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Bank of Japan

Some Reflections on Unemployment and Inflation

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It is a great pleasure for me to be able to participate in this conference.

More than 40 years ago, in his seminal speech on the subject, James Tobin said, "Unemployment and inflation still preoccupy and perplex economists, statesmen, journalists, house-wives and everyone else."¹ For the Bank of Japan, employment is not explicitly included in its monetary policy mandate, unlike in the case of the Federal Reserve. Unemployment is still a useful guide for us, however, in pursuing price stability, the explicit mandate of our monetary policy. In addition, it is widely recognized that price stability must be secured because it is an indispensable foundation for the health of the economy, which of course has a direct impact on workers. Therefore, despite some seeming differences in the mandates written in their respective statutes, there is little practical difference between major central banks across jurisdictions, in that both unemployment and inflation are of central concern in formulating their monetary policies.

Nevertheless, there are remarkable differences between the United States, the euro area and Japan in their historical observations of unemployment and inflation. Let us take a look at this very simple graph: a scattered diagram showing unemployment and inflation for these three jurisdictions. The horizontal axis is unemployment rate, and the vertical one is inflation rate. There are two approaches regarding how to interpret this graph.

One approach is to focus on where each cluster of dots is located. There is a well-known measure of welfare, the Misery Index, which is the simple sum of unemployment rate and inflation rate. If the Misery Index is indeed the most accurate measure of welfare, the further northeast an economy is located, the more miserable the state of that economy is. In this interpretation, Japan's performance has been consistently outstanding for many years with the lowest unemployment and lowest inflation among the three.² However, the Misery Index is an indicator that makes sense only in a high inflation environment, which has not been the case in major economies for the last twenty years. Therefore, the Misery Index would not in fact give us any useful hints in evaluating the monetary policies of major central banks.

¹ James Tobin, "Inflation and Unemployment," *American Economic Review*, Vol. 62, 1972.

² The ranking does not alter even if we use headline inflation instead of core.

The other approach is to interpret the clusters as each jurisdiction's Phillips curve, where the underlying theory is that inflation dynamics can be explained in the context of slackening in the labor market. I know that economists continue debating hotly whether or not a meaningful slope in the Phillips curve is observed in major economies in recent years.³ As a matter of fact, this simple graph appears to suggest that the Phillips curves for the United States and the euro area have barely sloped, if at all, since the middle of the 1990s. One important aspect is that both flat "curves" are located at around 2 percent inflation. In other words, the inflation rate has been mostly stable around 2 percent, irrespective of noticeable ups and downs in unemployment: inflation has been well anchored at the level intended by the respective central banks. Of course, the recent sizable and persistent deviation from 2 percent for the euro area could be problematic. I understand this is exactly the reason why the European Central Bank joined the QE club recently.

Compared with these two Phillips curves, Japan's is unique in two points. First, the negative correlation between unemployment and inflation is more apparent in Japan. Second and more importantly, the curve crosses the zero inflation line with a larger part of it remaining in negative territory. This suggests that long-term inflation expectation in Japan has likely been around zero or even slightly negative for nearly two decades since the mid-1990s. This is exactly the problem which the Bank decided to address decisively a little over two years ago through Quantitative and Qualitative Monetary Easing (QQE). Our intention was twofold: first, to stimulate the economy throughout various transmission channels and thereby move the economy and inflation in the northwest direction along our moderately but still meaningfully sloped Phillips curve; and second, to create higher inflation expectations and thereby shift the entire Phillips curve upward, through the drastic shift in our monetary policy.

Things are moving in line with our original intention. The latest data point can be interpreted as confirming that underlying inflation in Japan has been improving significantly, although the firmness is currently masked by the temporary negative impact of the sharp decline in oil prices. There have been a number of positive signs in this regard: first, various surveys indicate that inflation expectations have been edging up steadily over the last two years or so.

³ See, for instance, Robert J. Gordon, "The Phillips Curve is Alive and Well: Inflation and the NAIRU during the Slow Recovery," NBER Working Paper, No. 19390, 2013.

Second, annual spring wage negotiations appear to have started reflecting higher inflation expectations: base pay levels rose last year for the first time since the 1990s, and further accelerated this year. Third, the Bank's economists recently confirmed, based on a rigorous quantitative analysis, that a "regime-shift" in trend inflation from zero to a meaningful positive level indeed occurred under QQE.⁴ All these signs indicate that we are now overcoming the deflation that has long been afflicting our economy. We must maintain our current efforts in order to achieve the 2 percent inflation target at the earliest possible time, which we now expect to be around the first half of fiscal 2016.

Another interesting fact illustrated by the graph is that the recent unemployment rate in Japan, about 3.5 percent, is low even by Japanese standards. With everything else being equal, the lower the unemployment rate, the better the economic welfare.

However, that may not be the whole story. The fact that we have achieved this very low level of unemployment with only modest economic growth in the last two years indicates how heavily our adverse demography is weighing on the supply side of the economy. Japan's working-age population started to decline in the middle of the 1990s, and this decline is now gaining pace. This represents a considerable threat to potential growth, which has declined to an anemic 0.5 percent, or possibly even lower. In order to restore a stronger supply side, we need to raise labor participation rates among the female and elderly population as well as labor productivity. As a matter of fact, the third arrow of Abenomics is already working on these issues. Although a central bank cannot directly change the potential growth rate, the Bank of Japan's unprecedentedly accommodative monetary stimulus is certainly helping the reforms by dispelling the deflationary mindset.

