

The crisis and its repercussions on the conduct of monetary and fiscal policies

The financial crisis triggered in 2007 has deeply transformed the role of economic policy instruments and the way economists used to analyse them, even if it is still too early to measure exactly to what extent this is so. Without doubt, the idea that macroeconomic fluctuations were under control is no longer shared. The Great Moderation that developed countries experienced since the mid-1980s and that featured stable output and inflation belongs now to the past.

This economic environment had led to a new paradigm in macroeconomics⁽¹⁾, according to which economies were thrown into imbalance only by exogenous shocks and not by an accumulation of internal imbalances. Consequences of the aftermath of the 1987 market crash or the bursting of the Internet bubble in 2000 had been properly controlled indeed.

Meanwhile, little attention had been paid to financial regulation and the impact that a financial crisis could have on the real economy. Monetary policy was the main instrument of a countercyclical policy conducted as independently as possible, implemented more rapidly than fiscal policy which is subject to political constraints.

But in 2007, the bursting of a speculative housing bubble, mainly in the US, and the subprime crisis in a deregulated financial sector required not only that central banks cut interest rates almost to zero and conduct non-conventional policies but also forced governments to increase their deficits steeply to forestall, ultimately, a new Great Depression. The financial crisis has transformed the economic world. Now we have to interpret it⁽²⁾. ■

[1] As summarised by Blanchard (2008) and Woodford (2009).

[2] See the working paper "La crise et ses répercussions sur la conduite des politiques monétaire et budgétaire", n° 2011-05, Centre d'analyse stratégique, September.

THE CHALLENGES Policy makers have implemented economic policies that are unusual in their nature and scope to avoid sinking into a liquidity trap. Such monetary and fiscal instruments may have revealed their efficiency in this context by forestalling what might have been a new Great Depression but, in so doing, they have placed a heavy burden on government and central bank balance sheets. Ensuring that they are sustainable requires the right timing for a return to “normal”, while avoiding the risk of a deflationary relapse in economic activity and employment.

▶ PROMPT AND AGGRESSIVE RESPONSES THROUGH MONETARY AND FISCAL POLICIES HAVE HEADED OFF A NEW GREAT DEPRESSION

At the time of the Lehman Brothers bankruptcy in September 2008, many economists feared that the recession started in late 2007 would turn into a new Great Depression⁽³⁾. Several studies compare these two episodes : Paul Krugman, for example, in March 2009 reviewed the US manufacturing index during the two periods and concluded that, in its scope and downward slope, we were living through “half a Great Depression”⁽⁴⁾.

League of Nations historical data⁽⁵⁾ show clearly that drops in manufacturing output and equity prices were as steep in the first months of the recent crisis as in the 1930s. However, output did not fall as low as then and has recovered more rapidly. In addition, the consumer price index did not show deflation after the 2007 crisis. The difference with the Great Depression is the remarkable speed and extent with which support policies have been implemented today. Central banks cut their key rates more rapidly and more steeply than during the 1930s crisis, and public deficits increased more (*Chart 1*).

▶ POST-LEHMAN BROTHERS RISKS

The argument for these “massive” responses was the fear of sinking into a liquidity trap, as occurred during the “lost decade” in Japan (the 1990s), about which analyses converge in deeming political responses as too little, too late (*Inset 1*). Central banks had no other choice but to cut their short-term interest rates drastically, reaching a floor in early 2009. They did so faster than usual practice would have suggested (in the US and the UK in particular). However, the spreading banking crisis that was disrupting the normal channels for transmitting monetary policy required new policies.

(A- The risk of sinking into a liquidity trap

Before the crisis, monetary policy decisions were based on the “Taylor” rule (1993). Such a rule links the central bank’s setting of interest rates to shortfalls of output and inflation vs. their targets. However, this response function of central banks is not completely safe.

▶ Inset 1:

The liquidity trap and the Japanese “lost decade”

A liquidity trap was originally defined as a situation in which demand for money is perfectly elastic, i.e. supplying more money does not lower interest rates (as the demand curve is horizontal). But according to standard Keynesian theory, money supply acts on economic activity only through the resulting variations in interest rates.

In a liquidity trap, an increase in money supply does not act on interest rates, and therefore fails to boost economic activity. In contrast, tenants of the quantitative theory of money suggest that increasing the money supply can stimulate economic activity even if interest rates are unchanged, as long as individuals’ stock of nominal cash flows, and ultimately, aggregate demand, increases.

On this basis, the Bank of Japan conducted quantitative easing in the 1990s. But the Japanese economy’s subsequent stagnation cast doubt on this strategy and renewed interest in the concept of the liquidity trap (in which money supply has no effect on economic activity), which nowadays refers broadly to a situation in which nominal interest rates are zero.



[3] Barack Obama decided to reappoint Ben Bernanke as Fed chairman and to appoint Christina Romer as the head of the Council of Economic Advisers, since both are well known for their analyses of economic policies during the Great Depression in the US in the 1930s [Bernanke, 1983; Romer, 1992].

