

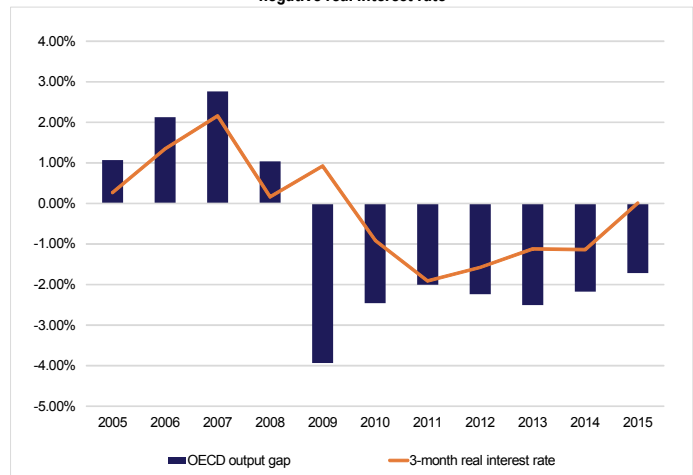
The debate on secular stagnation: a status report

- The concept of secular stagnation was introduced in 1938 by Alvin Hansen, who was concerned that investment might be too low to achieve full employment. After being forgotten for decades, the concept was revived in November 2013 by Larry Summers, who defined it as a situation in which the economy is unable to approach its potential growth rate, for reasons that include the difficulty of sufficiently reducing real interest rates.
- The concept initially focused on persistent slackness of demand, but now also encompasses a weakening of potential growth, and particularly of productivity and capital accumulation. The explanations for economic weakness based on supply and demand factors are not exclusive; indeed, they mutually strengthen one another. Slack demand can curtail potential growth through hysteresis effects such as the loss of human capital due to the persistence of long-term unemployment. Reciprocally, expectations of weak long-term potential supply can restrain demand even in the short term.
- The geographic scope of application of the secular stagnation concept is still open to question. While some economists stress the importance of the global dimension, the initial applications have often been proposed at national level. At present, the academic debate centers on the international transmission of secular stagnation and the attendant risks of currency wars and global economic stagnation.
- The concept of secular stagnation is the subject of lively debate among economists, in regard to its reality and its causes. Most economists, however, agree on the need for a global response to avert the risk of lasting stagnation—a response combining monetary, fiscal and structural measures, that are preferably coordinated at international level.

Source: OECD, *Economic Outlook*, April 2016.

Interpretation: The chart shows average output gaps and average 3-month real interest rates in the United States, Japan, euro area and United Kingdom (weighted by their share of world GDP in PPP).

A persistent output gap after the 2008-2009 crisis in the advanced economies, despite a negative real interest rate



1. Secular stagnation: supply-side or demand-side approach?

Introduced by Alvin Hansen in the 1930s, the theory of secular stagnation focused initially on the weakness of demographic growth and the decline in productivity. The theory fell into oblivion after the Second World War. Larry Summers revived it in late 2013 out of concern for the downturn in growth among the advanced economies. He raised questions about the persistent slackness of demand (the difficulty in closing the output gap) in a context of extremely low interest rates (see Chart on first page), triggering a still vigorous debate among economists.

1.1 A concept initially focused on the slackness of demand, explained in particular by a rise in desired saving

In late 2013, Summers defined the risk of secular stagnation as the risk of a persistent slackness of demand, citing the U.S. economy as a prime example. Weak demand, he argued, is due to changes in saving and investment behaviours leading to an increased desire for saving in a context where the growth in profitable investment projects appears to be slowing. Summers described this problem as an "excess of saving"¹, which should be understood as an excess of desired saving before an adjustment in real interest rates. The excess of saving, according to Summers, dragged down real interest rates and hampered the economy when rates could no longer fall sufficiently given the zero lower bound—a situation known as the liquidity trap² (see Part 2 for a detailed explanation).

In his initial comments, Summers stressed the inefficient distribution of income, arguing that it promoted savings in the developed economies, particularly the U.S. Changes in income distribution have benefited less to agents with the strongest marginal propensity to consume. Indeed, as Joseph Stiglitz and others have noted³, corporate profits rose in the 2000s and wage inequality widened. High-income households—who enjoy the benefits of their wage income, their dynamic savings, and their capital gains—generally have an above-average saving rate. Paul Krugman has challenged this argument by pointing out that the U.S. saving rate fell even as inequality increased between 1980 and 2008-2009.

This finding appears to suggest that a rise in inequality does not necessarily reduce demand⁴. Summers, however, emphasised that the rise in saving was concealed by an increase in debt among the lowest-income households, a trend that sustained demand artificially before the crisis. So as long as vigorous debt growth persisted, the economy did not suffer, but Summers argued that the debt slowdown triggered by the 2008-2009 crisis revealed secular stagnation.

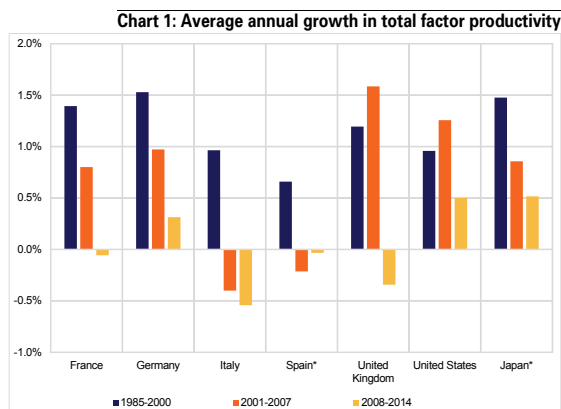
Summers later extended his analysis from national to global level. It was then picked up by other economists⁵, who drew inspiration from the "saving glut" theory developed by Ben Bernanke in the 2000s. Countries with a lower marginal propensity to consume (such as oil-exporting countries and China, which has a high saving rate because, among other reasons, of weak social protection) seemingly enjoyed strong income growth in the 2000s relative to countries with a higher marginal propensity to consume (such as the U.S.). Summers argues that this reallocation of wealth drove up global saving, with consequences including a negative impact on U.S. demand. By way of illustration, Olivier Blanchard *et al.*⁶ note that the saving rate in the emerging countries rose by 10 percentage points in the 2000s, causing a 1.7 percentage point increase in the global saving rate between 2000 and 2007.

