

The secular stagnation equilibrium

By [Gilles Le Garrec](#) et [Vincent Touzé](#)

The economic state of slow growth and underemployment, coupled with low inflation or even deflation, has recently been widely discussed, in particular by [Larry Summers](#), under the label of “secular stagnation”. The hypothesis of secular stagnation was expressed for the first time in 1938 in a speech by A. Hansen, which was finally [published in 1939](#). Hansen was worried about insufficient investment and a declining population in the United States, following a long period of strong economic and demographic growth.

In a [Note by the OFCE \(no. 57 dated 26 January 2016 \[in French\]\)](#), we studied the characteristics and dynamics of a secular stagnation equilibrium.

A state of secular stagnation results when an abundance of savings relative to demand for credit pushes the “natural” real interest rate (what is compatible with full employment) below zero. But if the real interest rate permanently remains above the natural rate, then the result is a chronic shortage of aggregate demand and investment, with a weakened growth potential.

To counter secular stagnation, the monetary authorities first reduced their policy rates, and then, having reached the zero lower bound (ZLB), they implemented non-conventional policies called quantitative easing. The central banks cannot really force interest rates to be very negative, otherwise private agents would have an interest in keeping their savings in the form of banknotes. Beyond quantitative easing, what other policies might potentially help pull the economy out of secular stagnation?

To answer this crucial question, the model developed by [Eggertsson and Mehrotra](#) in 2014 has the great merit of clarifying the mechanisms behind a fall into long-term stagnation, and it is helping macroeconomic analysis to update its understanding of the multiplicity of equilibria and the persistence of the crisis. Their model is based on the consumption and savings behaviour of agents with a finite lifespan in a context of a rationed credit market and nominal wage rigidity. As for the monetary policy conducted by the central bank, this is set at a nominal rate using a [Taylor rule](#).

According to this approach, secular stagnation was initiated by the 2008 economic and financial crisis. This crisis was linked to high household debt, which ultimately led to credit rationing. In this context, credit rationing leads to a fall in demand and excess savings. Consequently, the real interest rate falls. In a situation of full employment, if credit tightens sharply, the equilibrium interest rate becomes negative, which leaves conventional monetary policy toothless. In this case, the economy plunges into a lasting state of underemployment of labour, characterised by output that is below potential and by deflation.

In the model proposed by Eggertsson and Mehrotra, there is no capital accumulation. As a result, the underlying dynamic is characterized by adjustments without transition from one steady state to another (from full employment to secular stagnation if there's a credit crisis, and vice versa if credit doesn't tighten much).

To extend the analysis, we considered the accumulation of physical capital as a prerequisite to any productive activity ([Le Garrec and Touzé, 2015](#)). This highlights an asymmetry in the dynamics of secular stagnation. If the credit constraint is loosened, then capital converges on its pre-crisis level. However, exiting the crisis takes longer than entering it. This property suggests that economic policies used to fight

against secular stagnation must be undertaken as soon as possible.

There are a number of lessons offered by this approach:

- To avoid the ZLB, there is an urgent need to create inflation while avoiding speculative asset “bubbles”, which could require special regulation. The existence of a deflationary equilibrium thus raises the question of the appropriateness of monetary policy rules that are overly focused on inflation.
 - One should be wary of the deflationary effects of policies to boost potential output. The right policy mix is to support structural policies with a sufficiently accommodative monetary policy.
 - Cutting savings to raise the real interest rate (e.g. by facilitating debt) is an interesting possibility, but the negative impact on potential GDP should not be overlooked. There is a clear trade-off between exiting secular stagnation and depressing potential GDP. One interesting solution could be to finance infrastructure, education or R&D (higher productivity) through government borrowing (raising the real equilibrium interest rate). Indeed, an aggressive investment policy (public or private) funded so as to push up the natural interest rate can meet a dual objective: to support aggregate demand and to develop the productive potential.
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Must balancing the public finances be the main goal of economic policy

By [Henri Sterdyniak](#)

The financial crisis of 2007-2012 caused a sharp rise in public deficits and debt as States had to intervene to save the financial system and support economic activity, and especially as they experienced a steep drop in tax revenues due to falling GDP. In early 2012, at a time when they are far from having recovered from the effects of the crisis (which cost them an average of 8 GDP points compared to the pre-crisis trend), they face a difficult choice: should they continue to support activity, or do whatever it takes to reduce public deficits and debt?