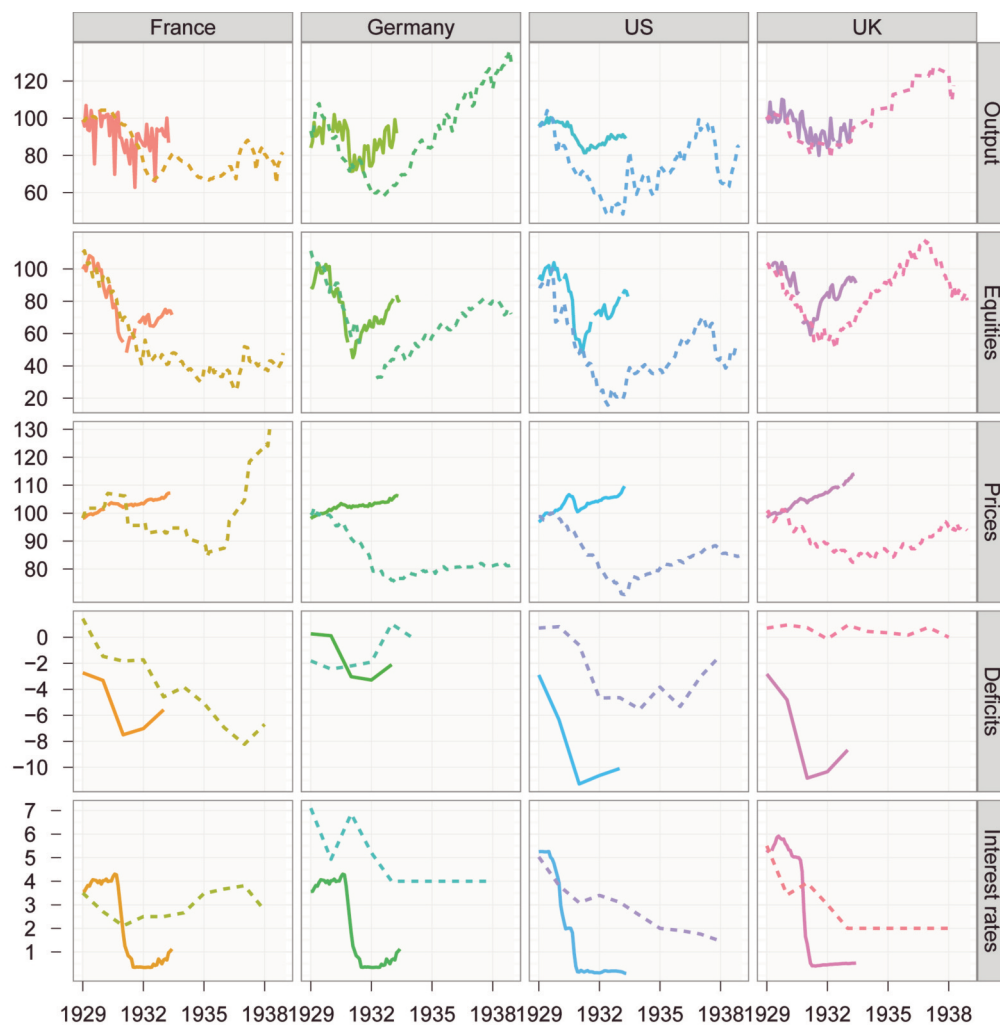
[4] P. Krugman, “The Great Recession versus the Great Depression”, *The Conscience of a Liberal*, 20 March 2009, <http://krugman.blogs.nytimes.com/2009/03/20/the-great-recession-versus-the-great-depression/>. Others have compared US equity prices, like D. Short in “The four bad bears”, *Advisor Perspectives*, 14 August 2011, <http://www.advisorperspectives.com/dshort/updates/Four-Bad-Bears.php> or the labour market, like J. Fox, “On the job front this is no Great Depression”, *The Curious Capitalist*, 16 March 2009, <http://curiouscapitalist.blogs.time.com/2009/03/16/on-the-job-front-this-is-no-great-depression-not-even-close/>. See also IMF in the April 2009 *World Economic Outlook*; T. Helbling [2009], “How similar is the current crisis to the Great Depression?”, *Voxeu*, 29 April 2009, <http://www.voxeu.org/index.php?q=node/3514> and Almunia, M., Bénétrix, A., Eichengreen, B., O’Rourke, K. H. and Rua, G. [2009].

[5] League of Nations annual statistical data have been digitalised by Northwestern University [<http://digital.library.northwestern.edu/league/stat.html>].

While recent economic literature has returned to the Keynesian tradition, it gives an other interpretation to its conclusions by stressing the monetary authority's ability to raise the inflation expectations of individuals even in a liquidity trap, hence to lower real interest rates in order, ultimately, to increase today's aggregate demand (Krugman, 1998; Eggertsson and Woodford, 2003). As a result, liquidity traps become true traps only if the central bank is unable to modify expectations.

Benhabib, Schmitt-Grohé and Uribe (2001) underlined that relying on the Taylor rule is not convincing when nominal interest rates hit the zero lower bound. They also highlighted that the Taylor rule does not lead back to the path of balanced growth, but rather locked into another equilibrium, in which deflation coexists with very low nominal rates, as in Japan. This article, which stimulated debate among experts when it was published, has taken on new meaning in the current context⁽⁶⁾. While many analysts considered Japan as an exception, the danger that the euro zone and the US would sink into a Japanese-style scenario began to be taken more seriously in autumn 2008 (Chart 2).

Chart 1:
The 2007 crisis and the 1930s Great Depression: monetary and fiscal policy responses

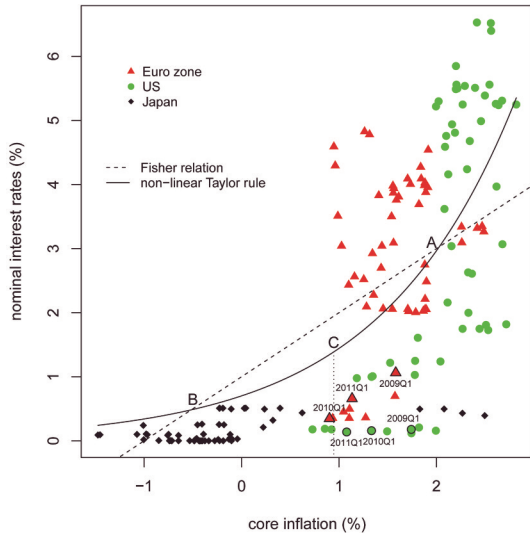


Note: Manufacturing output indices, equity prices and consumer prices are base 100 (September 1929 and September 2007). The period of the Great Depression is the dotted line, the post-2007 crisis is the bold line.

Source: League of Nations, OECD, Bordo et al. (2001).

[6] Bullard J. (2010).

Chart 2:
Relation between nominal interest rates set by central banks and core inflation in the euro zone, the US and Japan, 1998q1-2011q1



Note:

The ineffectiveness of the Taylor rule in a phase of low inflation and zero lower bound

The crossing of nominal interest rates set by central banks with core inflation [i.e., excluding food and energy] is a clear illustration of what makes Japan a specific case: rates below one and a core inflation often negative over the past 10 years. The euro zone and the US show positive inflation, with a greater tolerance for inflation in the US (with the same interest rates, US inflation is higher), but the last points are very closed to the Japanese example.

The dotted line depicts the Fisher relation for safe assets, according to which nominal interest rates have a real component plus a "monetary erosion" premium, equivalent to expected inflation^[7]. The bold line, meanwhile, depicts an estimated Taylor rule for all data. It describes how short-term interest rates react to inflation^[8]. On the right side, monetary policy is active: when inflation is above (below) target, interest rates rise (fall), but more than the price-level gap. When the curve describing the Taylor rule crosses the Fisher relationship line at point A, it can be assumed that there exists a state in which policy does not want to modify rates and wants to anchor inflation expectations. This is a point of equilibrium in the sense that, if there are not other shocks to the economy, nothing will change in the area of interest rates or inflation. On the chart, this equilibrium corresponds to an inflation rate of about 2% and an interest rate of 3%.