1.2 A concept complemented by supply factors, which explain such phenomena as the decline in investment

It is harder to use demand factors to explain the investment downtrend, whose causes appear to include the slower growth in the labour force and the decline in productivity gains, as Summers already noted in 2013. Economists such as Robert Gordon and Barry Eichengreen⁷ stress the burden of these supply factors on potential growth. For example, the dependency ratio⁸ in Europe is expected to rise from 20.3% in 2000 to 35.4% in 2025 and 57.5% in 2100 (see §3.1 and Chart 5), reducing labour factor growth. Regarding the causes of the decline in productivity growth (see Chart 1), opinions are divided. Gordon contends that the great waves of education may have ended in the advanced economies,

- (1) The excess of saving concept was referenced by Mario Draghi in his 2 May 2016 speech to explain the weakness of interest rates: "It is this phenomenon—the global excess of savings over profitable investments—that is driving interest rates down to very low levels." Similarly, Barry Eichengreen (2015) defines secular stagnation "as a downward tendency of the real interest rate, reflecting an excess of desired saving over desired investment, and resulting in a persistent output gap and/or slow rate of economic growth" ("Secular Stagnation: The Long View", *American Economic Review*, vol. 105, no. 5, May 2015, pp. 66-70; quote from p. 66). See also <http://larrysummers.com/2015/04/01/on-secular-stagnation-a-response-to-bernanke/>: "The essence of secular stagnation is a chronic excess of saving over investment."
- (2) A "liquidity trap" is defined here as a situation where the real interest rate does not achieve equilibrium between desired saving and desired investment. Its characteristics include an aggregate demand deficit and destruction of wealth (see Part 2).
- (3) See <http://opinionator.blogs.nytimes.com/2013/01/19/inequality-is-holding-back-the-recovery/>.
- (4) See http://krugman.blogs.nytimes.com/2013/01/20/inequality-and-recovery/?_r=0: "So look at overall private saving as a share of GDP. The trend before the crisis was down, not up—and that surge with the crisis clearly wasn't driven by a surge in inequality."
- (5) S. Lo and K. Rogoff also articulate the argument of inefficient distribution of income at national and world levels in their article "Secular stagnation, debt overhang and other rationales for sluggish growth, six years on" (2014): "Growing inequality of income, at least within countries, implies reducing relative spending power for low-income households with a high propensity to consume. Conversely, increasing equality across the world as a whole, powered by the transformation of India and China, might have also led to a downward shift in demand, as fast-growing countries with underdeveloped capital markets spin off savings to diversify risk."
- (6) See Teulings, C. and Baldwin, R. (eds) (2014), "Secular Stagnation: Facts, Causes and Cures", *voxeu.org* book, chap. 8, Blanchard, O., Furceri, D. and Pescatori, A., "A prolonged period of low interest rates?"
- (7) See Teulings and Baldwin (eds) (2014), op. cit. (note 6), chaps. 2-3.
- (8) Jimeno, J. F., Smets, F. and Yianguo, J. (in Teulings and Baldwin (eds) (2014), op. cit. (note 6), chap. 13) define the dependency ratio as the number of retirees (proxied by the number of persons over 65) divided by the number of working-age persons (proxied by the number of persons aged 20-64).

restraining future rises in average education levels and thus in productivity⁹. Other authors, such as Eichengreen, believe this weakness in productivity is temporary: productivity gains should materialise once the production system has adjusted and has been restructured to fully exploit the potential of new technologies—particularly the digital revolution with big data, machine learning and mobile robotics.



Source: OECD, "Growth in GDP per capita, productivity and ULC" data base.

Interpretation: Data series for starred countries end in 2013.

1.3 Mutually strengthening supply and demand factors

These explanations in terms of supply and demand factors are not mutually exclusive. On the contrary, they strengthen one another.

Factors that slow demand can inhibit potential growth through hysteresis effects. These may arise, for example,

from a loss of human capital due to the persistence of high long-term unemployment, which undermines worker productivity or leads people of working age to leave the labour market. The climate of uncertainty can also lead firms to accumulate precautionary saving in the form of liquid assets and to cut back on investment, both tangible and intangible, with a negative impact on capital stock and future productivity.

Conversely, factors that weaken potential supply can restrain demand even in the short term through expectation effects. For example, a return of growth in technical progress to its historically low standard pace may cause an immediate slowdown in investment aimed at optimising the adjustment to the future decline in capital stock. The slowdown in demographic growth, which diminishes the prospects for future demand, can also curb present investment.

Blanchard, Cerruti and Summers (2015)¹⁰ analyse 122 recessions in 23 countries in the past 50 years to empirically test the presence of hysteresis or expectation effects. The authors demonstrate a correlation between recession and lasting deterioration of the economy (in two-thirds of cases), or even of growth (in one-half of cases) in the post-recession years. To determine if the correlation is due to hysteresis or expectation effects, the authors remove the recessions caused by supply shocks (such as a rise in oil prices or a financial crisis), which would trigger a crisis and have persistent effects on the economy. Among the remaining recessions, the authors show the likely presence of hysteresis or expectation effects in the sample studied.

2. Secular stagnation: a decline in the equilibrium real interest rate that makes economies vulnerable to permanent weakness

2.1 A gap between desired saving and desired investment that sends down the equilibrium real interest rate

The supply and demand factors described above lead to an "excess of saving" if the real interest rate stays constant. In a classic IS-LM model, excess saving is eliminated through a decrease in the real interest rate (see Charts 2): a lower real interest rate discourages agents from saving and stimulates investment, resulting in a balance between saving and invest-