[An in-depth note expands on nine analytical points:](#)

- The growth of debt and deficits is not peculiar to France; it occurred in all the developed countries.
- France's public bodies are certainly indebted, but they also have physical assets. Overall the net wealth of government represented 26.7% of GDP in late 2010, or 8000 euros per capita. Moreover, when all the national wealth is taken into account (physical assets less foreign debt), then every French newborn has an average worth at birth of 202 000 euros (national wealth divided by the number of inhabitants).
- In 2010, the net debt burden came to 2.3% of GDP, reflecting an average interest rate on the debt of 3.0%, which is well below the nominal potential growth rate. At this level, the real cost of the debt, that is, the primary surplus needed to stabilize the debt, is zero or even slightly negative.

– The true “golden rule” of public finances stipulates that it is legitimate to finance public investment by public borrowing. The structural deficit must thus be equal to the net public investment. For France, this rule permits a deficit of around 2.4% of GDP. There is no reason to set a standard for balancing the public finances. The State is not a household. It is immortal, and can thus run a permanent debt: the State does not have to repay its debt, but only to guarantee that it will always service it.

– The public deficit is detrimental to future generations whenever it becomes destabilizing due to an excessive increase in public spending or an excessive decrease in taxation, at which point it causes a rise in inflation and interest rates and undermines investment and growth. This is not the situation of the current deficit, which is aimed at making adjustments to provide the necessary support for economic activity in a situation of low interest rates, due to the high level of household savings and the refusal of business to invest more.

– For some, the 8 GDP points lost during the crisis have been lost forever; we must resign ourselves to persistently high unemployment, as it is structural in nature. Since the goal must be to balance the structural public balance, France needs to make an additional major effort of around 4 percentage points of GDP of its deficit. For us, a sustainable deficit is about 2.4 GDP points. The structural deficit in 2011 is already below that figure. It is growth that should make it possible to reduce the current deficit. No additional fiscal effort is needed.

– On 9 December 2011, the euro zone countries agreed on a new fiscal pact: the Treaty on Stability, Coordination and Governance of the European Monetary Union. This Pact will place strong constraints on future fiscal policy. The structural deficit of each member country must be less than 0.5% of GDP. An automatic correction mechanism is to be

triggered if this threshold is exceeded. This constraint and the overall mechanism must be integrated in a binding and permanent manner into the fiscal procedures of each country. Countries whose debt exceeds 60% of GDP will have to reduce their debt ratio by at least one-twentieth of the excess every year.

This project is economically dangerous. It imposes medium-term objectives (a balanced budget, a debt rolled back to below 60% of GDP) that are arbitrary and are not *a priori* compatible with the necessities of an economic equilibrium. Likewise, it imposes a fiscal policy that is incompatible with the necessities of short-term economic management. It prohibits any discretionary fiscal policy. It deprives governments of any fiscal policy instrument.

– As the rise in public debts and deficits in the developed countries came in response to mounting global imbalances, we cannot reduce the debts and deficits without addressing the causes of these imbalances. Otherwise, the simultaneous implementation of restrictive fiscal policies in the OECD countries as a whole will lead to stagnating production, falling tax revenues and deteriorating debt ratios, without managing to reassure the financial markets.