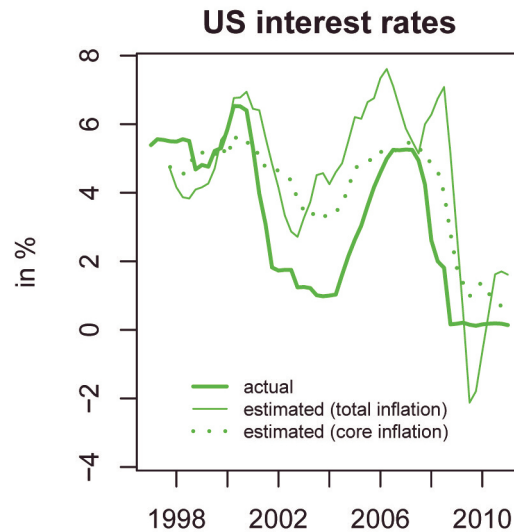
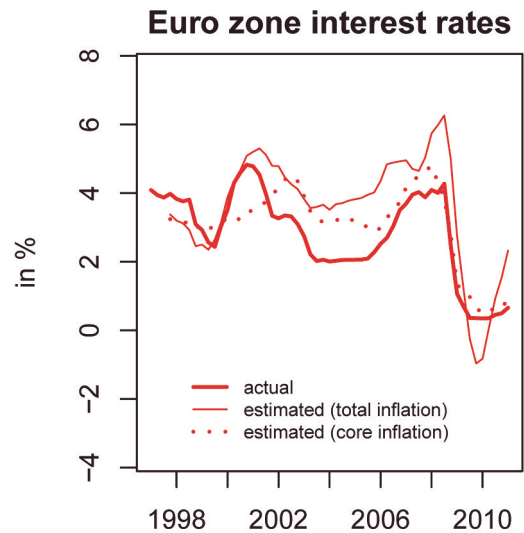
When we move away from equilibrium – and that is the point of the demonstration – there is a second point of intersection between the two curves (point B on the Chart), related to a second state of equilibrium. The figure seems to suggest that this second state is reached with an inflation rate of -0.5%. The analysis of Benhabib *et al.* (2001) stresses that, once a certain threshold has been crossed, monetary policy is no longer active but passive. Hence, when inflation falls, the rate is not reduced any longer because of the zero lower bound. Continuing in this context, when inflation rises, rates no longer respond by one point for one point of deviation in the price-level gap, because inflation is well below its target. The private sector then anticipates negative inflation, consistent with the Fisher relation and nothing changes therefore. With these data, we calculate the inflation rate when monetary policy becomes passive: it is the x axis of point C (where the slope of the tangent to the Taylor curve is unitary), hence an inflation of 0.9%. Since 2010 core inflation has been near this value, thus exacerbating concerns of the dangers of a liquidity trap.

Source: OECD, Centre d'analyse stratégique calculations.

B- Developed economies and interest rates policy since 2009

To what extent has developed economies suffered from the constraint of the interest rate floor since 2007? Answering this question gives a first assessment of the risks of sinking into a liquidity trap. In the current period, nominal rates, according to a standard Taylor rule, would be negative (Chart 3), with the exception of the United Kingdom, where inflation has remained rather high^[9].

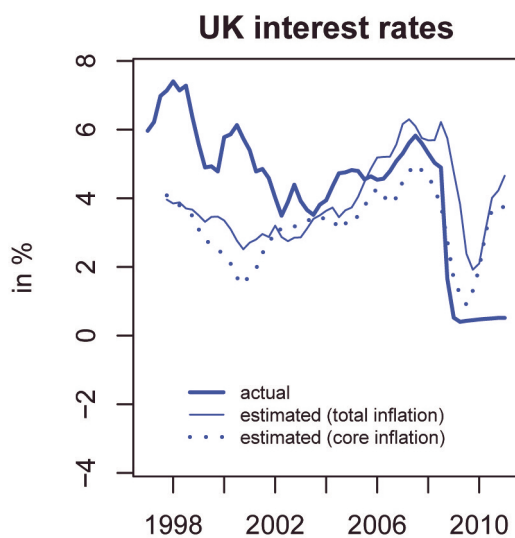
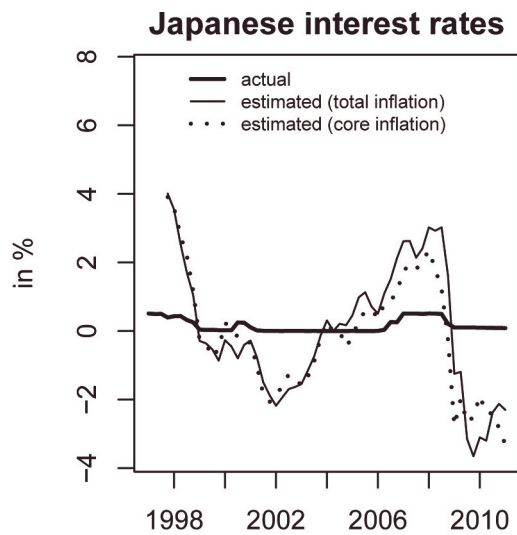
Chart 3:
Actual and estimated short-term interest rates in developed economies



[7] The real component may be equal to the preference rate for the present. Here it is set at 1% [short-term yields on safe assets were historically low].

[8] The special feature here is to depict a non-linear curve, because of the zero lower bound.

[9] The Taylor rule initially takes the form $\dot{z}_t = \pi_t + r_t^* + 0.5(\pi_t - \pi^*) + 0.5(y_t - y^*)$, where the nominal interest rate \dot{z}_t set by the central banks is a function of annualised inflation (averaged over the last four quarters) π_t , neutral real interest rates r_t^* , annualised price-level gap $\pi_t - \pi^*$ and output gap $(y_t - y^*)$. Neutral interest rates and targeted inflation are set at 2%. We thus find the Fisher relation (with a nominal rate equal to the real interest rate plus inflation) if there is no price-level or output gap.



Note: Nominal interest rates set by central banks are depicted in thick lines. Those estimated using a Taylor rule based on total inflation are in thin lines, and those based on core inflation are in dotted lines.

Source: OECD, Centre d'analyse stratégique calculations.

However, the difficulty in interpreting these results is due in part to the arbitrariness of the functional form of the Taylor rule. The assessment of a deflationary risk and the proper adjustment in monetary policy is also subject to the uncertainty in estimating the output gap during a downturn. Even when it is conducted in compliance with a “mechanical” rule, central bankers’ convictions play an important role in monetary policy. Nevertheless, at the beginning of 2008, the zero lower bound was binding enough to consider that nominal interest rates could no longer be used to conduct a countercyclical policy⁽¹⁰⁾, and that non-conventional policies would be required.

NON-CONVENTIONAL MONETARY POLICY AND HEAVY PUBLIC DEFICITS: EFFECTIVE WEAPON IN FIGHTING THE CRISIS

A- Non-conventional monetary policies taken since 2007

The threats to the financial system since 2007 have brought forth outstanding measures from monetary authorities, which intervened directly in the most vulnerable segments of the financial markets. No doubt that these measures forestalled a new Great Depression, that was guaranteed by no means in autumn 2008.

