

The effectiveness of the Japanese forward guidance to deal with the crisis caused by the Covid-19 pandemic: an analysis and an alternative proposal

Rosa Ferrentino, Luca Vota - 18/09/2020 [papers]

In this article, the authors discuss the effectiveness of the monetary policies adopted by the **Bank of Japan** (BoJ) in order to contrast the economic crisis caused by the pandemic of the **Covid-19** virus and, in particular, they focus on the forward guidance. This issue is particularly relevant and of immediate and wide importance at a time in which the political decision-makers are taking adequate measures to face what is likely to be the most serious recession of the history. The aim of this paper is to identify a valid fiscal policy alternative to the forward guidance adopted by the Japanese central bank. The authors carry out their own analysis in consideration of the measures already adopted by the central bank and by the government and of the theoretical and of the empirical results, both own and of other scholars and, after have highlighted that this particular policy tool could be inadequate to prevent the country from finding itself in recession and deflation, they suggest that a fiscal stimulus could be more useful for this purpose. In other words, the conclusion that the authors reach is that forward guidance is, in general, not very incisive and that in the current context it may be more appropriate to reduce the overall tax burden on the national consumers and on the national firms.

Keywords: *Forward guidance, Bank of Japan, Covid-19 shock, Monetary policy, Fiscal policy*

JEL Classification: *E02, E30, E50, E58*

1. Introduction

The explosion of the Covid-19 pandemic has triggered a very deep recession whose magnitude and whose effects, on a global level, are expected to be even more serious than those of the crisis following the failure of Lehman Brothers in 2007 and, probably, also of those of the Great Depression of 1929. The central banks and governments are facing this emergency situation by adopting accommodative fiscal and monetary policies. The latter consist mainly of reductions in interest rates, of the starting of new open market operations (OMO) or of the enhancement of those already adopted previously and, in some cases, also in the monetization (explicitly or implicitly) of the deficit in order to expand the public sector budget constraint. For an assessment of the effectiveness of such policies, at a global and individual levels, it is particularly interesting to focus on the case of Japan, because this country will have to calibrate the new measures on those already adopted, starting from 2013, to contrast the present macroeconomic shock and to revive the national economy following the "crisis of the lost decade" (the so-called "Abenomics"). A summary of the policies established by Japanese policy makers is offered by report "Policy Responses to Covid-19" of the International Monetary Fund (IMF), updated to on 30 April 2020. Regarding the fiscal policy, on April 07 2020, the Tokyo government announced the Emergency Economic Package Against Covid-19 (EEPAC) which incorporates the previous fiscal stimulus plan launched in December 2019 and which consists of an increase in public spending of 117.1 trillion yen (21.1% of GDP). The EEPAC resources are distributed in such a way as to achieve five objectives: the 0.5% of the expenditure in relation to GDP is destined to contain the epidemic and to the health treatment of the infected (first objective), the 16% is used to support the employment and the productive sector (second objective), the 1.5% is aimed to restore the production activities for the damage suffered by the quarantine (objective III), the 2.8% will serve to make the economy more resilient national by future macroeconomic shocks (target IV) and the 0.3% will be used to ensure that institutions can respond more quickly to the same shocks in the future (target V). Regarding the monetary policy, on 27 April 2020, the Bank of Japan (BoJ) has decided that it will purchase the amount of the Japanese government bond that it will deems necessary without setting any limits, has increased the maximum limit of the commercial paper and of the corporate bond to 20 trillion yen, has fixed an interest rate of 0.1% on deposits held by financial intermediaries within itself. In addition, the Japanese central bank is considering the possibility of offering new funding at an interest rate of 0% against all pooled collateral to eligible financial institutions with the aim of offering support to small and medium-sized enterprises. Also, the forward guidance has

undergone a clear change: in fact, the BoJ, which previously was committed to increase rates if the inflation had reached its target value, announced that rates will remain at the current level and does not exclude that they can be reduced. The objective of this paper is to discuss the effectiveness of this particular strategy adopted by the Bank of Japan to mitigate the negative effects of the health shock due to Covid -19 and to promote the economic recovery. On the basis of the main research results and of the empirical evidence on the subject, the authors carry out their analysis and present their innovative vision regarding this matter. They, in fact, after have highlighted that the forward guidance could be inadequate to prevent the country from finding itself in recession and deflation, they suggest that a fiscal stimulus could be more useful for this purpose. In other words, the conclusion that the authors reach is that the forward guidance is, in general, not very incisive and that in the current context it may be more appropriate to reduce the overall tax burden on the national consumers and on the national firms.

