The case for a 4 percent inflation target for the BoJ

- We see little point in further monetary easing of an incremental nature and thus focus on a major revision to the monetary easing framework. The key question here is why the BoJ's aggressive monetary easing has failed to deliver the desired outcome.

- We would argue that the central bank has actually been too disciplined (restrained) in its approach to monetization of government debt. While we believe that it remains unrealistic to assume the BoJ makes a commitment to keep rolling over JGBs in "perpetuity" or to close the door for an eventual exit from quantitative easing, we think it possible for the Bank to promise that monetization of government debt will be maintained over a more extended period of time. Put simply, there remains room for the BoJ to declare that public debt would be monetized in a less "disciplined" fashion.

- As discussed in our latest report (Japan Economic Adviser, 29 June 2016), we see potential merit in an approach whereby the BoJ sets a target for its JGB holdings and promises to stick with it even if the inflation rate exceeds +2% by a considerable margin.

- From the viewpoint of longer-term fiscal sustainability, we think that the country needs to target sustained +2% nominal GDP growth, which would require sustained +1.5% of inflation in terms of the GDP deflator. +1.5% GDP deflator inflation actually corresponds to slightly above +3% CPI inflation. This suggests that the central bank's inflation target has to be +3% as its lower bound of the targeted range.

- The upper bound of the targeted range would probably need to be around +5% given a persistent gap of around 2pp between the 1-year expected inflation rate of households and the actual headline CPI inflation rate. To be more straightforward, unless the household expected inflation rate rises to around +5%, the actual inflation rate may not go up to around +3%. The BoJ should need to make the households believe that the Bank would never take any meaningful action to normalize its monetary policy (virtually starting to exit from QE) until actual inflation hits +5%.

- It is thus possible to make a case for replacing the BoJ's current +2% inflation target with a new +4% goal representing the midpoint of a +3% to +5% range.
Incremental further easing is not our focus

It has appeared clear by now that the BoJ’s QQE policy has failed to eradicate deflation. The year-on-year core CPI inflation rate has come in below zero in each of the past three months, while the household sector’s expected one-year inflation rate has dropped from +3.1% as of autumn 2014 to around +1.75%, slightly below its level just prior to the launch of Abenomics. The corporate sector’s expected three-year inflation rate has also fallen to around +1.0%, both for the retail sector and on an all-industries basis, with the balance of risks still seemingly weighted towards the downside (Figure 1).

Most BoJ watchers envisage additional monetary easing, with the option of taking no further action looking increasingly untenable. Our own main scenario is for the BoJ to announce a modest Tier 3 policy rate cut coupled with a slight increase in its JGB purchases at the conclusion of the October 31–November policy board meeting. Yet, we think it makes little sense for the BoJ to keep easing under the current framework given that it has proved so ineffective over the past three years. Moreover, there is a danger that the (private-sector) financial intermediation channel will be impaired even further if the BoJ’s mix of quantitative easing and a negative interest rate policy (NIRP) continues to flatten out the yield curve. We see little point in further easing of an incremental nature and thus prefer to focus our attention on the possibility of some more meaningful course of action.

Something closer to "helicopter money" will be needed

Why has the BoJ’s aggressive monetary easing failed to deliver the desired outcome? We would argue that the central bank has actually been too disciplined (restrained) in its approach to monetization of government debt. It doesn’t necessarily matter much if the government debt is underwritten by the central bank or not. Instead, we think it crucial for the effectiveness of monetary easing going forward whether some sort of commitment to “permanent” debt monetization is really made by the BoJ.

A commitment—a promise to keep rolling over JGBs in “perpetuity” or to close the door for an eventual exit from quantitative easing—by the BoJ, if made, would be quite powerful, but is not feasible in practice, as such commitment is likely to breach the BoJ Law. In opting for a "helicopter drop of money", the BoJ needs to scrap the inflation targeting and thereby must tolerate a heightened risk of hyperinflation and associated financial system instability. The BoJ Law requires the BoJ to aim for price and financial stabilities.

That said, it may indeed be possible for the BoJ to make commitment on monetization of government debt over an extended period of time. Put simply, debt needs to be monetized in a less "disciplined" fashion. As discussed in our latest report (Japan Economic Adviser, 29 June 2016), we see potential merit in an approach whereby the BoJ sets a target for its JGB holdings and promises to stick with it even if the inflation rate exceeds +2% by a considerable margin.
Much to be gained from hiking the target inflation rate

If the "threshold" inflation rate necessary to support an exit from quantitative easing (government debt monetization) is set at quite a high level, then households and firms may start to envisage higher inflation. The more distant the exit, the longer that JGBs will sit on the BoJ's balance sheet. If economic agents start to recognize that there is very little probability of taxes being hiked to fund JGB redemptions any time soon, then they may become more willing to loosen their purse strings. Even just expectations of increased spending might be enough to drive up the expected inflation rate, thereby pulling the actual inflation rate higher (albeit probably with somewhat of a lag).

