

## Panel on “Post-Pandemic Monetary Policy and the Effective Lower Bound (ELB)”

Jordi Galí (CREI, Universitat Pompeu Fabra and Barcelona GSE)

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Any discussion of post-pandemic monetary policy may benefit from recalling the main challenges facing monetary policy *before* the pandemic. In my opinion those challenges were twofold.

A first challenge was given by the decline in  $r^*$ , the long-run neutral real interest rate. The significance of that decline is supported by much empirical evidence, as well as model-based simulations that link it to lower productivity growth and demographic trends, among other factors.<sup>1</sup> As is well known, and given average inflation, a lower  $r^*$  implies a lower average nominal interest rate and, as a result, less room for monetary policy to respond to large adverse shocks before it hits the effective lower bound (ELB).

A second challenge pertains to the flattening of the Phillips curve, i.e. a weakening of the relation between inflation and measures of economic slack. Evidence on that phenomenon has been reported in numerous papers using data for a variety of countries, even though its ultimate causes are far from being well understood. The decoupling between inflation and real activity makes it harder for monetary policy to revert any deviation of inflation from target, even if the lack of monetary policy space is not an issue.<sup>2</sup>

Both developments may be viewed as calling into question the monetary policy frameworks that many advanced countries have adopted over the past two decades. This has motivated the “strategy reviews” underway at many central banks.

How will the current pandemic affect the previous state of things *once the health crisis is over*? In my view it will strengthen the policy challenges, for at least two reasons:

- (i) the current downturn is likely to persist well beyond the end of the health crisis, *calling for additional policy space* at a time when the latter has been all but exhausted
- (ii) the fear of recurrent pandemic shocks in the future may raise households’ precautionary savings and discourage firms’ investment, bringing down  $r^*$  even further.

In this context the following question seems most pertinent: Should central banks modify their current monetary policy framework, characterized by a “flexible inflation targeting” strategy and a 2% inflation target, in order to enhance their ability to counteract future large adverse shocks?

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<sup>1</sup> For empirical evidence, see, e.g. Holston et al. (2017). A quantitative, model-based analysis of the role of different factors can be found in Eggertsson et al. (2019).

<sup>2</sup> See the volume edited by Castex, Galí and Saravia (2020) for evidence and policy implications of recent changes in inflation dynamics.

Three options would seem to be available:

- 1) Keep the monetary policy framework unchanged, while relying on ad-hoc unconventional monetary policies (UMPs, henceforth) when the ELB is attained (including forward guidance, large-scale asset purchases and/or negative policy rates). I view this option as representing the status quo and, hence, the likely default choice.
- 2) Adopt a new strategy, while preserving the 2% inflation target
- 3) Adopt a higher numerical target for inflation, while preserving the “flexible inflation targeting” strategy

Each of the options has its strengths and weaknesses. Let me briefly discuss some particular aspects of each.

