Problems with Raising the Inflation Target

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June 13th, 2020

Adapted from Economic Policy During and After a Pandemic (Sly 2020)

Argument for Raising the Inflation Target

The United States should not deliberately increase the inflation target in order to make it less likely that interest rates hit zero in the future. The basic theory behind this approach is that what really matters for the economy is the real interest rate, so if you increase inflation in an economy over the long term, you can raise nominal interest rates further above zero while still being able to achieve the same low real interest rates that keeps the economy performing well. If full employment in an economy can be reached if real interest rates are -3%, then nominal interest rates would have to fall to -1% if inflation were at 2%, since real interest rates are simply nominal interest rates minus the inflation rate. If, however, inflation was at 4% instead of 2%, then nominal rates could rise above zero up to +1%, and still maintain the same real interest rate of -3%. This is how raising the inflation target by 2% can, in theory, give central bankers an extra 2% buffer that makes it less likely that interest rates will hit zero again in the future.

First Problem: Difficult to Reach Higher Target and Keep Rates Above Zero

Unfortunately, there are three major problems with this strategy, where not only is it challenging practically to achieve this desired result, but the basic theory behind the approach is flawed as well. The first problem with this strategy is that central banks might have a difficult time raising inflation up to the higher target. In order to increase inflation, central banks need to lower interest rates over the short term in order to provide the monetary stimulus that will lead to higher inflation rates. If interest rates are already at zero, the central bank might have to expand the use of unconventional policies (like QE) in order to reach that new inflation target. Japan teaches us that even when the central bank maxes out on monetary stimulus, this might not be enough since inflation in that country has generally been stuck around its original inflation target of 1% in recent years and not very close to its new higher inflation target of 2%. That means more fiscal stimulus might be needed to get inflation up to the higher target, and the rest of government might be unwilling to do just that, in part because they fear increasing the risk of a future debt crisis.(1)

Even if the combined efforts of the central bank and rest of government do get inflation up to the higher target, the new target might not be high enough to get nominal rates above zero. If, in our example, the negative real rate needed to fall to -5% in order to reach full employment, then even with a 4% inflation rate, nominal rates would still have to fall to -1%. This strategy only works then if the desired real interest rate remains in a narrow band from -2% to -4% which may or may not be true in the US. Even if we do get inflation up to target and are able to raise nominal interest rates above zero, the government might want to remove the fiscal stimulus that was used to get inflation up to the new target, and once the government does that, then this delivers a negative economic shock to the economy that might require the central banks to lower interest rates again, perhaps back to zero.

Second Problem: Interest Rates Need to Stay Low to Keep Inflation Higher

More fundamentally, this leads to problem number two, where even if inflation rises to its new target, nominal rates go above zero again, and the economy recovers from the new fiscal stimulus being removed, the central bank might need to keep interest rates lower over the long term in order to keep inflation at this higher level in perpetuity. This is the basic theoretical error made by the proponents of raising the inflation target, where even if they admit the central bank would have to lower interest rates in order to get inflation up to target, in their theory, they say this will only have to happen temporarily. In practice, however, if the real interest rate needed to be -3% before and a real interest rate of -3% in the past yielded 2% inflation, then going back to a real interest rate of -3% is likely to get you an inflation rate of 2% in the future. The key point here is that if you want 4% inflation in the future, you will need to reduce the real interest rate below -3% over the long term in order to do so.

This leads to the key theoretical question which is how much do real interest rates need to decline long term to boost inflation up from 2% to 4%. If real interest rates only need to decline 1%, then the higher inflation gives central banks an extra 2% buffer, and the need for lower real interest rates will only eat up 1% of that buffer, so then raising the inflation target does accomplish your goal, but will only be half as effective as you originally thought. The real problem occurs if real interest rates need to decline by more than 2% in order to increase inflation from 2% to 4%. If real interest rates need to decline by 3% in order to increase inflation from 2% to 4%, then this long term decline in real rates eats up more than the 2% buffer created by the higher inflation, so that in this case raising the inflation target makes you even more likely to have nominal interest rates hit zero. My own personal guess is that real interest rates will have to go down by more than 2% over the long term in order to increase inflation from 2% to 4%, since in recent history raising inflation even up to the original lower target has been a bit of a herculean task for central bankers. Therefore, it seems reasonable to estimate that getting up to a higher target would require more than a trivial change in real interest rates.

