these alternatives in turn.

Supply-Side Stagnation?

Unlike Larry Summers, who worries that modern economies cannot generate enough aggregate demand to sustain growth at full employment because of the liquidity trap, other economists see secular stagnation as reflecting low growth in potential output. In other words, the problem is slow gains in aggregate supply rather than in aggregate demand.

GROWTH OF THE WORKING AGE POPULATION

Here is the bad news: the growth of the working age population has been slowing and is projected to slow considerably more in upcoming decades.

The economist most associated with this supply-side view of secular stagnation is Professor Robert J. Gordon of Northwestern University.[iii] To understand the supply-side view, consider that growth in real output is the sum of the growth in employment and the growth in productivity (which is output per worker).

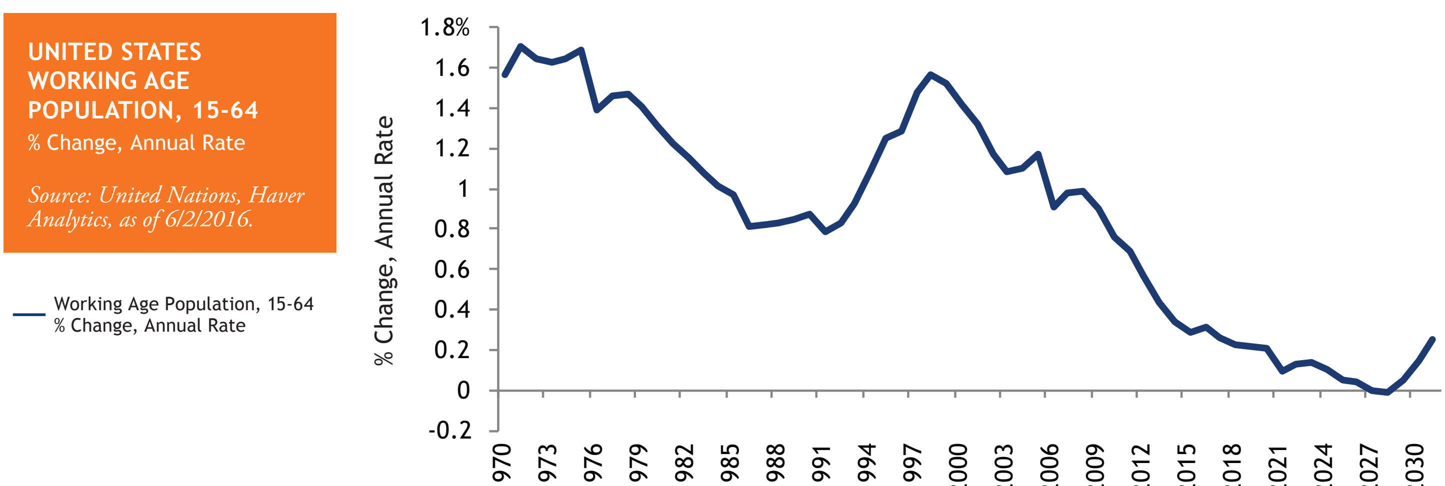
In the short run, employment can rise faster than the working age population as the unemployed find new jobs, as has happened in the past five years. But in the long run, employment must rise in line with the working age population. Insofar as the US unemployment rate was 4.7% in May 2016, it is unlikely that employment can continue to grow faster than the population for much longer.

And here is the bad news: because of the ongoing retirement of the large baby boom generation, along with decades of lower fertility rates, the growth of the working age population has been slowing and is projected to slow considerably more in upcoming decades. The chart below looks at recent history and forecasts the US working age population (ages 15 through 64) based on United Nations projections released in July 2015. This year, the population is estimated to rise a mere 0.3%, the same as last year. Even worse, population growth is projected to continue slowing to about zero in the second half of the next decade, suggesting that employment growth will also be close to zero.

UNITED STATES WORKING AGE POPULATION, 15-64

% Change, Annual Rate

Source: United Nations, Haver Analytics, as of 6/2/2016.