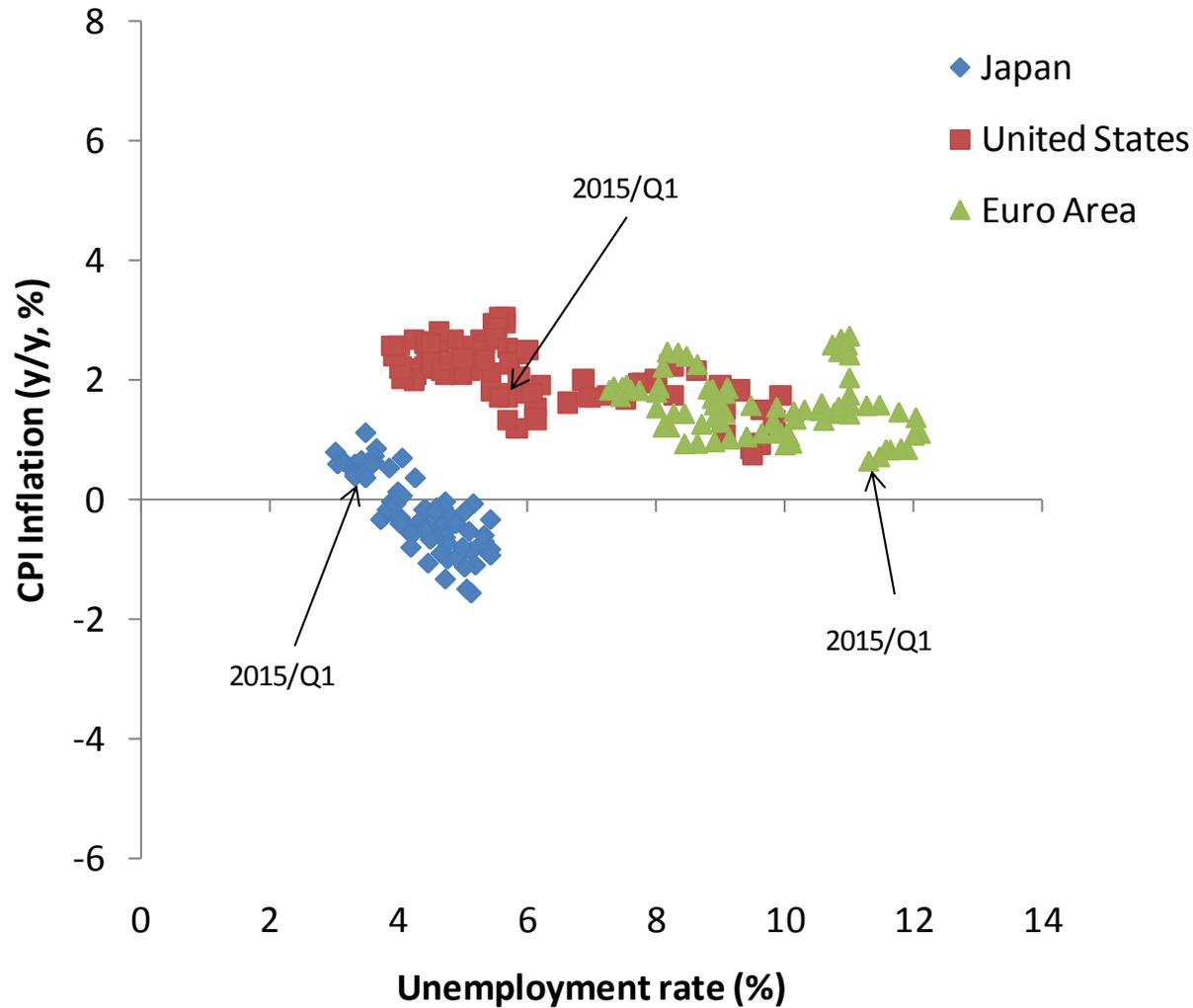
In Professor Tobin's day, the policy problem was primarily related to a trade-off between the social costs of unemployment and those of inflation. The picture is different now. Most major economies are in need of both higher inflation and more jobs. In this sense, there is no trade-off. The new challenge has more to do with expanding our policy frontier than with choosing between trade-offs. This challenge is further complicated by the structural

⁴ Sohei Kaihatsu and Jouchi Nakajima, "Has Trend Inflation Shifted?: An Empirical Analysis with a Regime-Switching Model," Bank of Japan Working Paper Series, No.15-E-3, 2015.

weakness of the economy, characterized among other things by demography. Professor Tobin stated in his conclusion that, thirty-five years after Keynes, welfare macroeconomics associated with unemployment and inflation was still a relevant and challenging subject. At the same time, he sounded reasonably optimistic about future policy wisdom that would better address these problems. He was half-right. Inflation has not been a serious problem in advanced economies for many years now. Nevertheless, growth and job creation are not satisfactory. On top of that, the risk of deflation is a new element that now requires serious consideration, while it was not on the list of concerns in the 1970s. No matter how difficult the problems may seem, however, I believe that the right policies, with strong determination, will ultimately prevail. I hope that we can be even more optimistic after this conference, with a deeper understanding of this subject, and still greater conviction that we are already heading in the right direction.

Thank you.

Unemployment and Inflation



Note: Data are for the period of 1995/Q1-2015/Q1. CPI inflation excludes food and energy components. Direct effects of consumption tax hikes are adjusted for Japan.

Sources: Ministry of Internal Affairs and Communications; BLS; Eurostat.