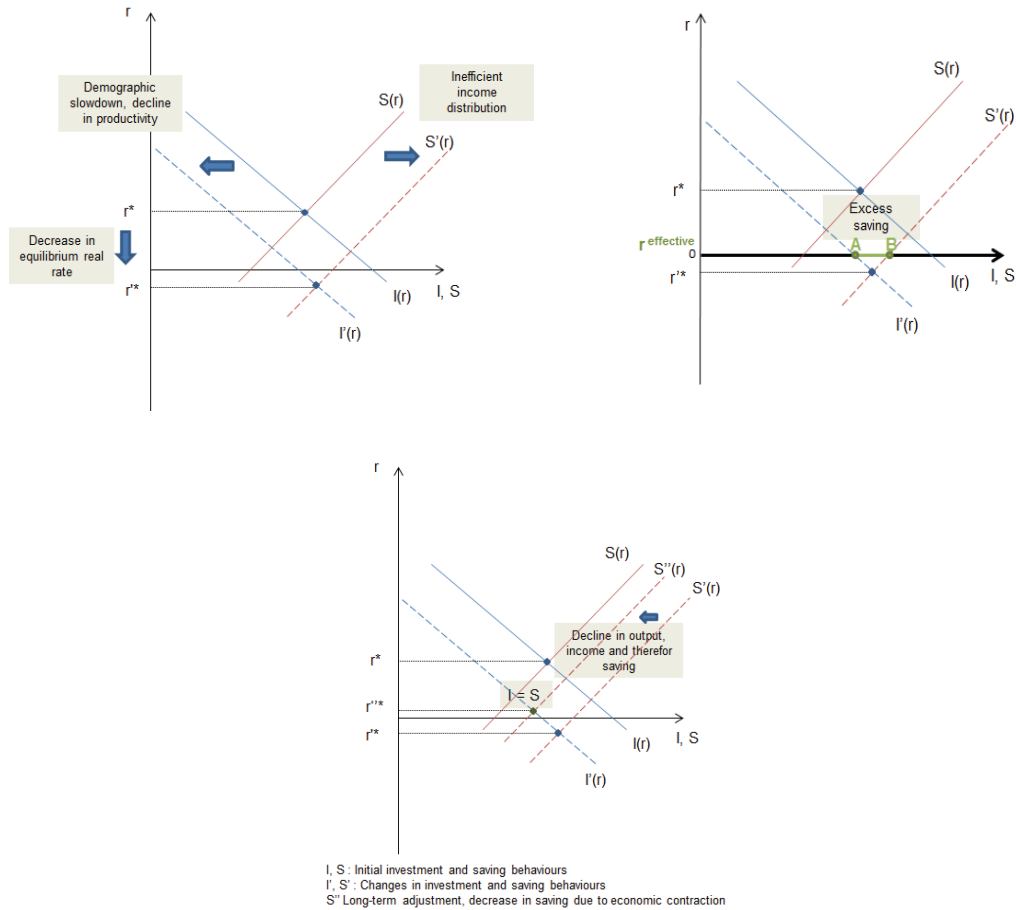
ment¹¹. In some circumstances, however, the downward adjustment in the real interest rate may not be sufficient to achieve this equilibrium, particularly when nominal interest rates have trouble moving below zero and inflation is very weak. In this situation, known as a liquidity trap, it is the quantities that adjust in order to balance saving and investment: output is cut back to adjust to weak demand, reducing income and saving, up to the point where saving matches longer-term investment.

(9) Gordon also notes that, in the case of the U.S., this involves a return of the growth in technical progress to its historically low norm. Between 1900 and 1930, total factor productivity (TFP) rose by an estimated average 0.5% a year, as it has since 1980. The anomaly appears to reside, instead, in the vigour of the TFP growth rate from 1930 to 1980, which was three times as great.

(10) Blanchard, O., Cerruti, E. and Summers, L. (2015), "Inflation and activity: two explorations and their monetary policy implications", *Peterson Institute for International Economics*.

(11) As the saving-investment balance is an accounting equation at global level, it is always obtained *ex post*.

Chart 2: In an IS-LM model, downward adjustment of prices (real interest rate) or of quantities (decline in output) in the event of a liquidity trap



Source: DG Trésor, illustration diagrams.

Interpretation: In an IS-LM model, when agents engage in intensive saving behaviour and the number of profitable investment projects is seen to decrease, the real interest rate adjusts downwards to stimulate investment and discourage saving (top left chart). If the effective real interest rate cannot reach the level that would balance saving and investment, excess saving persists in the economy (top right chart, gap between points A and B). In the longer run, output decreases to adjust to weak demand: income and therefore saving decrease, until the two aggregates match (bottom chart).

By measuring the equilibrium real interest rate, we can estimate the risk of such an adjustment through quantities, calculated as the gap between the equilibrium real interest rate and the effective real interest rate. The equilibrium real interest rate is the rate that—with a zero output gap—makes it possible to balance saving and investment, and thus to preserve full employment and price stability. The effective real rate should therefore be lower than the equilibrium rate when output is below its potential. As of now, empirical analyses suggest that the equilibrium real interest rate has

been trending down since the early 2000s and has stayed low—or even slightly negative in some developed economies—after the 2008-2009 financial crisis, reflecting an ex-ante situation of excess saving and investment deficit. The U.S. equilibrium real rate may remain below its 2% "reference value"¹² in the years ahead, according to estimates by Laubach and Williams (2015)¹³ (see Box 1) and Hamilton *et al.* (2015)¹⁴. Because of the high uncertainty of these estimates, the latter authors estimate a forecasting interval of 0.4 - 2% in the longer term.

(12) Value based on the long-term forecasts by the Federal Open Market Committee (see FOMC December 2012 Summary), which gave median values of 4% for the nominal rate and 2% for inflation, implying a real rate of 2%.
 (13) Laubach, T. and Williams, J. C. (2015), "Measuring the Natural Rate of Interest Redux", *Working Paper*, Fed of San Francisco.
 (14) Hamilton, J. D., Harris, E. S., Hatzius J. and West, K. D. (2015), "The Equilibrium Real Funds Rate: Past, Present and Future", *NBER Working Paper* no. 21476.

Box 1: The equilibrium real interest rate: Laubach-Williams (LW) model

There are several definitions of the concept of natural (or equilibrium) interest rate, introduced in 1898 by Knut Wicksell, who defined it as an interest rate compatible with a stable price level. In their 2003 article^a, Laubach and Williams define the natural interest rate as a real interest rate that the central bank should target when the output gap is zero and the economy is not subject to positive or negative inflationary pressures.

As this natural rate is not directly observable, the authors designed an empirical estimation method. Their theoretical starting point is that the natural interest rate varies over time, particularly because of fluctuations in household consumption preferences (and hence in inflation) and in the GDP growth rate. However, the "classic" empirical methods—long-term averages and univariate estimates—fail to capture the strong variations in output and inflation with sufficient speed.