PRODUCTIVITY GROWTH—DISMAL OF LATE

The second issue is productivity growth, which, sad to say, has been dismal recently and strikingly different from the hopes of 15 years ago. Productivity grew a stellar 2.8% per year on average in the fifty years ending in 1970, the result of an amazing wave of invention and innovation. That period saw the spread of electrification and the telephone, modern antibiotics and vaccines, sewage and clean water, automobiles and modern oil refining, the building of the interstate highway system and the advent of jet airlines, universal high school education, broad-based banking and modern Wall Street, the first digital mainframe computers, and radio and television.

Productivity growth slowed significantly after 1970, the causes of which have befuddled economists for over four decades. There was hope that productivity growth would return to the performance of its golden years when the computer/internet revolution swept the country in the second half of the 1990s and the first half of the 2000s. Alas, it was not to be. Productivity growth slowed sharply starting in 2005 and has stayed slow. For the years 2005 through 2015, real GDP per working-age person has increased at an annual average pace of only 0.8%.

PRODUCTIVITY GROWTH

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Looking forward, Professor Gordon projects that growth will be basically the same as it has been in the past ten years, with productivity rising just 0.8% per year through 2040. Combine that productivity growth projection with the population projection, and the result is that total real GDP is likely to rise about 1.4% per year on average from 2015 through 2040. That is far below historical averages for most of US history. Such a dismal forecast may cause an optimist to shudder and ask: what about advancing technology?

SLUGGISH GROWTH FOR THE NEXT 25 YEARS?

To be sure, there will be continued innovation that can help drive productivity higher, but the pace of productivity growth since 1970 has been sluggish, setting aside a stunning ten-year exception during the computer/internet revolution. It appears that the high-tech revolution, important as it was, has largely played itself out for the time being.

In distant decades, marvelous new inventions involving artificial intelligence, robotics, quantum computing, genetic manipulation, new energy sources and outer space exploration may result in another stellar burst of productivity growth. But for a 25-year horizon, Professor Gordon believes the US is in for sluggish growth in population, productivity and real GDP.

Judicious use of the levers of monetary and fiscal policy could keep inflation low and budget deficits in check, but the policy environment will be more challenging in a low-growth economy. Investors too will find a low-growth economy challenging, because in such a world, both short-term and long-term interest rates are likely to be low, and equity returns not as exciting as they were in the early stages of the recovery. There is no reason that the unemployment rate can't be low in such an environment, but workers would have to get used to only small wage increases. It is another type of secular stagnation, and boosting aggregate demand would not deliver sustainable growth. Indeed, too much stimulus to aggregate demand would likely end in a burst of inflation.

The Debt Overhang Hypothesis

A second alternative to the Hansen-Summers view of secular stagnation is the "debt hangover" hypothesis advanced by Harvard economics professor Kenneth Rogoff and his colleagues.[iv] According to their debt overhang hypothesis, stagnation is real but not secular; it is a bout of, so to speak, economic pneumonia, and the economy will eventually get better although the recovery may be protracted. Sad to say, credit booms and busts associated with deep recessions and delayed recoveries are nothing new in world history, although modern economists did not pay much attention to that sorry history prior to 2008.

The core of this hypothesis is that increasing leverage in a modern economy is analogous to accelerating in a car. Initially, the faster growth in an economy in a credit boom is pleasant, just as going faster in a car gets you to your destination faster. But as the old joke goes, it is not speed that kills, but the sudden stops. And so it is with a credit boom: when debt defaults undermine the financial system after leverage goes too far, the sudden stop in lending often crashes the economy.

Repairing the economy in the aftermath of a credit bust is an expensive and time-consuming task. When households, businesses, and banks have damaged balance sheets, their first priority is to repair them. Banks, faced with a sudden and unexpected surge in nonperforming loans, may be unable or unwilling to engage in new lending and may even call in outstanding loans. Deleveraging trumps other economic calculations; desired business investment and consumer purchases will be delayed as free cash flow is devoted to instead paying down debt. Moreover, as banks tighten lending standards, many households and businesses cannot finance the new spending they may desire.