The paper is organized as follows: in paragraph 2, after the introduction, a succinct literature review regarding the forward guidance adopted by the Japanese central bank is proposed; in paragraph 3, instead, the authors express their opinion regarding the effectiveness of forward guidance in light of their research results. Finally, in paragraph 4, the authors discuss their conclusions

2.Literature review

As is well known, the forward guidance is a communication strategy through which the central bank publicly spreads the forecasts for interest rates and for the monetary policy in the near future with the aim of achieving the long-term interest rate reductions term or to stimulate the investments. The effectiveness of the forward guidance, adopted by the Japanese central bank, should be assessed considering that the country is close to the zero lower bound (ZLB). The Japan adopted the forward guidance at the ZLB for the first time in 1999, namely during the period of the Zero Interest Rate Policy (ZIRP). In 2013, in the context of Abenomics (and more precisely in the context of the Quantitative and Qualitative Easing), the official discount rate was gradually reduced by the BoJ (becoming, in 2016, equal to -0.10%) starting the Negative Interest Rate Policy (NIRP).

The economists of the national government and of the Bank of Japan (BoJ) have often spoken out favorably on forward guidance. Many independent scholars, instead, oppose to this view and show greater caution (and in some cases even skepticism). The contributions of these scholars, in most cases, evaluate the Japanese forward guidance precisely at zero lower bound (ZLB) and model the process of forming operators' expectations formulating appropriate hypotheses about the rationality of the latter and about the structure of the shocks at the natural interest rate. Mitsuru Katagiri [1], an authoritative member of the BoJ board, in a working paper of 2016, presents the results of a quantitative analysis carried out through a non-linear new Keynesian model and explains that the Japanese forward guidance is able to influence the formation process of the agents' inflation expectations and, therefore, it is suitable to counter the deflation and the reduction of the GDP growth rate. Always in 2016, Alisdair McKay [2] presents a model in which agents bear an uninsurable income risk and are subject to a borrowing constraint and, consequently, dull the effects of the forward guidance with the precautionary savings effect.

In 2009, some researchers of the Federal Reserve, led by Andrew Levin [3], conduct a study on the major global economies (including also Japan) using a new Keynesian model. The conclusion of the study of these researchers is that the effectiveness of the forward guidance should be assessed considering the elasticity of the demand at the interest rate but that, in general, it depends on the size and on the persistence of the shocks:

it is useful in the case of small and little persistent shocks of the natural interest rate, while it is not useful in the case of large and very persistent shocks of the natural interest rate. Kazuo Ueda [4], in a paper of 2011, conducts an analysis on the unconventional monetary policies, implemented by the G7 central banks at the ZLB in the period 1991-2011, and also focused on the BoJ's forward guidance. He argues that, overall, these policies have had an appreciable effect only on asset prices, while, in the Japanese case, they have not been able to reverse the deflationary trend that the country has experienced since the early 1990s.

Also Filardo and Hofmann [5] in 2014 carry out an analysis on the forward guidance, at the ZLB, for the United Kingdom, for the euro area, for the USA and for the Japan and, compared to the latter, they concentrate on the forward guidance implemented in October 2010 in the context of Comprehensive Monetary Easing (CME), and on the forward guidance of 2013. They conclude that in the first case the effect on future interest rates was very small, while in the second case it was almost null, although the 10-years bond yield has significantly decreased. Particularly interesting, in the Filardo's and Hofmann's research, are the estimations of the realized volatility of the short term expected interest rate at the ZLB in the periods in which the forward guidance is explicit and the estimations of the realized volatility of the short term expected interest rate at the ZLB in the periods in which forward guidance is not operative (or anyway is not conducted explicitly). What can be noted in the paper of Filardo and Hofmann is that among all the economies considered, the Japanese one is the only one in which the two estimated values are almost coincident both over a one-year time horizon, both over a two-year time horizon, and both over a five-year time horizon. This result puts further into question the usefulness of the Japanese forward guidance. In any case, the two authors admit the objective difficulty in expressing an exhaustive evaluation of the forward guidance because, in the two periods, the announcements on the BoJ's interest rates overlapped those relating to the securities purchase programs.