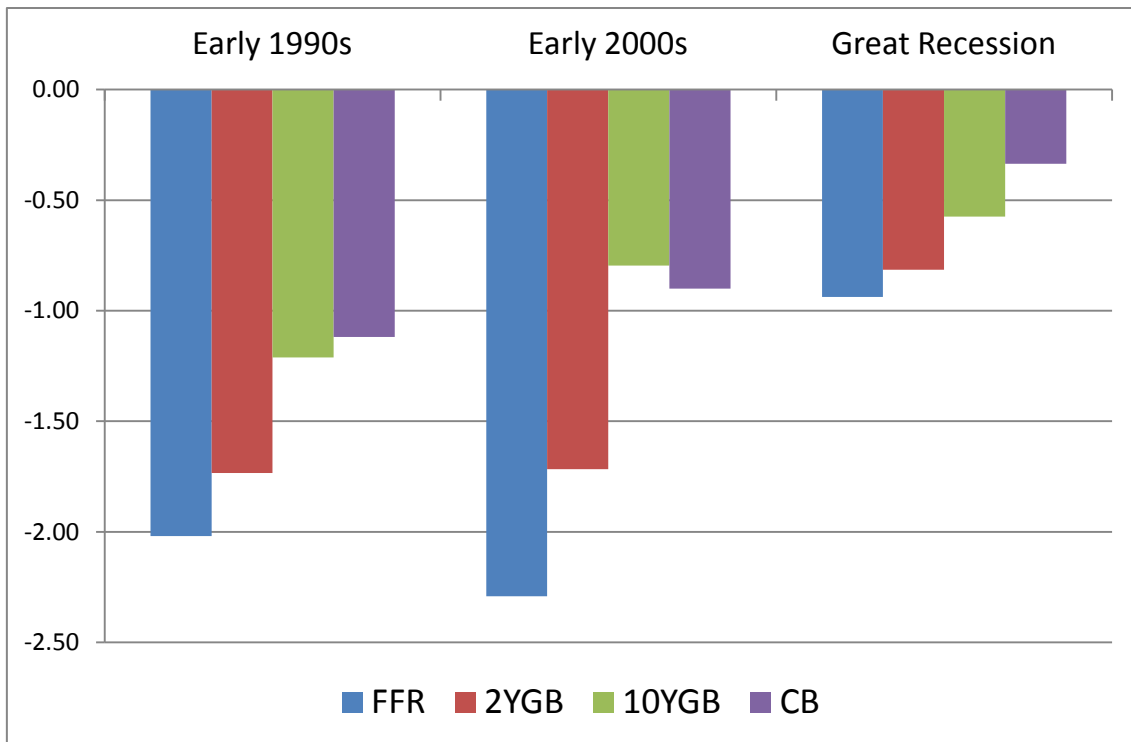
Option 1 relies on the effectiveness of unconventional policies to get around the ELB constraint when the latter is binding. A number of recent papers suggest that UMPs may have succeeded in rendering the ELB “irrelevant” in practice, at least in the recent U.S. episode (2008-2015).<sup>3</sup> Those papers provide evidence that the response of *long-term* interest rates to macro news or exogenous shocks during the binding ELB episode in the U.S. was similar to the pre-2008 period. But much of that evidence focuses on responses to “small shocks” for which “marginal” adjustments of long term rates that mimicked those observed before the binding ELB period may have been relatively easy to attain.

A different question is whether the UMPs succeeded in reducing the relevant market interest rates in a way *commensurate* to the *large* decline in activity observed over the recession as a whole. Next I provide some *prima facie* evidence suggesting that this may not have been the case, at least in the U.S. during the recent episode.

Figure 1 shows the cumulative decline of four different interest rates over the past three recessions, *normalized* in each case by the cumulative increase in the unemployment rate. Note that the normalized response of the Federal Funds rate target in the recessions of the early 1990s and 2000s was about twice as large as that during the Great Recession, reflecting the severe constraint implied by the ELB on the U.S. policy rate in the latter episode. But as the Figure makes clear, a similar “dampened” response can be observed in the 2-year and 10-year government bond yields, as well as in corporate bond (Baa) yields, even though none of those rates hit the ELB constraint. The previous evidence suggests that the aggressive UMPs in place during the Great Recession and its aftermath were not sufficient to bring about a reduction of the “relevant” interest rates comparable (in normalized terms) to that observed during the previous two recessions, thus pointing to the limits on the effectiveness of those policies to counteract a large adverse shock when the ELB becomes binding.

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<sup>3</sup> See, e.g., Swanson and Williams (2014) and Debortoli et al. (2019).



**Figure 1: Normalized Interest Rate Adjustments over Three Recessions**

A second option consists in the adoption of a new strategy, to replace flexible inflation targeting, while keeping the 2% inflation target. Most of the replacement strategies under consideration involve some commitment to makeup in the future for any current deviations from the inflation target (as opposed to the let-by-gones-be-by-gones that characterizes flexible inflation targeting). Though proposed makeup strategies found in the academic and policy discussion differ in important details, they all share the plan to *overshoot* the inflation target sometime in the future if current inflation falls short of its target (possibly due to a binding ELB). The *anticipation* of that overshooting (and the extra boost to activity that should go along with it) should dampen the initial impact on output and inflation of any large adverse shock, thus limiting the size of any required stabilizing interventions, i.e. shrinking the required monetary policy space.