CREDIT BOOM

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Sluggish growth in aggregate demand is a painful reality for the economy during the deleveraging process, and the central banks commonly assist the process by slashing interest rates, hoping to dampen the credit crunch. Low interest rates and slow growth are not the result of a permanent trap for the economy, rather a temporary malaise caused by deleveraging and tight credit standards. The pain does come to an end: when the amount of debt relative to income has returned to pre-boom levels, when balance sheets are repaired, then the debt overhang may be over, investment can return to normal, and the economy can potentially grow as it once did.

WHEN WILL DELEVERAGING END?

The good news for the US is that the deleveraging cycle seems to be over. The balance sheets of nonfinancial corporations and households appear to be in relatively good shape, and the burden of indebtedness seems to be manageable. Awful as the US economy has been in the past nine years, the US recession and slow recovery have been close to typical for major financial crises over the past century, according to calculations by Professor Rogoff. The end of the deleveraging process has allowed for stronger consumer spending and rising employment in the US.

The bad news is that the euro zone countries seem to be still deep in a deleveraging cycle, especially the countries of southern Europe, and some emerging economies (notably China and Brazil) are struggling with their own debt overhangs. US financial markets and the US trade balance are very much affected by debt overhangs in the rest of the world, and for that reason, the US is not out of the woods by any means.

Is Policy the Problem?

The final alternative explanation blames federal economic policymaking for the disappointing recovery. The most prominent economist who advances this view may be Stanford economics professor John Taylor. According to Taylor, the bank lending boom in the mid-2000s was not caused by a glut of savings, but policy failures: excessively easy monetary policy and lax bank regulatory enforcement. The consequent implosion of a credit bubble produced a large recession, but typically in US history, large recessions are followed by rapid recoveries. What should have been a rapid recovery was kneecapped by flawed policies. Taylor puts it this way:

ECONOMIC POLICY

It may not be just flawed policies which can slow a recovery; uncertainty about economic policy can as well.

> *"Deviations from good economic policy have been responsible for the very poor performance. Such policy deviations created a boom-bust cycle and were a significant factor in the crisis and slow recovery…more recent deviations are the hundreds of new complex regulations under Dodd-Frank, the vast government interventions related to the new health care law, the temporary stimulus packages such as cash for clunkers which failed to sustain growth, the exploding federal debt that raises questions about how it will be stopped, and a highly discretionary monetary policy that has generated distortions and uncertainty."*[v]

Taylor could have added much more to his list: the failed attempt to pass comprehensive new energy and environmental regulations (such as "cap-and-trade" system for carbon dioxide emissions), comprehensive new proposed EPA regulations, hostility toward the fossil fuel industry, ongoing failed attempts to overhaul immigration policy, brinksmanship over the federal debt ceiling with an associated threat to default on Treasury debt, a ratings downgrade for Treasury debt, two short-lived federal shutdowns, constant battles over the federal budget, the treatment of creditors of bankrupt auto companies, judicial treatment of foreclosure proceedings, the troubled conservatorship of Fannie Mae and Freddie Mac, multiple rounds of lawsuits against major banks, tough new mortgage lending rules, five years of declining real federal purchases, substantial federal tax hikes in 2013 and proposed further tax hikes.

IS SECULAR STAGNATION A SELF-INFLICTED WOUND?

From Taylor's perspective, while it is too late to have avoided the crisis or the slow recovery, it is not too late to implement better policies, which should support an eventual revival of productivity growth and labor market vitality. Put another way, for Taylor and his associates, secular stagnation is a self-inflicted wound and we can choose not to suffer it further.

And it may not be just flawed policies which can slow a recovery; uncertainty about economic policy can as well.[vi] There is a large literature describing how a rise in uncertainty can lead firms to delay investment and hiring, and consumers to delay buying houses or cars, until uncertainty is reduced. For example, just the threat that regulations may ban new coal-burning electricity generating plants could be sufficient to stop such investment, even if the regulations themselves never materialize.

That kind of uncertainty, spread over many industries, could slow the recovery across an entire economy. Foreign events can also generate uncertainty with deleterious effects. For example, heightened uncertainty following the September 11, 2001 attacks, and during the approach to the 2003 Iraq War, likely increased uncertainty and slowed the recovery from the 2001 recession.