3. *The authors' point of view*

In this paragraph, the authors, on the basis of the main research results exposed and of the empirical evidence on the topic under consideration, expose their innovative vision with respect to the usefulness of Japanese forward guidance in mitigating the negative effects of the health shock due to the Covid -19 and in favoring the economic recovery. It is important to specify that interesting considerations regarding the BoJ's forward guidance were proposed by the authors in their previous contribution [6], in which they propose a quantitative analysis to evaluate the effectiveness of the Abenomics. In the cited paper, the authors estimated a Structural Vector Autoregression model (SVAR) with the Cholesky decomposition method considering, as endogenous variables, the public expenditure at constant prices, the GDP at constant prices, tax revenue from corporate and consumption taxes at constant prices, the CPI inflation and the official discount rate of the BoJ and, as exogenous variable, the US federal funds rate. They used historical series, relating to these variables, in the sample period Q1 2000 - Q4 2016, on a quarterly basis and studied the monetary and the fiscal policies adopted by the government and the BoJ in the same sample period. Furthermore, through the SVAR model, the authors performed a historical decomposition of the real GDP and of the CPI inflation to estimate the effect, on the two variables in question, of the simultaneous shocks coming from all the other variables included in the sample. In particular, the authors divided the sample period Q1 2000 - Q4 2016 into three different periods, and focused their attention on them. The result to which they come is that, in all the three periods considered, the forward guidance is totally ineffective both in that cases in which it is exercised in an implicit form and in that cases in which it is exercised in an explicit form. In fact, the reductions of the official discount rate have no positive consequence in terms of increase in the investments and in the consumption and are not even able to guide the operators' inflation expectations. To understand the authors' point of view regarding the usefulness (or effectiveness) of the Japanese forward guidance, it is sufficient to reflect that from the results of the estimates made by the authors in the paper, it emerged, in particular, that:

- in the first period, namely the one that includes the five-year period 2000-2006 and which therefore relates to the first Quantitative easing (which runs from 2001 to 2006) and the reduction of the corporate tax rate from 48% in 1999 to 42% in 2000, both the official discount rate and the tax revenues make a positive but rather limited contribution not only to the real GDP (which has a V shaped trend) but also to inflation and that this contribution gradually tends to decrease until it disappears in 2006. The public spending in real terms and inflation expectations, on the other hand, have a negligible effect on both GDP and inflation.
- in the second period, namely in the two-year period 2009-2011, in which the official discount rate is set at 0.3% compared to the previous 0.5% (in 2008), the new adjustment of the official discount rate exacerbates the collapse of the real GDP and of the deflation, and even in this second period the (negative) contribution of the discount rate appears

very modest. A similar effect on both variables of interest is produced by the tax revenues. Again in this second case, the public spending at constant prices and the inflation expectations have a small effect both on GDP and on inflation.

- in the third period, namely that of the Abenomics and of the Quantitative and qualitative easing in the three-year period 2013-2016, in which the central bank committed to buy 80 trillion yen per year, some of its rates of interest have been reduced below 0% and an explicit form of forward guidance has been adopted (while in the two periods previously listed there is implicit forward guidance) leaving the official discount rate at 0.3% ; meanwhile, the Tokyo executive first increased public spending in 2013 to 40.83% of GDP compared to 40.69% in 2012, and, subsequently, adopted a controversial fiscal policy consisting in a waiver of many of the expenses included in the 2013 budget plan, in an increase in the consumption rate tax from 5 to 8% in the second half of 2014 and in a reduction of the corporate tax rate to 35.64% in 2014 compared to 38.01% in the previous year. As a result of such policies, the official discount rate exacerbates the negative trend of the real GDP, the tax revenues mitigate the new drop in the product, the government expenditure and the inflation expectations play no role.