The adoption of makeup strategies has been shown to reduce the incidence of ELB episodes and to improve overall macroeconomic performance in model-based simulations. An example of a makeup strategy that displays a very good performance “in the computer” is the one proposed by Ben Bernanke, Mike Kiley and John Roberts in a recent paper, and which calls for keeping the policy rate at the ELB until average inflation over a reasonably short period (say, one year) is back on target, reverting to flexible inflation targeting after that.<sup>4</sup> I interpret the recent revision of the Fed strategy statement as being consistent with that particular approach, even though it may arguably be able to accommodate variations that differ in some details.

<sup>4</sup> Bernanke et al. (2019)

One may interpret the adoption of such “makeup” strategies as a *systematic* way of incorporating forward guidance in the policy strategy, with the consequent reduction of uncertainty regarding future policy decisions.

Yet, it is not clear whether the anticipation effects that are key to the benefits of makeup strategies will operate in actual economies as effectively as in our theoretical models, especially during the early years of implementation, when they may not be fully understood by the population. First, the willingness to overshoot the target in the future may not be fully credible. Secondly, the persistent failure of central banks to meet their target in recent years may raise justified doubts as to their ability to steer inflation in the *surgical* way required by some of the makeup strategies commonly proposed.

By way of contrast, the adoption and successful attainment of a higher inflation target (option 3) should bring clear benefits in terms of additional monetary policy space, without the need to rely on the effectiveness of ad-hoc unconventional policies or the less-than-certain anticipation effects of makeup strategies.

Of course, that additional policy space has to be balanced against the eventual costs of higher inflation. In my recent Brookings paper with Philippe Andrade, Hervé Le Bihan and Julien Mathéron find that, at the margin, the additional costs of inflation are close to negligible relative to the stabilizing gains associated with having a higher average nominal rate.<sup>5</sup> More specifically, our findings suggest that the inflation target should be adjusted nearly one-for-one in response to a decline in  $r^*$ . Available estimates of that decline are in the 1%-2% range, suggesting the need to adopt an inflation target between 3% and 4%.

Given the persistent undershooting of the current inflation target, a proposal to raise that target may understandably raise some eyebrows. This may be avoided if the adoption of a higher target follows the principles of *gradualism* and *opportunism*. First, an announcement could be made that a higher inflation target may be considered for adoption *sometime in the future*, but in no case before the current target is attained. That announcement may in itself help counteract the deflationary pressures that prevent the attainment of the current target. Secondly, the new target, once announced, could be adopted at a time when inflation overshoots significantly the current target. That timing would facilitate the adjustment of inflation expectations and the transition to the new steady state.

Let me conclude. The existence of an ELB on the policy rate makes estimates of  $r^*$  a key ingredient in the design of a monetary policy framework. When the current framework was put in place those estimates were substantially higher than they are today. If the estimated change in  $r^*$  is viewed as permanent (or nearly so), the framework should be adjusted accordingly. The ad-hoc use of unconventional policies may not provide sufficient ammunition in the face of a large adverse shock, as the evidence above suggests.

In my view, a *two-handed approach* combining a moderate, properly announced and timed, adjustment in the inflation target (to say 3%) with an (also moderate) revision of the strategy along the lines of the reformulation recently announced by the Fed is the best way to go.

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<sup>5</sup> Andrade et al. (2020)

Let me finish by saying that I believe fiscal policy will have to play a more central role as a countercyclical tool in the low interest rate environment we will be facing in the years to come, and that monetary policy should be supportive of that role, especially in countries where high debt ratios may otherwise constrain the degree of countercyclicality of fiscal policy. But this is a topic for some other time!

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