Third Problem: Interest Rates are Still Declining

Even if central banks are able to raise inflation up to the new target and it only takes a small decline in real interest rates over the long term in order to do so, there is still a third problem that makes raising the inflation target a bad idea. The basic issue is that in order for this idea to work, the desired real interest rate needs to remain in a range from -2% to -4%, but if interest rates in general across the entire economy are still declining over the long term, then the real interest rate needed to get the economy up to full employment might be falling as well. This means that even if a 4% inflation target might have gotten nominal interest rates above zero in the last recession there is no guarantee it will get you nominal interest rates above zero in the next recession. Based on long term trends in interest rates, it seems highly likely that in the next business cycle real interest rates will have to be around 2-3% lower, so that in order to keep nominal rates above zero in the next recession, the inflation rate would have to rise to at least 6%.(2) Then in the following business cycle, inflation would have to rise to 8% to keep nominal rates above zero, and up to 10% in the one after that. That means as long as interest rates are still declining over the long term, inflation might have to continually go up over time in order to achieve the goal that nominal rates stay above zero in perpetuity.

Even worse, central banks might always be one recession behind, where they raise the inflation target to meet the required negative real interest rate in the last recession, but in this recession, it is 2% lower, so nominal interest rates hit zero again. Knowing they did not go far enough last time, they raise the inflation target by 2% again, but this again falls short because of declining interest rates, so nominal rates hit zero again. This leaves us in a world where inflation keeps going up with each new business cycle, but nominal rates keep hitting zero each time, and central banks must resort to unconventional measures again. If raising the inflation target means central banks will need to continually resort to unconventional measures like QE, then perhaps they might as well figure out how to do the unconventional measures correctly while keeping inflation low, rather than continually trying to achieve the unreachable dream of keeping nominal rates above zero just by raising the inflation target.

Conclusion

This leads to the conclusion that there are a lot of serious problems with the strategy of raising the inflation target. First, central banks might find it challenging to raise inflation rates to the higher target especially when interest rates are already stuck at zero. Second, even if they do reach their higher inflation target, in order to keep inflation at this level, real interest rates are going to have to decline, and this reduction in real interest rates will eat up some or all of the buffer gained by raising inflation, which actually could make it more likely that nominal rates hit zero again. Finally, raising the inflation target from 2% to 4% only works if the desired real interest rate remains in a band from -2% to -4%, and as long as interest rates are still declining the economy is going to remain in that band for only a short period of time, so that in order to keep nominal rates above zero long term, the inflation rate will also have to rise to undesirable levels over time. That means if a lot of unconventional policy is needed to get you to the higher inflation target, and unconventional policy in some form is going to be needed in the future as interest rates keep declining, then it probably makes sense to figure out how to do unconventional policy right so that you can keep inflation low, and give up on the strategy of keeping nominal rates above zero forever simply by raising the inflation target.

End Notes

#1 – The Bank of Japan raised its inflation target to 2% in January 2013, but has had a lot of difficulty consistently reaching that target over the long term. Since mid-2015, core inflation has remained at or below 1.0% despite engaging in massive amounts of QE since that time. From 2014 to 2016, the Bank of Japan has purchased bonds through QE worth about 15% of GDP, and since 2016 has bought as many bonds as it takes to keep the 10 year interest rate on Japanese government bonds at 0%. Over this time, the Japanese government has been reducing the amount of fiscal stimulus it provides by reducing the overall budget deficit from 7.2% of GDP in 2013 to 3.8% in 2018.

#2 – At the peak of the last business cycle, interest rates rose to 5.25% in 2007. In the peak of this business cycle interest rates peaked at 2.5% in 2019. This shows that since 2007 interest rates have fallen by about 2% to 3% over that time, and if this trend continues then with each new business cycle the neutral real rate of interest might also fall by another 2% to 3%.

References

Sly, James. 2020. “Economic Policy During and After a Pandemic.” Unpublished Working Paper, June.