– A more balanced global economy would require that the countries in surplus base their growth on domestic demand and that their capital assumes the risks associated with direct investment. In the Anglo-American world, higher growth in wage and social income and a reduction in income inequalities would undercut the need for swelling financial bubbles, household debt and public debt. The euro zone needs to find the 8 GDP points lost to the crisis. Instead of focussing on government balances, the European authorities should come up with a strategy to end the crisis, based on a recovery in demand, and in particular on investment to prepare for the ecological transition. This strategy must include keeping interest rates low and public deficits at the levels needed to support

activity.

Monetary policy: Open-Market Operations or Open-Mouth Operations?

By [Paul Hubert](#)

Can the communications of a central banker influence agents' expectations in the same way as they change interest rates? To believe Ben Bernanke, the answer is yes.

In a [speech on 18 October 2011](#), Ben Bernanke, governor of the US central bank, highlighted his interest in finding new tools to help businesses and consumers anticipate the future direction of monetary policy. Thus we learn that the bank's Federal Open Market Committee ([FOMC](#)) is exploring ways to make its macroeconomic forecasts more transparent. Indeed, if the publication of the forecasts influences the formation of private expectations about the future, then this could be treated as another tool of monetary policy.

It is worth pointing out that the impact of communicating the central bank's forecasts depends on the bank's credibility. Any impact that the publication of the forecasts has on the

economy is neither binding nor mechanical, but rather is channelled through the confidence that businesses and consumers place in the statements of the central bank. So if a statement is credible, then the action announced may not be needed any more or its amplitude may be reduced. The mechanism is straightforward: publishing the forecast changes private expectations, which in turn modifies decision-making and therefore the economic variables. Ben Bernanke's determination to implement what he calls "[forward policy guidance](#)" and the emphasis he is giving to the importance of the central bank's forecasts suggest that the Fed is seeking to use its forecasts as another instrument to implement its monetary policy more effectively.

Based on the inflation expectations of private agents collected through quarterly surveys called the Survey of Professional Forecasters (available [here](#)), it appears that the FOMC inflation forecasts, published twice yearly since 1979, have a persistent positive effect on private expectations (see the [working document](#)). Expectations rise by 0.7 percentage point when the Fed increases its forecast by one percentage point. Two interpretations of this effect could be offered: by raising its forecast, the Fed influences expectations and in a certain sense creates 0.7 percentage point of inflation. The effectiveness of such an announcement would therefore be questionable. In contrast, it is conceivable that an increase of 1 percentage point of inflation will occur and that by announcing it, the Fed sends a signal to private agents. They then expect a response from the Fed to counter the increase, and so reduce their expectation of the increase. The Fed's communication would therefore have succeeded in preventing a 0.3 percentage point increase in future inflation, meaning that the announcement has been effective.

This last mechanism, called "Open-Mouth Operations" in an [article](#) published in 2000 dealing with the central bank of New Zealand, would therefore act as a complement to the bank's

[open market operations](#) that are intended to modify the central bank's key rates so as to influence the economy.

In order to shed light on the reasons why private expectations have increased, it would help to characterize the mechanisms underlying the influence of the FOMC forecasts. If the FOMC forecasts are a good leading indicator of the Fed's future key rates, they provide information about future decisions. It appears from this study that an increase in the FOMC forecasts signals that there will be an increase in the Fed's key rates 18 to 24 months later.

Furthermore, the FOMC forecasts do not have the same impact as the bank's key rates on macroeconomic variables, nor do they respond in the same way to macroeconomic shocks: the responses of key rates to macroeconomic shocks are substantial and rapid in comparison with the responses of the forecasts. This suggests that the FOMC forecasts are an *a priori* instrument intended to implement monetary policy over the long term, whereas the key rates are an *a posteriori* instrument that responds to shocks to the economy, and thus to the short-term cycle.

Can the central banks influence the expectations of

private agents?

By Paul Hubert

Can the forecasts of a central bank influence the expectations of private agents, and if so what are the reasons for this? A few hours after the press conferences of Ben Bernanke and Mario Draghi, here are some explanations.