The LW model is based on a semi-structural six-equation specification that links the equilibrium interest rate to the output gap, the trend growth rate^b and inflation. The model describes the interactions between unobserved variables (natural interest rate and output gap) and observed variables (GDP, short-term nominal interest rate and inflation) as follows:

- An initial equation for aggregate supply (Phillips curve) links inflation to the output gap, its past values and supply shocks (import prices).
- A reduced form of aggregate demand (IS curve) links the current output gap negatively to the gap between the real and natural rates (first structural constraint), as well as to past values of the output gap.
- The other equations describe the dynamics of the natural rate and the output gap; their fluctuations are determined by specific shocks but are also influenced by a common factor (second structural constraint).

This specification allows a simultaneous estimate of the unobserved variables: the natural interest rate and potential GDP growth. The uncertainties generated by this type of model, captured by the confidence intervals, concern both of the unobserved variables.

One of the model's major findings is the variability of the equilibrium real interest rate over time^c. The recent (October 2015) estimates by Laubach and Williams^d confirm the downtrend in the equilibrium real interest rate, which is running at a historically low level of near zero; they see, in particular, a connection with the downtrend in potential growth^e (see Chart 3). The authors state that their results are robust to different approaches for estimating the natural interest rate and the output gap. However, their new estimate does not replicate the very large confidence intervals of the 2003 article.

Chart 3: Estimated U.S. equilibrium real interest rate in LW model



Source: Laubach, T. and Williams, J. C., estimates updated from model described in article by the same authors (2003) (cited in note a).

a. Laubach, T. and Williams, J. C. (2003), "Measuring the Natural Rate of Interest," *Review of Economics and Statistics*, 85(4), pp. 1063-1070.

b. In this model, the trend growth rate is an economy's known long-term average growth rate.

c. This result has been confirmed by Hamilton *et al.* (2015) and Barsky *et al.* (2014).

d. Laubach, T. and Williams, J. C. (2015), "Measuring the Natural Rate of Interest Redux", *Working Paper*, Fed of San Francisco.

e. Nearly half of the decrease is explained by a decline in potential growth (in their model, potential growth falls from 3.5% in the late 1990s to 2% today). The rest is attributed to "unspecified" factors.

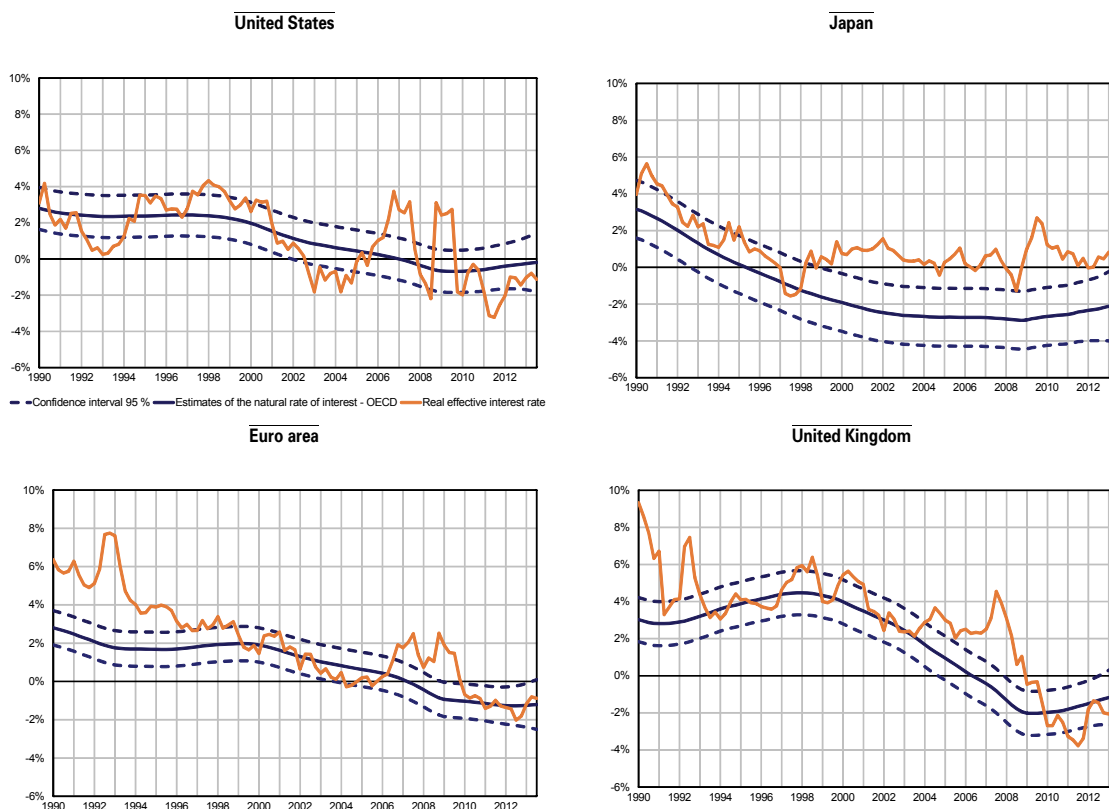
2.2 Does the decline in the equilibrium real interest rate expose the economy to a permanent risk of weakness in today's conditions?

A weakness in equilibrium real interest rates could put the economy at risk of permanent stagnation. The lower the equilibrium real rate, the harder it is for the effective real rate to converge towards it, because of the nominal rate floor—particularly when inflation is weak. The problem is aggravated in the event of an economic shock that creates a negative output gap (such as the 2009-2010 financial crisis). When the output gap is negative, the interest rate must fall below the equilibrium rate in order to stimulate the economy and close the output gap (if this does not happen, or to complement its effects if it does, other levers—such as fiscal policy—can be applied as a stimulus).

The OECD estimates¹⁵ suggest heterogeneous gaps between equilibrium real interest rates and effective rates, especially since the 2008-2009 crisis. In the U.K. and U.S., the effective real interest rate appears to have stayed close to or below the equilibrium rate in recent years, with a gradual narrowing of the output gap. By contrast, in Japan, the effective rate has been running well above the equilibrium rate for several years, even as the output gap has remained wide since the 2008-2009 crisis. The OECD sees a more ambiguous pattern in the euro area, with a phase in which the effective rate exceeded the equilibrium rate (2007-2010) followed by a gradual convergence (see Charts 4) at a time when the output gap started to widen again.