JGB prices are of course likely to fall—sending market interest rates higher—if and when the threshold inflation rate starts to look achievable, at which point some sort of fiscal tightening would become necessary for stabilization purposes. However, setting a high threshold would mean that fiscal tightening takes place only when the inflation rate is quite elevated, by which time the expected inflation rate should have risen throughout the economy as a whole. Moreover, fiscal contraction should have a milder impact when inflation is high than when inflation is low, thereby helping to prevent inflation expectations from being depressed once again.

What level of inflation should be targeted?

The inflation rate obviously cannot be allowed to rise without limit owing to the need to keep inflation expectations relatively stable. As such, an eventual normalization of monetary policy will have to be kept in mind to at least some degree. This process will necessarily entail an increase in the (marginal) interest on excess reserves (IOER) rate and a reduction of the BoJ's target for JGB holdings (perhaps expressed in terms of market share). So what sort of inflation targeting approach might be compatible with the eventual need for a two-stage normalization (exit) process? We believe that monetary policymakers might be best served by a target range, with the lower bound denoting the level of inflation beyond which the BoJ would start hiking the IOER rate, and reductions of the BoJ's target for JGB holdings contingent on inflation reaching the upper threshold. This upper threshold would obviously be the most important aspect of the new inflation targeting framework.

Where should it be set? Much should ultimately depend on (1) the level of the inflation rate necessary to achieve fiscal sustainability and (2) the desired level of the expected inflation rate among households.

As can be seen from Figure 2 (please refer Japan Economic Analysis – No.12), trend nominal GDP growth of around +2% is necessary to prevent an explosive increase in the ratio of government debt to GDP if we assume that no new measures will be taken to curb social security outlays and that the consumption tax rate will remain at 8%.

Figure 2: Required VAT rate to secure fiscal sustainability

<table>
<thead>
<tr>
<th>Debt cost</th>
<th>Trend nominal GDP growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-3%</td>
</tr>
<tr>
<td>0.5%</td>
<td>84.9%</td>
</tr>
<tr>
<td>0.9%</td>
<td>84.2%</td>
</tr>
<tr>
<td>1.3%</td>
<td>83.6%</td>
</tr>
<tr>
<td>1.9%</td>
<td>82.9%</td>
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<tr>
<td>2.5%</td>
<td>82.3%</td>
</tr>
<tr>
<td>3.1%</td>
<td>82.0%</td>
</tr>
<tr>
<td>3.7%</td>
<td>81.8%</td>
</tr>
</tbody>
</table>

Source: Cabinet Office, MHLW, IPSS, MoF, Credit Suisse
Tax revenues are known to be quite elastic vis-à-vis nominal GDP, with +2% nominal GDP growth sufficient to support national tax revenue growth of around +7% (Figure 3). The ratio of tax revenues to GDP is currently somewhat above 11%, and would rise by around 0.6-0.8%pt per year as a consequence of +7% revenue growth. This would see tax revenues almost double to around ¥113 trillion (a little above 18% of GDP) within a decade. Primary balance expenditures (outlays excluding debt-servicing costs) under the national general budget are set to total around ¥73 trillion in FY2016. Even if other outlays can be held steady, natural growth in social security expenditures of around ¥2 trillion per year on average will see this figure reach ¥93 trillion after ten years. Total expenditures would rise to ¥116 trillion even if debt-servicing costs hold steady, thereby leaving the general account balance in deficit. Still, nominal GDP growth of +2% would help to lower the debt-to-GDP ratio by adding to the denominator (Figure 4). Conversely, if nominal GDP growth in the order of +2% is not achieved, then the debt-to-GDP ratio is liable to keep rising in an ultimately unsustainable fashion.

Figure 3: Growth rates of nominal GDP and the national government tax revenue

Figure 4: National government fiscal positions under +2% nominal GDP growth (simulation)

What level of inflation would be necessary to support +2% nominal GDP growth? This will obviously depend on the trend real GDP growth rate. Ignoring the huge demand swings precipitated by the global financial crisis of late 2008-early 2009, we note that Japan has averaged real GDP growth of around +0.5% since 2H 2010. Our production function analysis points to a decline in the contribution of total factor productivity (TFP) in recent years but a continuing increase in the contribution of labor driven by a rise in the female participation rate (Figure 5).

