

Topic	Issues for macroeconomic policy in Japan
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Keynote address

1. Four risk factors for global economy

• Today I would like to discuss macroeconomic policy issues for Japan. BOE Chief Economist Haldane said last September that financial risks were mounting around the world and that we were in "part three" of a Greek tragedy. Some \$15trn has been knocked off the value of world stock markets since mid-2015. This shock is clearly global in scale, inasmuch as the corresponding figures for the global financial crisis and the European debt crisis were \$30trn and \$10trn, respectively. I see four risk factors in particular confronting the global economy.

• First, problems may emerge as the US unwinds the ultra-accommodative monetary policy kept in place for so long. The extended length of the ongoing US expansion suggests it is ready for a cyclical recession, and the markets may take a different view of this than the FRB. Second is the risk of a slowdown in China and other emerging economies and of a substantial devaluation of the Chinese currency. The corporate sectors in many emerging economies are also carrying large amounts of debt. In 1994 the Asian currency crisis erupted after the CNY was devalued by about 40%, and markets are worried about a similar scenario unfolding today. Third is the sharp drop in oil prices. While this is generally good news for Japan and other developed economies, it has destabilized parts of the corporate bond market and sparked a crash in high-yield bonds. The Russian currency crisis occurred at a time of falling oil prices, and market participants are concerned about a possible repeat. Fourth is Eurozone banks' slow progress in writing off their bad loans. Italy has an NPL ratio of 11%, and the figure for the eurozone as a whole is in excess of 7%. Japanese banks had a very difficult time writing off their own bad loans, and even at its peak the Japanese ratio was about 8%.

2. Long-term stagnation, natural rate of interest, and shadow rate of interest

• Factors driving these risks include weakening economic

recoveries around the world, the slippage in longer-term potential growth rates, and the continued low-interest-rate environment, including the proliferation of negative interest rates.

• Labor productivity growth in the developed economies has fallen sharply since the global financial crisis. In Japan it has continued to hover around 0.5%, and in the US and the UK it also dropped significantly after the crisis. A longer-term perspective that includes the pre-Lehman period shows that real interest rates are in fact falling around the world. I attribute this to market forecasts of a substantial decline in future economic growth rates. The so-called natural rate of interest—the inflation-adjusted rate that brings savings and investment into balance—has actually turned negative, implying that long-term real market rates may also be approaching zero. When actual inflation-adjusted rates are higher than the natural rate are conducive to deflation; when they are lower we tend to have inflation.

• There are a number of ways of estimating the natural rate of interest, but Laubach-Williams model—the same Williams who is now president of the Federal Reserve Bank of San Francisco—produces estimates of zero for Japan in the mid-1990s and of minus 0.5% to minus 1.0% at present. In the US, the same model suggests the natural rate slipped below zero after Lehman Brothers collapsed but has recently climbed back to zero. If so, the likelihood of deflation is low inasmuch as actual inflation-adjusted rates are lower than the natural rate, which is also the case in the UK. In Japan, meanwhile, actual inflation-adjusted rates are now higher than the natural rate, although the converse was true immediately after QQE was introduced. If Japan hopes to avoid deflation, it will need to either bolster monetary accommodation and lift inflation expectations or send nominal rates themselves into negative territory. In a 1998 paper titled "It's Baaack!," Krugman argued (and I paraphrase) that while Japan's natural rate of interest may be

low, it cannot be lower than minus 4%, so it should be possible for the BOJ to pull the economy out of deflation even if nominal rates are at zero by using a 4% inflation target to take real rates as low as minus 4%.

•The zero constraint on nominal rates was one of the reasons central banks turned to quantitative easing. It was Hicks who first noted the zero constraint; in his 1937 paper he argued that if market rates turn negative, in theory nearly everyone will only want to hold cash money. Because of this constraint, the world's central banks adopted quantitative easing policies so that they could keep policy accommodative even after taking the policy rate down to zero. But Professor Black, who is perhaps best known for his theory of options pricing, argued in his 1995 paper that market rates could also turn negative, in which case holding cash would have an option value. Black defined the shadow rate of interest as observed nominal yields less this option value and described it as the rate of interest that would exist in the absence of a non-negativity constraint. Using Black's method to estimate Japan's shadow rate of interest, we come up with a figure of minus 1%.

•For central banks adopting negative interest rates, it is not clear how far they must take rates below zero to end deflation. Here I think estimates of the natural and the shadow rates may offer a guide. At the BOE, the argument has been made that monetary policy should be conducted with an eye on the "interest rate gap" (the gap between the natural rate and actual inflation-adjusted rates) instead of the output gap.