The results of the non-conventional monetary policies led by the three major institutions (Federal Reserve, European Central Bank and the Bank of England) show a “before-Lehman” and an “after-Lehman” phase, referring to the September 2008 Lehman Brothers bankruptcy (Lenza, Pill and Reichlin, 2010). Before Lehman, the three central banks provided support to the financial markets by modifying the composition of their balance sheets in various manners, but by leaving their size unchanged on the whole; this was qualitative easing. However, after Lehman, central banks expanded their balance sheets and, as a result, monetary basis and aggregates; this was quantitative easing.

Central bank intervention’s main objective then was to fill the role normally played by interbank transactions, which were no longer working because of broad distrust between financial institutions. As noted by Giannone *et al.* (2011), such actions can be seen as a modern version of “a lender of last resort” that the Fed of the 1930s was not⁽¹¹⁾. At the beginning of autumn 2008, central banks were “intermediaries of last resort” to keep the banking system afloat.

Inset 2:

Non-conventional monetary policies taken since 2007

Kozicki, S., Santor, E. and Suchanek, L. (2010) have found that measures taken by central banks beginning September 2007 can be classified into four types of facilities:

- 1- Liquidity facility. In reaction to the freezing of the interbank market, central banks facilitated bank financing terms. In the Fed’s case, this took the form of the Term Auction Facility (TAF) and the Primary Dealer Credit Facility (PDCF). Similarly, the ECB adopted the fixed rate / full allotment (FRFA) procedure, which

[10] This is all the more so, as estimates are based on a very conservative form of the Taylor rule. In his study, Rudebusch (2009) suggests, on the basis of growth and inflation expectations, that nominal interest rates should have been –6 percentage points in 2009.

[11] This is a way of drawing lessons from the analysis of Friedman and Schwartz (1963), who showed that the Fed had made the mistake of allowing the monetary aggregate to shrink by about 20% between 1931 and 1933.

consists in providing all the liquidity that the banks request at a price set by the central bank;

- 2- Credit facility. In a targeted manner to enhance conditions on the credit markets, the central bank buys commercial paper (Commercial Paper Funding Facility, CPFF) and corporate bonds and supports money-market mutual funds;
- 3- Quantitative easing. The Bank of England and the Fed began to buy public-sector securities to ease all financial terms (not just government securities but also mortgage-backed securities, after the nationalisation of Freddie Mac and Fannie Mae);
- 4- Facilities to cope with the insolvency of financial establishments that are “too big to fail”, i.e., that present a systemic risk.

The central banks have taken numerous (Borio and Disyatat, 2009), and often technical, measures in this situation (*Inset 2*). For Giannone *et al.* (2011), it is crucial to understand that the purpose of expanding the ECB's balance sheet is to promote channels for transmitting monetary policy. In spring 2009 it began to stand out from the quantitative easing of other central banks, which involved buying assets on liquid, functioning markets, in order to expand the nominal cash flows in the private sector and to act on the slope of the yield curve⁽¹²⁾.

The impact of the non-conventional policies is a highly controversial issue. Several authors, including Lenza *et al.* (2010), stressed that the policies have acted mainly on interest rates and money-markets spreads, rather than on the quantitative effects of money supply (*Chart 4*). According to Giannone *et al.* (2011), measures taken by the ECB (beginning in September 2008) have managed – albeit with the help of government stimulus plans – to spare households and companies from a breakdown in financial intermediation. The spread of the crisis through the collapse of the system of intermediation that played a key role in the Great Depression, was thus avoided⁽¹³⁾. Simulations based on general equilibrium models confirm that central bank swaps of liquid securities for illiquid securities are effective when nominal interest rates are at the zero lower bound. Del Negro *et al.* (2010) for example, calls this the “Great Escape”, stating that the contraction in GDP would have been 10% rather than 6%, and that share prices, like inflation, could have fallen by twice as much. They estimate the balance sheet multiplier at 0.63, which means that GDP rises by 63 cents when liquidity rises by one dollar⁽¹⁴⁾.



[12] Note, however, that the ECB also took part in buying up government bonds (from June 2009) and shares (from May 2010), even though in volume terms, this amounted to very little on the ECB balance sheet.

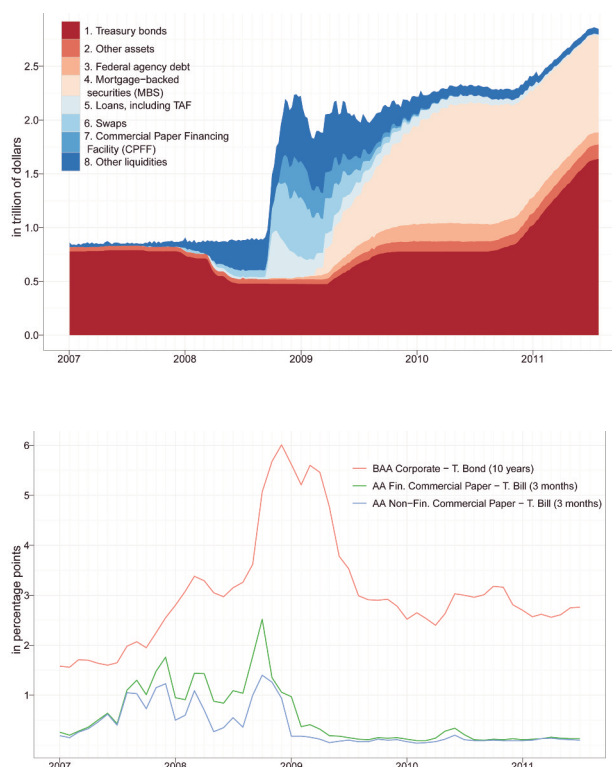
[13] Other empirical studies corroborate the impact of quantitative easing on interest rates in the US and the UK (Gagnon, Raskin, Remache and Sache, 2010 ; Joyce, Lasasoa, Stevens and Tong, 2010).

[14] This figure cannot be compared to a fiscal multiplier (which measures the impact of additional public consumption on GDP), which is above the unit, as, in the case studied, the central bank temporarily raises liquidity in exchange for private-sector securities that it will be able to sell. So there is no consumption in this case.

[15] Christiano, L., Elchenbaum, M. and Rebelo, S. (2009); Eggertsson, G. (2010); Gomes S., Jacquinot P., Mestre R. and Sousa J. (2010); Woodford, M. (2010). Moreover, these results are corroborated by recent empirical literature that seeks to assess the extent of multipliers based on the position in the economic cycle (Auerbach and Gorodnichenko, 2010). The latter study shows that the multiplier of public expenditures is close to the unit during periods of expansion and higher than 2 during cycle troughs.

[16] A neo-Keynesian dynamic stochastic general equilibrium model is used with monopolistic competition between firms and frictions in setting prices and wages.