(15) Rawdanowicz, L. *et al.* (2014), Secular Stagnation: Evidence and Implications for Economic Policy, *OECD Economic Department Working Paper* no. 1169. The authors use a method similar to that of Laubach and Williams (2015) described in Bouis, R., Rawdanowicz, L. *et al.* (2013), The effectiveness of monetary policy since the onset of the financial crisis, *OECD Economic Department Working Paper* no. 1081.

Charts 4: Estimated equilibrium real interest rate (OECD) and effective real interest rate



Source: Randalowicz et al. (2014).

3. Secular stagnation: a local or global phenomenon?

3.1 Local application of the concept: from the U.S. example to the European example

While Summers effectively stressed the role of international factors—particularly the saving-investment imbalances in large areas of the world—in his address to the IMF economic forum in November 2013, his discussion of the U.S. example initially led to the application of secular stagnation to individual countries or regions. The concept was applied to the U.S. in the context of a heated debate on the rise of inequality in the U.S., which included the publication of Thomas Piketty's study¹⁶. However, the U.S. economy's acceleration from 2013, on-despite a major fiscal consolidation, soon shifted the debate away from the U.S. towards the euro area. The limpness of the euro area recovery, and particularly of inflation and investment, raised fears of slack growth over the long run. The debate also concerns Japan, where growth

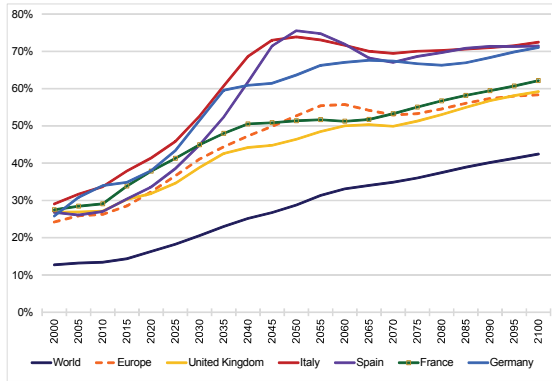
has been relatively weak since the 1990s amid sluggish productivity and population ageing. The weakness of inflation, often in negative territory since the mid-1990s, restricts the Japanese central bank's manoeuvring room and aggravates the risk of adjustment through quantities.

Several factors are cited as evidence of the risks to the euro area, as noted by Jimeno, Smets and Yiangou¹⁷. The increase in the dependency ratio (see Chart 5) and uncertainty over the future of pension systems could drive up the saving rate per capita. Explanations based on rising inequality and the low propensity to consume among higher-income groups pervaded the analyses of the U.S., but they have been invoked less often for the euro area, where income inequality is lower albeit trending up (see Chart 6).

(16) Piketty, T. (2014), "Capital in the Twenty-First Century", Cambridge, Mass.: Harvard University Press / Belknap Press (transl. of *Le capital au XXI^e siècle*, Paris: Le Seuil).

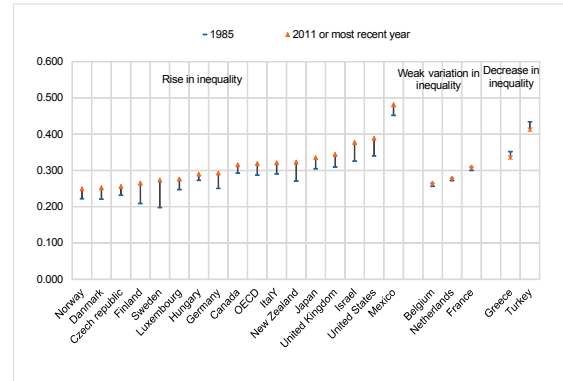
(17) Teulings, Baldwin et al. (2014), *op. cit.* (note 16), chap. 13.

Chart 5: Dependency ratios = population over 65 / population aged 20-64



Source: UN, "The Revision of the World Population Prospects 2015" data base.

Chart 6: Disposable income inequality in OECD member countries (Gini)



Source: OECD, *Focus Inégalités et croissance*, December 2014.

The imbalance between desired saving and desired investment also seems due to slack investment. Several factors may contribute to the structural weakness of investment in the European Union. They include Member States' commitment to long-term debt reduction, a rise in risk premiums that may have increased the cost of capital in certain Member States after the sovereign-debt crisis, weak demographic growth, and a relatively weaker productivity performance than in the other major economies (see Chart 1). The 2008-2009 crisis accentuated this structural decline: the climate of uncertainty—which leads firms to accumulate precautionary saving ex ante in the form of liquid assets—curbs both tangible and intangible investment. The decline in investment (and economic activity) since the 2008-2009 crisis may also restrain future investment. As the OECD working paper by Rawdanowicz *et al.* (2014)¹⁸ emphasises, hysteresis effects seem relatively stronger in the euro area (0.3) than in the U.S. (0.1)—possibly owing to the euro area's lesser labour-market flexibility or a lower geographic mobility of its workers.

3.2 A global dimension at the core of secular stagnation, based on market transmission of safe assets

Several economists¹⁹ have voiced their doubts about a regional analysis of secular stagnation. In a world of integrated goods and capital markets, real interest rates are also determined by international factors such as the volume of foreign saving. A country experiencing secular stagnation in isolation could pull out of it (or export its problem) thanks to capital flows and exchange-rate adjustments. A shortage of profitable investment projects in the domestic economy would trigger a capital outflow and hence a depreciation of

the national currency. Thanks to competitiveness gains, the depreciation would allow the country to revive exports and therefore the domestic economy. Secular stagnation in an open economy therefore implies a persistent weakness of profitable investment projects in all countries or weak integration with the other economies.

The article by Caballero *et al.* (2015)²⁰ references this international dimension. The authors argue that the observed downtrend in real interest rates reflects a growing scarcity of safe assets (a point also raised by Blanchard *et al.*²¹) after the 2008-2009 crisis. Caballero *et al.* elaborate on the notion of "liquidity trap", which appeared in the initial debates on secular stagnation, by describing what they call a "safety trap"²². In this situation, the real interest rate that balances global safe-asset supply and demand is negative and unattainable, particularly because of the positivity constraint on the nominal rate and because of low inflation. The authors therefore refocus the debate on safe-asset supply and demand. The simplified version of the theoretical model²³ yields two opposing equilibriums: either all countries fall into a safety trap, or all countries escape it. In a fuller version of the model—which assumes a domestic bias on goods and an income elasticity of trade differing from unity—the authors show that the severity of the safety trap in each country results from several propagation mechanisms. First, an efficient international integration of safe-asset markets (low domestic bias) may promote the export of surplus saving and contagion effects. Second, when a currency is perceived as a safe asset, the issuer country's economy will deteriorate²⁴. The reason is that each country will offset the weakness of domestic demand by accumulating current-account surpluses and capital outflows to the

(18) Rawdanowicz *et al.* (2014), op. cit. (note 15).