3. Japan's economy: current state and outlook

•Japan's economy contracted by 1.1% in Oct–Dec 2015 as the post-consumption-tax-hike slump dragged on longer than expected. Growth has averaged just 0.6% in the three years since "Abenomics" was launched with the pledge of delivering 2% growth in real terms. Improvements in the output gap have lagged behind, since that 0.6% growth is roughly in line with potential. On the other hand, labor market conditions are extremely tight (as they also are in the US and the UK), and there are severe shortages of labor. The output gap in the US is estimated at 3%, yet the unemployment rate there has fallen to 4.9%, which represents full employment. We need to give some thought to the factors driving this gap between the labor market and the goods and services markets in the developed economies. Japan's inflation rate after stripping out fresh food and energy is 1.1%, but since actual inflation-adjusted interest rates are higher than the natural rate, the economy is likely to fall back into deflation if nothing else is done.

•The Japan Center for Economic Research forecasts economic growth of 0.7%, 1.0%, and 0.1% for Japan in FY2015-2017, but actual growth may undercut those projections given the four major factors of risks described earlier. Many market participants appear to believe an economic recovery will make itself more clearly felt this summer, but it is not clear exactly where the growth is supposed to come from. Over the medium term, I project Japanese growth will drop to 0% from 2026 to 2030 if the government makes little progress on its growth strategy. But if that strategy comes to fruition, I forecast growth will rise to the government's 2% target in real terms between 2026 and 2030. Successful implementation of the growth strategy will require 1) stopping the population decline, 2) making Japan a global destination in the same sense as the UK and lifting inward direct investment to ¥120trn, 3) reducing the gender gap to something like in the Netherlands, and 4) boosting labor productivity with technological innovation, among other things.

4. QQE: assessment and outlook

•I have previously noted the limits of QQE. In particular, the central bank's purchases of government bonds are constrained by the need of institutional investors and financial institutions to hold a certain amount of JGBs for use in managing their portfolios. Taking into account factors specific to individual investor categories, and even after adding in the "supplementary" measures announced by the BOJ last December, it is estimated that private-sector investors have about ¥129trn in JGBs that can be sold to the central bank. That implies the BOJ's bond-buying program will hit a wall sometime in mid-2017, given the fact that the BOJ will purchase ¥120trn JGB. While some have argued the central bank will be able to continue buying government bonds as long as it offers high enough prices, I do not think that is a realistic scenario when we take into account the capital losses the BOJ might eventually end up bearing. The Japan Center for Economic Research estimates losses could amount to ¥8trn in the event the BOJ bought JGBs since the start of the QQE. This comes to ¥1trn a year if amortized over eight years, an amount that cannot be ignored even if we take into account the ¥1trn a year in interest income anticipated from holding the JGBs.

•The BOJ's decision to adopt a negative-interest-rate policy (NIRP) in January appears to have come as a surprise to market participants and the media because the BOJ Governor had previously dismissed the possibility. I was not surprised in the least, however. Since last autumn I had been of the view that NIRP were the only additional easing option remaining for the BOJ. That said, the NIRP framework adopted by the BOJ is

milder than those of the ECB or the Swiss National Bank. Of the current account deposits outstanding at the BOJ, some ¥210trn will continue to attract a positive interest rate of 0.1%, ¥20trn will be subject to a rate of minus 0.1%, and the rest will be subject to a rate of 0%. In other words, there will still be a net transfer of income of some ¥190bn to financial institutions. They will also be able to continue generating capital gains by selling government bonds to the central bank in its quantitative operations.

•When we look at the longer-term costs for the BOJ, QQE and its three "dimensions" of quantity, quality, and negative interest rates will eventually run out of road. Additionally, if falling deposit rates under NIRP prompt the private nonfinancial sector to increase its holdings of cash, negative interest rates may lose their ability to deliver the intended effects. While Hicks surmised that the interest rate elasticity of demand for cash under zero interest rates was infinite, the experience of the European nations that have adopted NIRP—the actual amounts of cash in circulation—show that the actual increase in demand for cash is far from infinite. In that sense Hicks may have been wrong. For a central bank that has adopted NIRP, the practical question of how low it can take rates is an important one. Here the costs involved in using cash as a transaction or settlement measure offer a guideline of sorts. For example, research in the EU estimates cash transaction costs at 2.3 cents per euro, or about 2%.

•One anticipated effect of NIRP is a rebalancing of household and corporate portfolios. Cash and deposits account for 53% of Japanese household assets compared with figures of 13% for the US and 34% for Europe. I have often wondered whether such a high level is really in the best interests of households. Japan's corporate sector also holds relatively large amounts of cash and deposits, with the experiences of the US and Europe suggesting that Japanese companies could halve their current ratios of cash and deposits without problems. The greatest beneficiaries of NIRP are, of course, borrowers. In that sense they are good news for young families who want to build a house or invest in education. In Japan, where the national debt exceeds ¥1,000trn, a 1% deflation rate increases the real value of the debt by ¥10trn, a cost that will be borne entirely by the younger generation. I believe the worst consequence of deflation is that the younger generation is losing its will to work as the real burden of this debt increases. While NIRP cannot solve all of these problems, I think it provides at least some aid to the younger generation.

•Thank you for your time.