Chart 4:
Modification of Fed balance sheet and consequences on various US yields spreads, 2007m1-2011m6



Source : FRED, Federal Reserve Bank of Saint Louis

B- A fiscal stimulus at least twice as effective in a crisis situation

The Japanese experience and the fear of a liquidity trap have also brought back to the fore the value of fiscal stimulation. The objective is to counter the recessive effects of an increase in real interest rates in a context of deflation with nominal interest rates at the zero lower bound (Krugman, 1998). A consensus is emerging today in favour of fiscal multipliers of more than 2 in such conditions, and therefore far above what is usually found⁽¹⁵⁾.

Depending on whether nominal interest rates are determined by a Taylor rule or are at the zero lower bound due to a specific shock, the multiplier effects of a fiscal stimulation based on the same model⁽¹⁶⁾ vary considerably. In particular, studies converge to stress that a temporary

increase in public spending has a much greater impact than under normal circumstances. Some tax cuts are also beneficial in this zero rate situation, such as consumption or investment tax credits; others, such as cuts in the capital or labour income tax, have perverse effects. In other words, cuts in highly distorting taxes in a recession aiming to increase potential production could ultimately lead to lower it. This is illustrated in two paradoxes: the paradox of thrift and the paradox of toil.

When nominal interest rates are positive, tax cuts on capital gains can increase investment and capital formation and thus expand the economy's productive capacity. But at the zero lower bound, the problem is not insufficient production capacities but insufficient aggregate demand. Cutting these taxes is thus an incentive for individuals to save, whereas the opposite objective is being sought. If everyone starts saving more, demand shrinks and household income, too, ultimately reducing their capacity to save. Paradoxically, tax cuts on capital gains result in a reduction in overall savings, on a general equilibrium basis, because everyone is trying to save more⁽¹⁷⁾.

Similarly, these models show that a policy of cutting taxes on labour is expansive in normal circumstances (according to most findings in the literature). However, when nominal interest rates are zero, the relationship is altered, and such tax cuts become recessive. For, by reducing companies' marginal costs, such tax cuts lower the prices of the goods and services produced. This then raises real interest rates, as the central bank cannot temper this price decline by cutting key rates, as they are already at a floor. This mechanism highlighted by Eggertsson (2010) is known as the paradox of toil, i.e., if everyone wants to work more during an economic downturn with zero interest rates, everyone ends up working less, in general equilibrium terms.

Moreover, increasing public spending appears to be very effective in this framework. In the model estimated by Eggertsson (2010) for example, the fiscal multiplier is 2.3 in the US, meaning that every dollar spent by the government raises output by 2.3 dollars⁽¹⁸⁾. Why is the multiplier so high? The main cause of falling GDP and prices is anticipation of declines in output and in deflation. But if the private sector anticipates an increase in public spending, while nominal interest rates are at zero, that alters recession expectations, which has a stimulating effect during this period. Expectations thus play a decisive role in explaining the multiplier effect of public spending. The key element therefore lies in the government's commitment to support demand until the end of the recession. Within this

framework, the period of implementation of stimulus plans appears to be less crucial if fiscal policy is credible.

Two other arguments can explain high fiscal multipliers during crisis: first, credit constraints, which make aggregate demand more dependent on current income and second, international coordination, particularly in the current case. Many simulations based on neo-Keynesian models thus demonstrate the effectiveness of fiscal stimulus during crisis situations. Divergences are due to authors' different assumptions about the nature of additional public spending. For example, Cogan *et al.* (2010) studies the effects of an increase in public spending with a model that is very similar to those mentioned previously and yet comes up with much weaker multipliers. The reason for this difference is that the additional public spending that they introduce in their model is assumed to be permanent, whereas the articles cited previously regard it as a temporary stimulus in reaction to an economic downturn. This point stresses the importance of returning public spending to its previous level, once the crisis has past and growth is back.

However, the policies conducted since 2008 have expanded public balance sheets of both governments and central banks, something that carries certain costs. While such costs must be compared with the gains of having forestalled another Great Depression, return to normal may increase their burden. While the move to the zero lower bound and the fear of sinking into a liquidity trap have allowed the multipliers to be so high, it is the exit from such a regime that must now be broached.

➤ MANAGING THE EXIT FROM AN EXCEPTIONAL CRISIS

For each type of economic policy, consideration must be given to: 1) measures to take now to end the crisis once and for all without harming growth and undermining the reduction in unemployment (*Inset 3*); and 2) deeper reforms of macroeconomic tools to prevent a new major crisis.

📌 Inset 3:

The mistake of 1937

Recent studies, while done prior to the current crisis, revisit the US Great Depression with a new analysis grid and shed new light on the current situation.

The 1933 US recovery appeared to have been due in part to a sharp shift in expectations after Roosevelt took measures that called prevailing dogma into question. On the monetary front, the new US president took the US off the



[17] The paradox of thrift was originally developed by Keynes.

[18] The 5%-95% confidence interval indicates even a multiplier of between 1.4 and 3.3.

gold exchange standard and announced an explicit inflation target that would allow prices to return to pre-1929 levels^[19]. On the fiscal front, Roosevelt raised spending and public deficits, which made his objectives credible. This resulted in a substantial decline in real *ex ante* interest rates, as prices and output stabilised and then gradually rose. According to Eggertsson (2008), 70% to 80% of the upturn in output and prices between 1933 and 1937 (Chart) was due to this regime-switching.

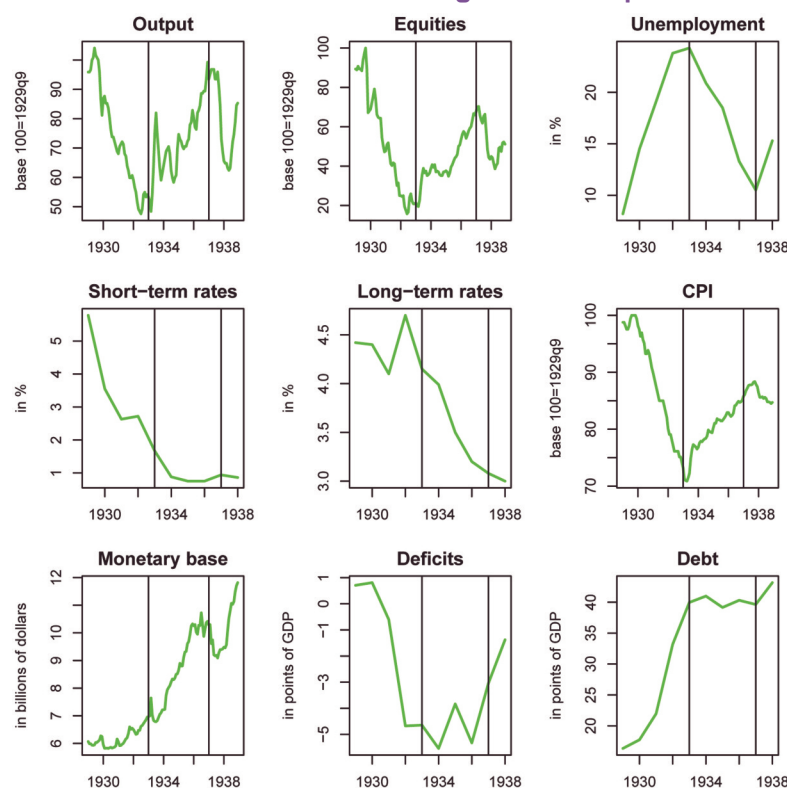
However, the US fell back into recession in 1937 (between May 1937 and June 1938, GDP contracted by 9% and industrial production by 32%), due mainly to economic policy errors (Eggertsson and Pugsley, 2006). According to these authors, the “mistake of 1937” was due to the premature shutdown of measures taken when Roosevelt took office, or at least miscommunication on the decisions that the administration was going to take, especially regarding inflation targets. Signs suggested that the depression was at last over; interest rates, which had been near zero for several years, were about to rise; some concerns were surfacing over excessive inflation to come, especially for those who looked at the expansion in the monetary base of the past years (Chart)^[20]. Beginning February 1937, the Fed chairman, Eccles, deemed that key