(19) See Bernanke: <https://www.brookings.edu/blog/ben-bernanke/2015/03/31/why-are-interest-rates-so-low-part-2-secular-stagnation/>. Responding to this post, Summers himself admitted: "With the benefit of hindsight, I wish I had been clearer in seeking to resurrect the secular stagnation hypothesis that one should take a global perspective" (<https://www.brookings.edu/blog/ben-bernanke/2015/04/01/on-secular-stagnation-larry-summers-responds-to-ben-bernanke/>).

(20) Caballero, R. J., Farhi, E. and Gourinchas, P. O. (2015), "Global imbalances and currency wars at the ZLB", *NBER Working Paper* No. 21670.

(21) See Teulings, Baldwin *et al.* (2014), op. cit (note 6), chap. 8.

(22) Like liquidity traps, safety traps imply an asset shortage, zero lower bound, aggregate demand deficits and recessions. However, the safety trap specifically concerns a single asset class: safe assets. This distinction is important because the supply of safe assets is less elastic. For example, it is hard for firms or the financial sector to produce safe assets.

(23) The authors describe a perpetual-youth, overlapping-generations model incorporating nominal rigidities (on prices and wages) to illustrate the heterogeneity of financial-asset supply and demand across different countries.

(24) The issuing country faces a safety trap and a greater under-utilisation of productive capacity if it was already experiencing a safety trap in autarky. It is at even greater risk of falling into a safety trap if it was not in a safety trap in autarky. The authors describe here what they call the "paradox of the reserve currency": if, in normal conditions, the economy whose currency is perceived as a safe asset enjoys purchasing power gains, its currency's hegemony may become a handicap if a safety trap develops.

"safe" economy. This increases the risk of a safety trap in the safe economy, all the more so as the capital inflows will cause its currency to appreciate and undermine competitiveness, aggravating its productive capacity under-utilisation.

The presence of even stronger domestic bias in national safe-asset markets could mitigate the contagion mechanisms described by this model. Assuming adequate financial integration, the model finds that the U.S. should be particularly affected by the global saving glut, which causes safety traps.

The U.S. safe-asset market, however, still seems dominated by domestic demand, enabling the U.S. to limit contagion effects from countries with high current-account surpluses such as China and oil-exporting countries. The situation in the U.S. Treasuries market—which supplied nearly one-third of the U.S. safe-asset market in 2015 according to the Securities Industry and Financial Markets Association²⁵—is illustrative: two-thirds of Treasuries are held by domestic agents (see Table 1).

Table 1: Geographic distribution of foreign holders of U.S. Treasuries

	\$ million, end September 2015 ^a	In % of Treasury Market ^b
Foreign demand of which	6,101.7	33.6%
China	1,258	6.9%
Japan	1,177.1	6.4%
EU ^c	1,091.1	6.0%
Caribbean	321.8	1.8%
Oil-exporting countries	291.3	1.6%
Brazil	251.6	1.4%
Switzerland	227.6	1.3%
Hong Kong	198.6	1.1%
Taiwan	178.1	1.0%
Singapore	122.8	0.7%
India	113.5	0.6%
Russia	89.1	0.5%

a. <http://ticdata.treasury.gov/Publish/mfhhis01.txt>

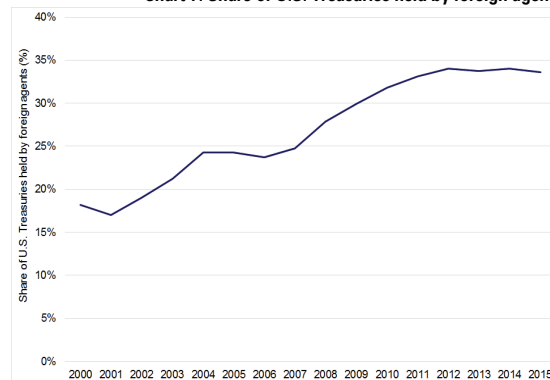
b. <https://www.fiscal.treasury.gov/fsreports/rpt/treasBulletin/backissues.htm>. The March 2016 Treasury Bulletin estimates the size of the Treasury Market at the end of fiscal 2015 (September 2015, "Total Federal securities outstanding") at approximately \$18,174,718 million.

c. Including, in decreasing order of holding size: Ireland, U.K., Luxembourg, Belgium, Germany, France, Sweden, Netherlands, Spain, Italy, Poland, Denmark

Source: U.S. Treasury Department, *Securities (B) : Portfolio Holdings of U.S. and Foreign Securities, end-September 2015 data*.

The Fed's decision to resume rate hikes in December 2015 was a positive signal regarding the U.S. capacity to absorb saving from countries with large current-account surpluses. However, the difficulties encountered in continuing these rate hikes at the pace initially planned—owing, among other things, to the negative impact of the dollar's appreciation on the U.S. economy—should be watched. In this connection, the growing share of foreign demand in total demand for safe assets issued by the U.S. could give greater weight, in future, to the contagion mechanisms described by Caballero *et al.* (2015). The share of foreign demand in the U.S. Treasuries market doubled between 2000 and 2015 from almost 18% to just under 35% (see Chart 7).

Chart 7: Share of U.S. Treasuries held by foreign agents



Source: U.S. Treasury Department.

Interpretation: Holdings at end-September of each year (end of fiscal year).

(25) <http://www.sifma.org/research/statistics.aspx>

Other safe assets include certain types of corporate debt, mortgage-linked securities, municipal debt, currency-market securities, rating-agency securities, and asset baskets.

4. Policy recommendations to mitigate the risk of secular stagnation

4.1 An overall response combining monetary and fiscal policies and structural reforms

If secular stagnation does materialise, economists now agree on the need to apply all the tools of economic policy depending on each country's manoeuvring room and efficiency. It is still hard to decide between the presence of hysteresis effects and that of expectation effects. As Blanchard *et al.* (2015) point out²⁶, both phenomena are probably at work, hence the vital need to combine reforms that support demand and potential output.