These trends are consistent with "graying" of the economy and an increasing role for the services sector. There is no guarantee that the contribution of labor will continue to increase in the longer term, but it may still be possible to maintain the same level of growth by boosting the contribution of capital so as to compensate for insufficient human resources. It thus seems reasonable to assume a trend real growth rate of around +0.5%, which implies that +1.5% of inflation in the GDP deflator terms would be necessary to support +2% nominal GDP growth.
Figure 5: Growth accounting results

<table>
<thead>
<tr>
<th></th>
<th>Labor contribution</th>
<th>Capital contribution</th>
<th>Private capital</th>
<th>Public capital</th>
<th>TFP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hours</td>
<td>Workers</td>
<td>Cap-U</td>
<td>Vintage</td>
<td>Stock</td>
</tr>
<tr>
<td>1Q2016/4Q2000</td>
<td>0.7</td>
<td>-0.1</td>
<td>-0.1</td>
<td>0.0</td>
<td>-0.2</td>
</tr>
<tr>
<td>4Q05/4Q00</td>
<td>1.0</td>
<td>-0.4</td>
<td>1.0</td>
<td>-0.2</td>
<td>0.0</td>
</tr>
<tr>
<td>4Q10/4Q05</td>
<td>0.6</td>
<td>-0.1</td>
<td>1.0</td>
<td>0.0</td>
<td>-0.5</td>
</tr>
<tr>
<td>1Q16/4Q10</td>
<td>0.5</td>
<td>0.1</td>
<td>0.0</td>
<td>0.1</td>
<td>-0.1</td>
</tr>
<tr>
<td>1Q16/4Q12</td>
<td>0.8</td>
<td>0.2</td>
<td>0.1</td>
<td>0.3</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Cabinet Office, METI, BoJ, Credit Suisse

+1.5% inflation in terms of the GDP deflator would correspond to CPI inflation of around +3.3%. As can be seen from Figure 6, the former measure of inflation has been consistently lower than the latter since 1995. It would thus appear that CPI inflation of "a little over +3%" is necessary to achieve a material improvement in fiscal sustainability without relying on tax hikes, spending cuts or other measures liable to jeopardize economic growth.

So where should the upper threshold of the BoJ's target range be set? Inflation has averaged around +0.4% under Abenomics versus a target level of +2% (Figure 7), suggesting that the BoJ might need to aim for "+5% inflation" to achieve something a little above +3% for actual inflation. Looking at this in reverse, a +5% inflation target might be needed to drive actual inflation somewhat beyond +3%.

Figure 6: Core CPI and GDP deflator

Figure 7: Core CPI and household 1-year expected inflation rate

We next note with some interest that the household sector's expected inflation rate has on average been around 1.8%pt higher than the actual inflation rate (see Figure 7 again). As such, "anchoring" the expected inflation rate at around +2% might leave actual inflation stuck in the 0% to +0.5% range. It may therefore be necessary to "re-anchor" the household sector's expected inflation rate somewhere closer to +5% in order to support actual inflation of a little over +3%.

It is thus possible to make a case for replacing the BoJ's current +2% inflation target with a new +4% goal representing the midpoint of a +3% to +5% range.

Source: MoF, Cabinet Office, Credit Suisse
The zero lower bound and a 4 percent inflation target

We are now living in a world of low growth, low inflation, and low interest rates. Faced with the so-called "zero lower bound" (ZLB), a number of the world's major central banks have launched quantitative easing policies driven by asset purchases. However, it has become increasingly clear that quantitative easing cannot continue indefinitely and may also cause serious side effects. The supply of assets that can be purchased by a central bank is necessarily finite, and trading volumes are also liable to dwindle as the central bank becomes the dominant player (and keeps buying without selling), thereby impeding market liquidity.

The next step in Europe and Japan has been the adoption of negative interest rate policies (NIRPs) whereby negative interest is charged on central bank reserves. Such measures have not offered a fundamental solution, however. First, NIRPs have seemingly failed to catalyze inflation expectations, with the resultant flattening out of the yield curve serving to impair the financial intermediation channel. Second, there appears to be little prospect of negative interest rates propagating significantly beyond the central bank reserve market and thereby helping to stimulate the economy. Savers are understandably reluctant to pay interest on their savings, meaning that very few economic agents will ultimately have access to negative-cost funding. The net upshot is that NIRP has been ineffective in eliminating the ZLB.

It is interesting to note that some economists have called for higher inflation targets by way of a possible solution. For example, Laurence Ball (2015) has argued with regard to the US that (1) a +2% inflation target is too low, (2) a +4% inflation target might be more appropriate, (3) a higher inflation target may serve to alleviate the ZLB problem by driving up long-run equilibrium nominal interest rate levels, and (4) the higher the inflation rate at the onset of a recession, the lower the likelihood of running into the ZLB (and thus the greater the probability of monetary policy proving effective).

A similar case can seemingly be mounted for a +4% inflation target in Japan. A continuing downtrend in the inflation rate means that Japan is very likely to face ever-lower inflation levels at the start of cyclical recessions, thereby leaving monetary policymakers with very little room to maneuver before hitting the ZLB. It may therefore be worth considering setting a higher inflation target aimed at driving up both the actual inflation rate and market interest rate levels, thereby mitigating the ZLB problem.

Quite importantly, a higher inflation target might be able to bring about "helicopter drop of money" effects to at least some degree by signaling that the BoJ will continue to monetize the government's debt for a longer period.

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1 “The Case for a Long-Run Inflation Target of Four Percent”, WP/14/92, IMF Working Paper
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