interest rates were too low and suggested raising reserves explicitly to raise long-term rates. Eccles then called on the US Treasury to combat “excessive” inflation by balancing the public budget^[21]. On 2 April 1937 Roosevelt stated: “I am concerned—we are all concerned—over the price rise in certain materials”, even as prices were still well below 1929 levels.

The mistake of 1937 was due to this premature fight. A model such as that mentioned above for fiscal multipliers predicts that if prices are below their target and government sets aside its inflation policy, real interest rates will rise. The end of the 1937-1938 depression bears out this assumption, when the Roosevelt administration decided once again to conduct an inflationary policy.

True, it is not easy to apply to the euro zone the exact same recommendations that prevailed back then in the US, given that deflation is currently much less of a problem. However, it is not necessary to have as much deflation as in the 1930s to obtain these results, as, even with very sticky prices, the contraction spiral moves mostly through output.

Chart: Changes in real and nominal variables in the US during the Great Depression



Note : The first vertical line marks Roosevelt arrival at the White House in March 1933, and the second, the beginning of 1937.

Source: League of Nations, Bordo *et al.* (2000), FRED.



[19] Roosevelt stated in the *Wall Street Journal* of May 1st, 1933: “We are agreed in that our primary need is to insure an increase in the general level of commodity prices. To this end, simultaneous actions must be taken both in the economic and the monetary fields.” (quoted by Eggertsson and Pugsley, 2006).

[20] The authors stress in their introduction that such a situation was likely to be familiar to the Japanese public in 2006. They would certainly agree to make these remarks to a much broader public in 2011.

[21] For other examples of anti-inflation communication, see Eggertsson and Pugsley (2006), p. 25.

A- Temporary price targeting and an acceleration in short-term inflation

While many central banks are currently setting price stability objective based on an inflation target, several commentators have suggested that this be set aside temporarily. Woodford, for example, in a column published in the *Financial Times*⁽²²⁾, advocates setting a price level target, in order to recover their low increase and even the deflation of the crisis years, as the costs of implementing a price targeting policy appear to be well below the expected gains.

Since the speech of Ben Bernanke (2003), this idea has moved back into the public debate to seek, there again, a solution to the Japanese impasse⁽²³⁾. This does not go without saying, particularly from someone who has advocated explicit inflation targets (Bernanke and Mishkin, 1997). Inflation targeting, meanwhile, has been widely adopted by central banks in the last two decades⁽²⁴⁾ and has proven to be an effective communications tool. By clarifying the central bank objectives, it helps focus and anchor inflation expectations and reduces uncertainty on the financial markets. However, for Japan, Bernanke considers that inflation targeting is not enough and advocates aiming for the price level that would have prevailed if inflation had hit its target in past years, and thus narrow the price-level gap, i.e. the difference between effective and targeted prices.

The clearest advantage is to provide some relief to the banking sector and borrowers forced to pay off their debt in yen of a higher value than expected. Of course, the drop in share prices and the structural problems of Japanese firms are great, but an acceleration in inflation would mitigate their difficulties.

More formally, the more the economy deviates from this objective, the more aggressive policy makers will be in their decisions (Eggertsson and Woodford, 2003). This is not the case with a mere inflation target, for, even if the inflation target is not met in one period, nothing suggests that the central bank won't take the same stance in the following year. The failure of the inflation target is therefore not penalising, since no additional effort is required the following year. On the contrary, with a price target, deflation that continues over several periods requires

higher and higher targets in terms of short-term inflation, given that the price-level gap leads to a stepped-up effort by the central bank, which must steer individuals into expectations that deflation will give way to inflation.

While there are many advantages to targeting a price level, it is worth asking what keeps it from being adopted today. The period of Great Moderation was regarded as a success in inflation targeting policies, even though the recent economic slump has tempered this view. Moreover, with the exception of Sweden, which adopted price targeting during the Great Depression in going off the gold exchange standard in 1931, no other country has ventured down this path, although the Bank of Canada is actively considering a possible change. Moreover, while unhinging is clear in the case of Japan, the 2007 crisis's consequences on price levels in the major developed countries are perceptible only by looking at the core price index, i.e., excluding food and energy (*Chart 5*). The ECB, for example, focuses more on total inflation. Lastly, there are fears that central banks will go too far and that the problem of deflation will turn into a problem of inflation. Indeed, the costs of such a transition can be high if monetary policy is not sufficiently credible.

Although well founded, such fears call for two caveats. First, there are potentially significant gains for the real economy from a more rapid restoration of pre-crisis price levels. And, second, the idea that inflation could be left higher for an extended period is defended by some economists, such as Blanchard *et al.* (2010), at least during phases of strong growth, in order to leave more room for lower nominal interest rates in the event of adverse shock⁽²⁵⁾. However, in his column in the *Financial Times*, Woodford notes that raising the inflation target might exacerbate price volatility, and the uncertainty over the value of the dollar could then raise yields on debt securities instead of lowering them. He concludes that a temporary price level target would produce significant gains for the economy, while avoiding the risks of overshooting if the central bank sticks with its medium-term inflation target.

Ultimately, lacking in-depth studies that would compare all costs incurred by an increase in inflation, such as salary re-indexation for example, to the benefits drawn from moving away from the zero lower bound, a consensus among economists seems to be emerging in favour of temporary price level targeting for the next few years.