Without calling current monetary policies into question, several academics call for prudence in regard to monetary policy decisions, given the uncertainty over estimates of the

equilibrium real interest rate. Hamilton *et al.* (2015)²⁷ suggest, for example, assigning greater weight to past values of the key rate in determining the current key rate, i.e., adopting a more inert monetary policy²⁸. The authors conclude that it would be preferable for the Fed to raise interest rates later rather than sooner, even if this entails a faster subsequent rise in rates (see Box 2). Conversely, other economists, who do not subscribe to the secular stagnation theory²⁹, recommend the adoption of more restrictive monetary policies to provide long-term protection from the adverse effects on financial stability of over-accommodative monetary policies—such as the risk of capital misallocation and even bubbles.

Box 2: Monetary policy rule and uncertainty about the estimate of the equilibrium real interest rate^a

Using the Federal Reserve Bank's FRB/US model, the article by Hamilton *et al.* (2015) shows that the uncertainty over the value of the equilibrium interest rate (estimated in an interval of 0.4-2%) generates volatility in U.S. economic performance and in interest rates movements if the Fed follows a "classic" Taylor rule (with no policy inertia) of the form:

$$i_t = r_t^* + \pi_t + 0,5(\pi_t - \pi^*) - 2(u_t - u^*)$$

If the equilibrium interest rate r^* is estimated correctly, the economy and interest rates conform to the medium-term forecasts of the model's baseline scenario. However, if the estimated value of r^* exceeds its actual value, the Fed may raise rates sooner and more aggressively, and this may hinder the decline in unemployment and the attainment of the 2% inflation target. Eventually, the economic downturn slows the increase in Fed rates. Conversely, if the estimated value of r^* is below its actual value, the Fed will raise rates later, stimulating the decline in unemployment and sending inflation over the 2% target. The Fed will then need to raise rates faster than expected to keep the economy from overheating.

To limit this volatility linked to the uncertainty over the estimated equilibrium real interest rate r^* , the authors—drawing on the results of Orphanides and Williams (2002)^b—recommend the adoption of a more inert monetary policy rule based on the "classic" Taylor rule, to which they add an autoregressive term:

$$i_t = a_0 i_{t-1} + (1 - a_0)(r_t^* + \pi_t) + 0,5(\pi_t - \pi^*) - 2(u_t - u^*)$$

In the event of uncertainty about the value of r^* , this new monetary policy rule makes it possible to keep the economy and interest rates moving on a track relatively closer to the reference scenario (classic Taylor rule when the value of r^* is not uncertain) than the classic rule. This rule with inertia also suggests that the Fed should normalise rates later and that rates will then rise faster. The argument is that the rate response will require a greater decline in unemployment and a steeper increase in inflation than with the earlier rule. This patience in raising rates should result in a greater decrease in employment and stronger inflation, requiring larger rate hikes later on.

Adopting a more inert policy has both advantages and disadvantages: on the one hand, inertia yields less volatile paths for the economy and rates. On the other hand, a more inert policy generates stronger rate responses in the future. By using a well-being measurement function, the authors show that the greater the uncertainty over the equilibrium real interest rate, the higher the inertia (weight assigned to past values of the key rate in determining present key rate) must be to minimise losses of well-being.

a. Cf. Hamilton J. D. *et al.* (2015), *op. cit.* (note 14).

b. Orphanides, A. and Williams, J. C. (2002), "Robust Monetary Policy Rules with Unknown Natural Rates", *Brookings Papers on Economic Activity*.

Summers, joined by Blanchard, advocates instead a fiscal response that would support demand (through a rise in public spending) but also potential output (by raising productivity). Among other examples, Summers discusses a revival of public infrastructure investment, in a context characterised by very low lending rates, relatively cheap materials given the decline in commodity prices and—parti-

cularly in the U.S.—the availability of construction workers. The IMF³⁰ also recommends raising expenditures on active employment and education policies³¹, R&D investment, and transfers targeted at households relatively more affected by slower economic growth. These measures would aim to increase productivity and combat the risk of secular stagnation.

(26) Blanchard, Cerruti and Summers (2015), *op. cit.* (note 10).

(27) Hamilton *et al.* (2015), *op. cit.* (note 14).

(28) We define a more inert monetary policy here as a monetary rule that attaches relatively greater weight to past (and observed) values of the interest rate.

(29) See Borio, C. and Disyatat, P., "Policy frameworks should allow for the option to tighten monetary policy to lean against the build-up of financial imbalances even if near-term inflation appears to be under control" (<http://www.bis.org/publ/work346.pdf>).

(30) See World Economic Outlook, April 2016, chap. 1.

(31) See, for example, Anne-Braun, J., Lemoine, K., Saillard, E. and Taillepie, P. (2016), "Initial and continuing education: the implications for a knowledge-based economy", *Trésor-Economics*, no. 165

Structural responses are increasingly present in the debate, in particular to stimulate productivity and counteract hysteresis and expectation effects. Beyond the fiscal stimulus measures mentioned earlier, reforms in the composition of public revenues and spending could provide incentives to expanding private investment and innovation—for example, in green technologies. It is also vital to limit uncertainty in order to fight against negative expectation effects. In this area, specific announcements on future changes in retirement pension systems would make it possible to curtail precautionary saving in countries experiencing a substantial ageing of their labour force. Financial reforms such as the enactment of the European Banking Union would also stimulate a domestic demand recovery. Lastly, measures concerning the labour market to promote the return to employment could help to combat hysteresis effects. To limit the negative effects of these policies in the short term, the introduction of minimum guaranteed welfare benefits in countries currently lacking them would also provide a short-term stimulus to domestic demand.

4.2 A coordinated response to allow for the global dimension of the phenomenon

Economists also emphasise the need for international coordination of economic policies to address the risk of secular stagnation.

While fiscal stimulus is an instrument for getting out of safety traps, its use must be coordinated to avoid an under-sized global response. In the models designed by Eggertsson *et al.* (2015)³² and Caballero *et al.* (2015)³³, fiscal policies are sources of externalities in an integrated world and in a global safety-trap situation. The reason is that fiscal stimulus, particularly in countries running a current-account surplus, would allow an increase in the global equilibrium real interest rate and so make it easier to rebalance the global safe-asset market. Without coordination, "free rider" behaviours may appear and lead to an inadequate increase in global public demand. A country could thus benefit from its partners' revival of public demand—through export growth and a decline in the global real interest rate—without having to implement a fiscal stimulus itself.