Bad policies can be like pebbles thrown into a stream. Throw a single pebble in a stream, and it makes no difference. Throw many pebbles into a stream, and you may end up damming the stream.

Where Do We Go from Here? First Do No Harm

Sometimes doctors identify a cluster of symptoms occurring in a large number of patients, and they give the cluster a name, even if they don't understand the causes or aren't sure of the treatment. An example may be "chronic fatigue syndrome." Economists do the same. "Secular stagnation" is the economic version of "chronic fatigue syndrome," a mysterious malady with a name and endless controversy about where it comes from and what to do about it. In both the medical version and the economic version, the victim feels bad and suffers from a lack of energy and drive, and healing comes slowly.

WHAT'S AHEAD

Those of us in the investment industry need to resign ourselves to a likely scenario of a few more years of low growth, low inflation, and low interest rates in the US and throughout much of the developed world.

Perhaps policy makers should borrow an old medical saying: "First, do no harm." Putting up new barriers to international trade and starting a trade war, or raising taxes substantially, or risking a Treasury default, would be self-inflicted wounds. And there may be a time when the US should balance its budget, "normalize" interest rates, restructure the banking system, reform mortgage finance, or hike minimum wages, but I doubt these are wise during a bout of secular stagnation.

Given the decrepit condition of many US roads, bridges, airports, seaports, pipelines, water supply, and subway systems, and in view of extraordinarily low federal borrowing costs, there is a case for substantially more infrastructure spending, which should boost aggregate demand in the short run and aggregate supply in the long run if it can be done right. And there is a strong case, I believe, for more subsidies for basic scientific research, which ultimately may provide another round of fundamental technological breakthroughs that could boost productivity growth. It is useful to remember that technologies such the internet, GPS, satellite communication and jet aircraft started with military research which was later opened to the private sector.

In the meantime, those of us in the investment industry need to resign ourselves to a likely scenario of a few more years of low growth, low inflation, and low interest rates in the US and throughout much of the developed world. A world of low returns will certainly complicate life for pension funds and life insurance companies as well as those trying to save for an adequate retirement.

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Endnotes

[i] *Alvin H. Hansen, "Economic Progress and Declining Population Growth," American Economic Review, March 1939.*

[ii] *A transcript of his speech can be found at: http://larrysummers.com/imf-fourteenth-annual-research-conference-in-honor-of-stanley-fischer. Summers elaborated on the issue in "US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound," Business Economics, volume 49, number 2.*

[iii] *Years of his research is summarized in a recent book called The Rise and Fall of American Growth, Princeton University Press, 2016. Also see Tyler Cowen, The Great Stagnation, Dutton, 2011.*

[iv] *See Carmen Reinhart and Kenneth Rogoff, This Time Is Different: Eight Centuries of Financial Folly, Princeton University Press, 2009. Also Schularick, M and A Taylor, "Credit booms gone bust: monetary policy, leverage cycles, and financial crisis: 1870- 2008," American Economic Review, April 2010. Finally, Kenneth Rogoff, "Secular stagnation, debt overhang and other rationales for sluggish growth, six years on," BIS Working Paper No. 482, January 2015.*

[v] *Quote from "Causes of the Financial Crisis and the Slow Recovery: A Ten-Year Perspective," by John B. Taylor, Economics Working Paper 14102, Hoover Institution, January 2014. This paper was presented at the Joint Conference of the Brookings Institution and the Hoover Institution on "The US Financial System—Five Years After the Crisis," held on October 1, 2013. A collection of papers on how economic policies slowed the recovery can be found in the book Government Policies and the Delayed Economic Recovery, edited by Lee E. Ohanian, John B. Taylor, and Ian J. Wright, Stanford, CA: Hoover Institution, 2012.*

[vi] *A survey of the impact of uncertainty can be found in Nicholas Bloom, "Fluctuations In Uncertainty," Journal of Economic Perspectives, Spring 2014.*

Disclosure