About inflation, instead, two different phases should be distinguished: a first phase, which lasts until the firstquarter of 2014, in which there is a price growth supported by the real GDP, by the public expenditure in real terms and, above all, by the inflation expectations, and a second phase, which runs from the second half of 2014 until the last half of 2016, in which it, again, has again a negative trend mainly determined by the real GDP and by the (very negative) inflation expectations. Surprisingly, the tax revenue from the consumption tax, despite its increase in this period, counteracts this negative trend. The interpretation of the above results is as follows: in all the three periods considered, the reductions in the official discount rate have no positive consequences in terms of an increase in investments and in consumptions and are not even able to direct inflation expectations of the operators. The forward guidance is therefore totally ineffective both in the cases in which it is exercised in an implicit form (as in the first two periods), and both in the cases in which it is exercised in an explicit form (as in the third period). From a microeconomic point of view, this negative effect on current consumption could be explained by the fact that in presence of a change in the interest rate (in the case in question the official discount rate) the wealth effect (negative) is greater than both to the substitution effect (positive) and the income effect (positive). Only the government's fiscal policy shows to be adequate to raise the inflation expectations. In fact, as already highlighted, in the first period to the reduction of the corporate taxes corresponds an improvement both in the actual inflation and in the relative expectations and in the third period the actual inflation and the relative expectations begin to worsen just when the government announces its intention to renounce to many of the expenses it had included in his 2013 budget plan and return to being strongly negative in mid-2014 with the increase in the consumption tax rate. In light of these considerations, the authors believe that the Japan, to deal with the new macroeconomic shock of Covid-19, should use fiscal policy rather than monetary policy, which showed perverse effects on the country's economy throughout its history, namely, it can cause a reduction of the GDP growth rate and to intensify the recession. More precisely, the substantial ineffectiveness of the QQE seems to indicate that monetary policy has exhausted its function for some time already, and therefore, and is this the innovative vision, the fiscal policy should be strengthened to contrast the new health shock. In other words, the central government, in addition to increase the public spending as it has already announced it wants to do, should also reduce the consumption tax rate and should guarantee to the consumers that this reduction would be maintained in the long run.

4. Conclusions

From the analysis of their research results and from the brief overview of those of the other scholars, the authors deduce that the Japanese forward guidance turns out, in general, to be inadequate to achieve the inflation target set by the BoJ . In other words, the conclusion, which the authors come to, is that forward guidance could have modest effects in the current context and that, instead, the government's fiscal stimulus could be more successful; the authors' innovative view is just that the fiscal policy should be strengthened to counter the new health shock. To this end, they hope that Japanese policymakers will consider the hypothesis of reducing the overall tax burden to allow a recovery in consumptions and, consequently, the

achievement of the selected inflation target. The authors, moreover, hope that this article may open a debate about the usefulness of the conventional and the unconventional monetary policies and induce the economists to propose alternative measures that may prove more effective.

Conflict of Interest

Author A declares that she has no conflict of interest. Author B declares that he has no conflict of interest.

Ethical approval

This article does not contain any studies with human participants performed by any of the author

[Versione italiana](#)

References

- [1] Katagiri, M. (2016) Forward guidance as a monetary policy rule. Bank of Japan Working Paper Series, 16, 1-49.
- [2] McKay, A, Nakamura, E., Steinsson, J. (2016) The Power of Forward Guidance Revisited. American Economic Review, 106(10), 3133-3156.
- [3] Levin, A. et al. (2009) Limitations on the effectiveness of forward guidance at the zero lower bound. CEPR Discussion Paper, 143-189.
- [4] Ueda, K. (2011) The effectiveness of non-traditional monetary policy measures: the case of the Bank of Japan. The Japanese Economic Review, 63(1), 1-22.
- [5] Filardo, A., Hofmann, B. (2014) Forward guidance at the zero lower bound. BIS Quarterly Review March 2014, 37-53.
- [6] Ferrentino, R., Vota, L. (2019) A structural vector autoregression model for the study of the Japanese GDP and of the Japanese inflation. Advances in Management and Applied Economics, 9(2), 69-93.