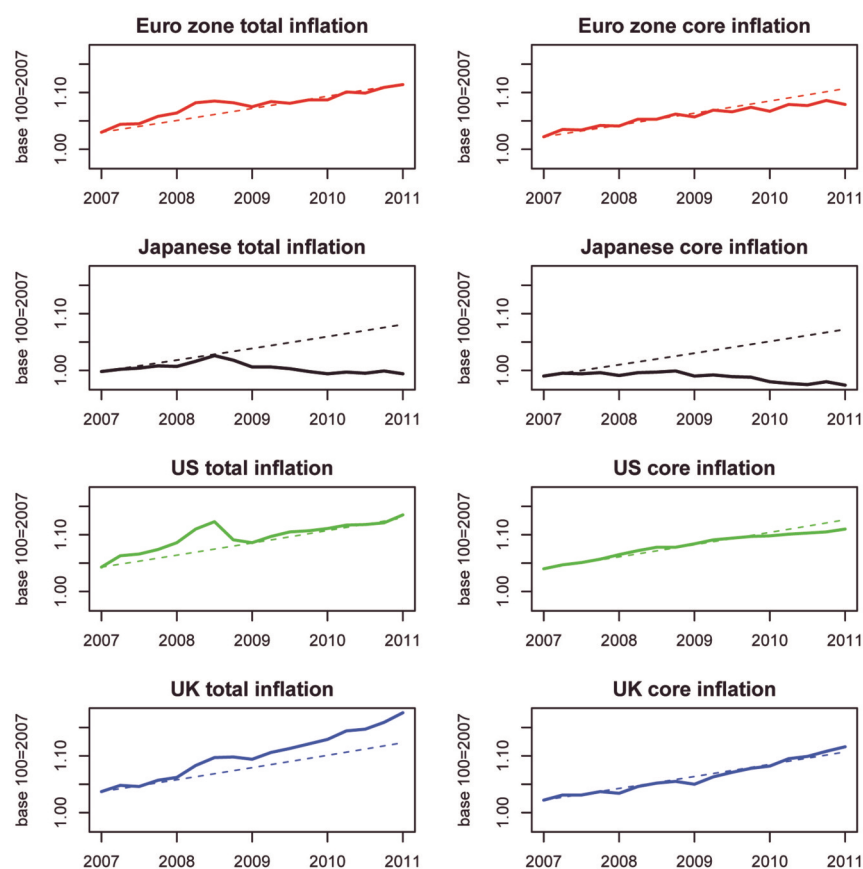
[22] Woodford M. (2010), "Bernanke needs inflation for QE2 to set sail", *Financial Times*, 11 October.

[23] Bernanke recalled then that prices in Japan were on a downward trend, with a cumulative decline of 4% to 9%, based on the index used, between 1998 and 2003. But, in his view, the price stability objective required not only actual stabilisation, but also a policy of reflation of the economy that would restore prices to the levels that prevailed prior to deflation.

[24] The ECB's main mandate is to maintain price stability, in other words "inflation below but close to 2%".

[25] Leigh (2009) also shows that Japan could have avoided an excessively steep loss in output if the Bank of Japan had set a higher inflation target.

Chart 5:
Total and core inflation in major developed countries, 2007q1-2011q1



Note: The bold line depicts total or core inflation, which should be compared to regular 2% annual trend beginning in the first quarter of 2007 (dotted line). In the case of core inflation, only the UK is slightly above this regular trend. In the case of Japan (very clearly), but also in the euro zone and the US (to a lesser extent), the crisis has led to a loss in core inflation compared to a normal trend.

Source : OECD.

B- Articulating a macro-prudential policy to better ensure financial stability

The “Jackson Hole consensus”⁽²⁶⁾ that had prevailed since the mid-1990s and considered that the central bank should only be concerned about asset prices if they had an impact on inflation (Bernanke and Gertler, 2001), now sounds like a dead letter. The crisis has demonstrated that a low-interest environment encourages leverage and that supplying liquidity at very low cost can feed bubbles (*Inset 4*). However, if inflation is low for other reasons (the emergence of China, for example), an additional instrument is needed to manage asset price inflation, alongside deflation in goods and services. Economists, at least theoretically, have left little room for macro-prudential

regulations and have been concerned, rather, by information asymmetries on the microeconomic level. There currently exists a true opportunity to set up a macro-prudential policy by adopting counter-cyclical prudential ratios. If leverage looks excessive, prudential ratios can be raised; if liquidity is too low, liquidity ratios can be introduced; to reduce housing prices, maximum debt ratios can be lowered⁽²⁷⁾.

Inset 4: Historical examples of price stability and financial instability

The most striking and recent example of financial disequilibrium in a low-inflation environment is Japan in the late 1980s. Inflation was at zero or close to it in 1986, 1987 and 1988 (Chart) and stayed below 4% for the period,

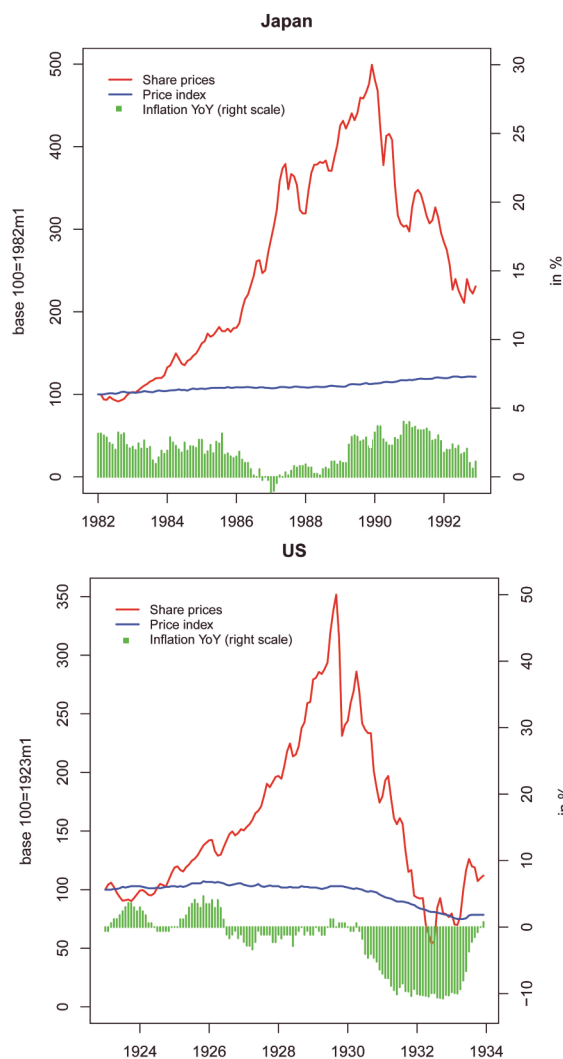


[26] Named after a city in Wyoming, where economists and central bankers meet every summer.