The awarding of the [2011 Nobel Prize in Economics](#) to Thomas Sargent and Chris Sims for “their empirical research on causal effects in macroeconomics” highlights the role of the expectations of private agents in economic policy decisions. Because the expectations of businesses and households about inflation and growth affect their decisions on investment, consumption, savings, and wage demands, these are at the heart of the interaction between economic policies and their effects.

Since the 1980s, the main instrument of monetary policy has been the interest rate set by the central bank. Changes in this affect the economy and allow the central bank to arbitrate between economic growth and inflation through [several channels](#), and in particular interest rates, credit, asset prices, exchange rates and, finally, expectations. Indeed, in the course of their daily decision-making, businesses and households base themselves on numerous expectations about consumption, investment, future capacity and future wages and prices, etc. These expectations then play a central role in the determination of economic variables. Changes in the central bank rate thus send signals about the future state of the economy and future monetary policy, and alter the expectations formed by private agents.

However, the expectations channel is ambiguous, and changes in the base rates can be understood in different ways: private agents may respond to lower rates by consuming and investing

more, which may indicate that growth will be stronger in the future, bolstering their confidence and their willingness to consume and invest. In contrast, the same agents may feel that current growth is lower than expected, prompting the central bank to intervene, which reduces their confidence, and hence their willingness to consume and invest... Since the 1990s, the central banks have been complementing interest rates with the [effect of announcements](#) to clarify their future intentions. Communication seems to have become a [tool of monetary policy](#), and two types can be distinguished. Qualitative communication includes interviews and speeches, while quantitative communication consists of the publication of the central bank's forecasts of inflation and growth.

In a [recent working paper](#), we analyze the effect of the forecasts of inflation and growth published quarterly by the central banks of Canada, Sweden, the UK, Japan and Switzerland. With the help of surveys conducted by Consensus Forecasts of professional forecasters from financial and non-financial sectors, we show that the inflation forecasts of the central banks of Sweden, the UK and Japan are a significant factor in the inflation forecasts of private agents. In other words, the publication of the central bank inflation forecasts leads to a revision of the forecasts of private agents. It also appears that the opposite is not true: the central bank forecasts do not respond to the forecasts of private agents.

Two factors could explain the central bank's influence: first, the inflation forecasts of the central bank could be higher quality, making it rational for private agents to be influenced by them so as to improve their own forecasts of macroeconomic variables. Second, the inflation expectations of the central bank can influence private agents because they transmit signals, either about future decisions on monetary policy, or about the private information available to the central bank. This type of influence is independent of the forecasting performance of the central bank.

To determine the sources of this influence, we evaluated the relative forecasting performance of the central banks and private agents and tested whether the central bank's influence on private expectations depends on the quality of its forecasts. Estimates showed that, in our sample of central banks, only the central bank of Sweden produced significant, regular and robust inflation forecasts that were better than those of private agents. We also found that the degree of influence depends on the quality of the inflation forecasts. In other words, the inflation forecast over a short horizon (1 or 2 quarters), which a historical analysis of forecast performance tells us are of low quality, do not influence private agents, whereas those of higher quality do influence them. Furthermore, the longer-term inflation forecasts of Sweden's central bank managed to influence private expectations even when their quality was low, and the better the quality, the stronger the influence.

While the central banks in the United Kingdom, Japan and Sweden all succeed in influencing private expectations by publishing their macroeconomic forecasts, it appears that the reasons for this influence differ. The first two use the transmission of signals, while the Swedish central bank uses both possible sources for influencing private expectations: its greater forecasting capability and the sending of signals. The consequence of these results is that the publication by the central bank of its macroeconomic forecasts could facilitate and render more effective the establishment of the desired monetary policy by shaping private expectations. This transmission channel, which is faster because it relies only on the provision of forecasts, could thus allow the central bank to affect the economy without changing its key interest rate, in practice making it an additional policy instrument.