Policies aimed at raising competitiveness—such as an exchange-rate policy or cost-competitiveness policy—must also be coordinated under pain of seeing their effects cancel one another out, or even triggering a "race to the bottom". Devaluations and competitive disinflation policies that seek to rely on external demand to revive the domestic economy can, for example, provoke a currency war that would further damage the world economy. As Benoît Coeuré stressed in his speech in Berkeley in November 2015³⁴, priority must go to reforms aimed at strengthening productivity rather than competitiveness through cost compression.

It is also vital to take account of the global effects of structural reforms aimed at achieving price and wage flexibility at national level. Caballero *et al.*³⁵ (2015) show that, in a global safety trap, the countries with the most flexible prices and wages are relatively less affected by capacity under-utilisation than countries with greater rigidities, for their economies adjust more easily and—most important—increase their relative competitiveness. However, at world level, excessive price and wage flexibility raises the global real interest rate (by reducing inflation even as the nominal rate is at the floor), resulting in greater global capacity under-utilisation.

Without taking a position on the existence of secular stagnation, G20 political leaders agree on the need for global, collective action to support world growth in the long term. The Communiqué from the Finance Ministers and Central Bank Governors at the G20 summit in Shanghai (February 2016) accordingly advocates a global, coordinated response: "*Over the last several years, the G20 has made important achievements to strengthen growth, investment and financial stability. We are taking actions to foster confidence and preserve and strengthen the recovery. We will use all policy tools—monetary, fiscal and structural—individually and collectively to achieve these goals.*"³⁶ It also states that the G20 countries are ready to ramp up their response if the macroeconomic outlook worsens: "*To enhance our readiness to respond to potential risks, we will continue to explore policy options that the G20 countries may undertake as necessary to support growth and stability.*" These commitments have since been reiterated in the G20 communiqués at the Washington (April 2016) and Chengdu (July 2016) Meetings.

Anne JAUBERTIE, Linah SHIMI

(32) Eggertsson, G. B., Mehrotra, N. R., Singh, S. and Summers, L. (2015), "A Contagious Malady? Open Economy Dimensions of Secular Stagnation", Brown University.

(33) Caballero, Farhi and Gourinchas (2015), *op. cit.* (note 20).

(34) Coeuré, B., 21 November 2015: "*It is high time that the growth narrative is shifted from a narrow view of 'competitiveness' towards a broader understanding of 'productivity', both within and across countries.*"

(35) Caballero, Farhi and Gourinchas (2015), *op. cit.* (note 20).

(36) Communiqué from G20 Finance Ministers and Central Bank Governors, Shanghai, 27 February 2016.

This text admirably describes the current stagnation as a short-term demand problem that monetary policy cannot resolve and/or as a long-term supply problem. It seems to me that two factors can allow us to be more specific. The problem facing monetary policy, which is unique in the postwar era, is not the weak real interest rate but the permanently weak inflation rate. The weakness of inflation leads us to nuance the role of supply factors in the short and medium term. A productivity slowdown generates unobserved inflationary effects. Furthermore, as the authors remind us, the U.S. has returned to a still perilous growth path, admittedly at a moderate pace, while stagnation mainly affects Europe and China.

This brings me to the missing element in the secular stagnation debate: the set of medium-term imbalances. The world is experiencing powerful deflationary forces produced by China and the euro area. China has managed the consequences of the 2008 crisis by implementing investment recovery plans. This has resulted in manifest capacity gluts in tradable goods sectors such as steel and cement, but also in non-tradable goods such as real estate, which generates bad loans in China. Capital overaccumulation creates deflationary pressures in China.

Next, the disastrous management of European divergences since 2007 has led to recommendations for wage cuts in many euro area countries. This downward pressure on wages (rather than the significant wage increases in high-surplus countries such as Germany) leads to wage stagnation, which is perhaps the true cause of weak inflation and hence secular stagnation in Europe. In far more direct terms, the German trade surplus—the largest as a percentage of GDP among the developed countries—is the result of low German wages and reveals an imbalance in European demand rather than a more general problem.

A final remark on the medium term: for reasons connected to the exchange-rate regime, it is often argued that the macroeconomic adjustment between supply and demand must be achieved through monetary policy and therefore, in the event, by a policy of low interest rates. The use of fiscal policy is too often excluded from the debates because of the high level of public debt in many countries. However, in a context of low interest rates (liquidity trap), we know that fiscal policy is a far more powerful tool than monetary policy for reviving economic activity. These considerations point to an inescapable conclusion: secular stagnation is also another way to describe our difficulty in managing an asymmetrical demand deficit in a world of high public debt, which is the product of the financial crisis.

Xavier Ragot

*Président, Observatoire Français des Conjonctures Économiques (OFCE)
(French Economic Observatory)*

Publisher:

Ministère de l'Économie
et des Finances

Direction Générale du Trésor
139, rue de Bercy
75575 Paris CEDEX 12

Publication manager:

Michel Houdebine

Editor in chief:

Jean-Philippe Vincent
+33 (0)1 44 87 18 51
tresor-eco@dgtresor.gouv.fr

English translation:

Centre de traduction des
ministères économique
et financier

Layout:

Maryse Dos Santos
ISSN 1962-400X
eISSN 2417-9698

Recent Issues in English**September 2016**

No. 181. The world economy in summer 2016: moderate but gradually accelerating growth
Jean-Baptiste Bernard, Laetitia François, Thomas Gillet, Julien Lecumberry, Ysaline Padieu,
Alexandre Tavin

No. 180. Fighting corruption: positive impacts on economic activity, including in developed
countries
Jean-Baptiste Chauvel, Laura Le Saux

No. 179. The economic consequences of obesity and how to limit them
Daniel Caby

August 2016

No. 178. The October 2015 agreement on France's complementary pension schemes for
private-sector employees (AGIRC and ARRCO) will improve the pension system balance by
0.3 points of GDP from 2020 to 2060
Julia Cuvilliez, Thomas Laurent

No. 177. How effective are hiring subsidies for boosting employment?
Jonas Anne-Braun, Sophie Ozil

<http://www.tresor.economie.gouv.fr/tresor-economics>

This study was prepared under the authority of the Directorate General of the Treasury (DG Trésor) and does not necessarily reflect the position of the Ministry of Economy and Finance.