[27] See the proposals of the Bank of England in 2009 and Borio (2011). For the capacity to detect bubbles in securities and real-estate assets, see Brand T. and Mareuge C. (2009) and the related working paper.

while share prices rose five-fold between the start of 1983 and the end of 1989. This is not unique in history. The bubble that burst during the US Great Depression (with share prices tripling between 1925 and 1929) formed an environment of very low and even negative inflation from mid-1926 to mid-1929 (Chart)^[28].

Inflation, prices and share prices in Japan (1982-1992) and the US (1923-1933)



Source : OCDE, Fred, Shiller Online Data.

The problem is still determining who sets these ratios. Based on the above remark^[29], the idea defended, among others, by Blanchard (2010) is to entrust this instrument to the central bank. Its responsibility in the extent and frequency of financial cycles would therefore be increased,

with an objective that goes beyond mere price stability. One drawback of such a reform could be less transparency in the objective of financial stability, unlike the clarity of an inflation target. This obstacle should probably not be underestimated, and further economic research must be undertaken in this area. Nonetheless, close coordination between monetary and macro-prudential policies now appears to be a necessity (Aglietta, Berrebi and Cohen, 2009).

C- Fiscal consolidation and “fiscal space” for use in the event of a downturn

The widening in public deficits to boost economic activity and keep the banking and financial system afloat have come at the price of steep increase in public debt, which will require restrictions, once the crisis is over. The difficulty lies in deciding on the timing for the necessary fiscal consolidation in the future. This will be an especially great challenge for France, which historically seems to have a tendency to undertake less aggressive fiscal adjustments than most other developed countries when the state of the economy is favourable^[30].

Some have suggested that fiscal multipliers may not work during episodes of consolidation. In other words, they may not have much of an impact on economic activity. Giavazzi and Pagano (1990), using the examples of Denmark (1983) and Ireland (1987), developed by Alesina and Perotti (1995) and more recently by Alesina and Ardagna (2009), found that a reduction in spending can even have expansionary effects on economic activity.

However, several recent empirical studies that develop some elements for assessing the effect of fiscal adjustments on economic activity run counter to the conclusions of tenants of “expansionary fiscal consolidation”.

Inset 5:

The effects of fiscal adjustments on economic activity, according to the IMF

Empirical findings converge to attest that fiscal adjustment almost always has a recessive impact on GDP. For example, a one-point consolidation in GDP reduces growth by about half a point in the two following years and raises the unemployment rate by 0.3 percentage point (Chart), while domestic demand (in both consumption and investment)

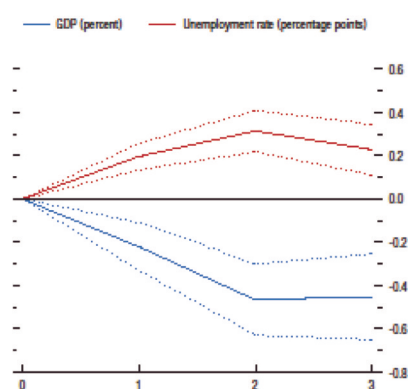
[28] Borio and Lowe (2002).

[29] According to whom, monetary policy and macro-prudential policy have too long been fully separated, whereas they should go hand-in-hand.

[30] See Brand T. (2008) ; Brand T. and Passet O. (2010).

falls by about one point. However, central bank interest rate cuts make it possible to relieve downward pressure on growth. For each point less of deficit-to-GDP ratio, interest rates thus fall on average by 20 basis points after two years. The reduction in the real value of a domestic currency (through either nominal depreciation or devaluation) also plays an important role in mitigating the depressive impact of consolidation by raising net exports. For each point of deficit less, the currency's value diminishes on average by 1.1%, and the contribution of exports to GDP rises by 0.5 point. Since countries cannot all raise their net exports at the same time, that means a greater contraction in GDP when all countries adjust their budgets at the same time.

Chart: Impact of a reduction in public deficits equal to 1 point of GDP, on GDP and unemployment



Note: $t=1$ depicts the year of consolidation. The dotted lines depict +/- a standard deviation.

Source: IMF World Economic Outlook, October 2010, IMF calculations.

Moreover, fiscal consolidations based more on cutting spending than on raising taxes generally have a less severe impact on output, as central banks react more favourably by cutting rates further. This is especially true in the case of higher taxes on consumption. In countries facing a high risk of default, contractions in GDP are, on average, less painful. But even in these countries, reducing the deficit seldom has an expansionary impact.

The IMF report's authors also use simulations based on a model (GIMF) similar to those mentioned previously. They found that reducing public debt is beneficial in the long term and stimulates private investment. Moreover, a lower debt-servicing burden creates a "fiscal space" to reduce the most distortionary taxes. In the short term, however, if interest rates are at zero, a fiscal contraction continues to have a rough impact on economic activity^[31].

The IMF, in its World Economic Outlook of October 2010 (Chapter 3), and even more recently Guajardo *et al.* (2011), provide results of an in depth investigation based on a thorough review of fiscal measures taken in developed countries over the last 30 years. After criticizing the methods for measuring fiscal consolidations in the above-cited articles^[32], the authors used a Romer and Romer narrative method (1989, 2010) which lists all past budget bills in various countries during the period, in order to gauge more policy makers' intentions than actual results. They found several interesting facts (*Inset 5*), which suggest that while fiscal adjustment is necessary, it does come at a cost, which is nonetheless more moderate when consolidation is done during a period of sustained growth.

However, while in the wake of the crisis that we have just experienced, the virtues of fiscal policy as a counter-cyclical instrument are recognised on the same level as a central bank's key rates, during periods of growth, a "fiscal space" is necessary, i.e., balanced public finances, to be able to conduct aggressive policy when multiplier effects are the strongest. Reconciling the rebuilding of fiscal manoeuvring room and the impact of adjustments on a still weak economy requires that governments develop their capacity to make credible long-term commitments. Ensuring the sustainability of pension systems for future generations or adopting fiscal rules requiring balanced budgets during future peaks in economic cycles^[33] are ways to show a strong will to re-establish fiscal balance in the medium and long terms. For the short term, such commitments must make it possible to avoid nipping the recovery in the bud by too quickly withdrawing public support policies.



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[31] For simplicity's sake, their model ignores the possibility that the central banks react to a fiscal adjustment by using non-conventional instruments such as quantitative easing. Since such instruments provide support to economic activity, these simulations can overestimate the impact of the zero lower bound.

[32] Alesina and Perotti (1995) for example, looked at the change in the structural budget balance to assess political will for reabsorbing the public deficit, the measure of which is subject to fierce debate, given that such a methodology can bias the analysis by overestimating the expansionary impact of fiscal adjustments or by including non-political effects in variations of the structural balance (such as a change in asset prices, for example).

[33] See Ben Jelloul M. and Brand T. (2010).

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