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Bank of Japan

How Unconventional Monetary Policy Stimulates Demand: Theory and Practice

*Remarks for the Panel Discussion at
the Bank for International Settlements Annual General Meeting*

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It is a great honor to be able to participate in this panel discussion today.

The Bank of Japan introduced its Quantitative and Qualitative Monetary Easing (QQE) in April 2013. One tentative conclusion that can be drawn from the experience of a little over two years is that central banks can overcome the zero lower bound, as long as the policy maker commits decisively to fulfilling its mandate with well-designed unconventional policy measures. To give you some idea of the outcomes since the beginning of the QQE, the unemployment rate has fallen 0.8 percentage point, and CPI inflation has risen about 1 percentage point. Other major central banks have also been successful in stimulating demand through their own unconventional policies.

It has become a common understanding among the central bank community that unconventional monetary policy, despite some lingering skepticism from the academic front, has actually proven to be effective. This is best characterized by a famous quote from the former Fed Chair, Ben Bernanke: "The problem with QE is it works in practice but it doesn't work in theory." In that case, the question remaining about unconventional monetary policy is not whether it works, but why it works. The rest of my remarks will focus primarily on this issue from both theoretical and practical perspectives.

First, let me start with term premiums. Whether central banks' large-scale asset purchases succeed in reducing term premiums hinges upon whether the preferred habitat hypothesis holds.¹ Some influential academics deny this effect, claiming that "open-market operations should be largely ineffective to the extent that they fail to change expectations regarding future policy."² This argument is presumably what was in Mr. Bernanke's mind when he said that QE didn't work in theory.

Among central bankers, however, it is becoming increasingly accepted that term premiums can actually be reduced by large-scale purchases of long-term bonds through changes to their

¹ Franco Modigliani and Richard Sutch, "Innovations in Interest Rate Policy," *American Economic Review*, Vol. 56, pp. 178-197, 1966.

² Gauti Eggertsson and Michael Woodford, "The Zero Bound on Interest Rates and Optimal Monetary Policy," *Brookings Papers on Economic Activity*, No. 1, pp. 139-235, 2003.

demand-supply conditions.³ Experience has further convinced us that the fall in long-term interest rates in turn affects the price of other financial assets such as equities and private credits through portfolio rebalancing, as predicted by James Tobin's General Equilibrium theory.⁴ Economists have recently started to embed this preferred habitat mechanism in their macro-economic models so as to explicitly incorporate this transmission channel of QE.⁵

Second, forward guidance, which is another element of unconventional monetary policy, is generally supported both in theory and in practice. In theory, forward guidance could pin down the future expected path of policy rates by clarifying the central bank's policy reaction function and thereby reducing the volatility of financial markets. In fact, forward guidance, together with a strong commitment to policy objectives, has been used effectively in various policy settings across jurisdictions.

Third, let me discuss the "quantitative" aspect of quantitative easing. Does the size of the central bank's balance sheet matter in itself and, if so, why? Some theoretical economists argue that QE is effective from the viewpoint of monetary financing of the government budget. However, this is the opposite case of Ben Bernanke's quote: it works well in theory but cannot be applied in practice. Monetary finance is widely understood to run the risk of eroding the credibility of the central bank and thereby potentially increasing risk premiums rather than reducing them. Furthermore, recent experience in the United States and the United Kingdom has demonstrated that an unconventional monetary policy works even in the midst of substantial fiscal consolidation. In the case of Japan, the joint statement of January 2013 clearly stated that the Bank of Japan would pursue a 2 percent inflation target while the government committed to ensuring long-term sustainability of the public debt. Thus, from the beginning there was no intention at all that QQE would work through facilitating fiscal expansion.

³ There are a number of empirical studies that attempt to decompose long-term government yields into the expected path of short-term interest rate and premium components. For Japanese government bonds, see Kei Imakubo and Jouchi Nakajima, "Estimating Inflation Risk Premia from Nominal and Real Yield Curves Using a Shadow-Rate Model," Bank of Japan Working Paper, No. 15-E-1, 2015.

⁴ James Tobin, "A General Equilibrium Approach to Monetary Theory," *Journal of Money, Credit and Banking*, Vol. 1, pp. 15-29, 1969.

⁵ Han Chen, Vasco Cúrdia, and Andrea Ferrero, "The Macroeconomic Effects of Large-Scale Asset Purchase Programmes," *The Economic Journal*, Vol. 122, pp. F289-F315, 2012.

While monetary finance is not on our agenda, the size of central bank balance sheets is, in my view, important for a different reason. Since inflation is widely perceived to be ultimately a monetary phenomenon, the creation of a massive quantity of money would be a strong signal of a central bank's commitment to fighting deflation. It is in this context that an unprecedented expansion of the monetary base plays an essential role in our QQE.

Fourth and lastly, I will discuss what I believe is a very critical transmission channel of unconventional monetary policy: the expectation channel. This overlaps with the signaling effect associated with the "quantity" that I just mentioned.⁶ One possible problem is that the theoretical foundations seem not to be well established. Standard theories simply assume that rational expectations automatically hold, while they tend to be silent on exactly what it would take to change the way firms and households formulate their expectations. I am quite confident, however, that a strong commitment to policy objectives, clear and consistent communication, and decisive action to fulfill the commitment would collectively be powerful enough to have a significant impact on inflation expectations, and therefore on the behavior of private entities. This expectation channel is crucial for Japan in particular, where the deflationary mindset, so firmly embedded for such a long period, needs to be dispelled completely.

Before I conclude, I would like to quote the words of Walter Heller, economic adviser under Presidents Kennedy and Johnson: "An economist is a man who, when he finds something works in practice, wonders if it works in theory." If this adage is true, I suppose we can look forward to a much deeper theoretical understanding of the secrets of unconventional monetary policies in the coming years. At the same time, practitioners in central banks cannot afford to be complacent. Speaking of the Bank of Japan, for example, inflation is still well below our target, although this is partly due to the temporary influence of low oil prices. While our projection is that inflation will be in the neighborhood of 2 percent most likely around the April-September period of 2016, the risks to that scenario cannot be ignored, particularly when the global economy is full of uncertainty, including over geopolitical factors. That being said, our commitment to achieving the 2 percent inflation target will

⁶ See, for instance, Haruhiko Kuroda, "What We Know and What We Do Not Know about Inflation Expectations," (Speech at the Economic Club of Minnesota), April 19, 2015.

never be compromised. With our unwavering determination, I am confident we can achieve that goal.

Thank you.