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Japan – The Myth of Easy Money

By John Greenwood

Introduction and Overview

- On December 20th the Bank of Japan announced a change to its Yield Curve Control (YCC) policy, widening the trading band on the 10-year JGB yield to +0.5% and -0.5 % from +0.25% and -0.25%.
- To understand properly what is going on here we have to take a step back and examine Japanese monetary policy over the past three decades.
- **First,** I will illustrate with examples the widely touted myth that Japanese monetary policy has been and remains "ultra-easy".
- **Second**, I will explain the theory that underlies the reason for very low Japanese interest rates, yields, and inflation.
- **Third**, this study will tell us what it will take for Japan to break out of its low interest rate, low inflation straitjacket.
- **Fourth**, we will explore what the recent decision to widen the BOJ's trading bands for the 10-year JGB means for the short- and medium-term outlook.
- To paint a clear picture of Japan's macro trends we need to assess the impact of the recent acceleration and deceleration of Japanese M2 growth. We will also need to forecast the likely growth of broad money (M2) going forward.
- The results suggest that CPI inflation will decline from its recent peak of 3.8% and start heading back towards the 0-1% average of the past decade.
- Despite the short-term upward movement in JGB yields, the most likely direction over the next year or so is therefore a reversal back to lower yields, not higher yields.
- This in turn means that the yen is likely to remain weak, continuing to be a funding currency for carry trades.

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1. The Myth of Easy Money in Japan

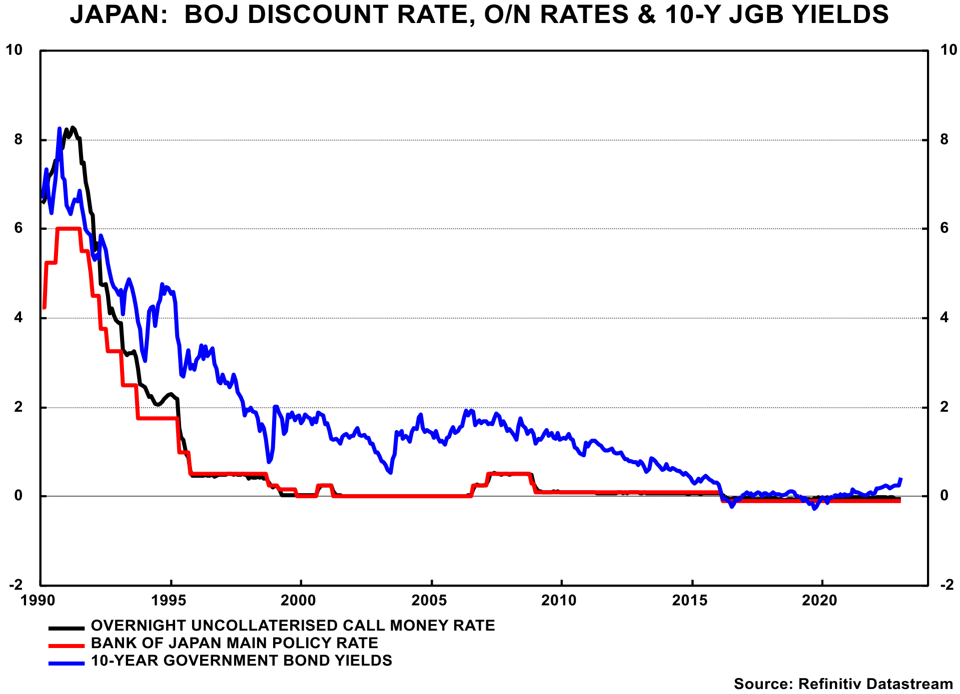
Here are some sample quotations from recent press articles about Japanese monetary policy.

"*Japan's central bankers had long stuck to an **ultra loose policy**, and they refused to join other central banks in raising interest rates. But yesterday, BOJ officials, led by Governor Haruhiko Kuroda, said they'll allow 10-year JGB yields to fluctuate by half a per cent instead of a quarter per cent.*" Jess Smith, FT, Dec 21, 2022.

"*And now we've got Kuroda, this guy who's stuck to this **extreme easing policy**, that is he's been the one guy that wouldn't budge. And now he's come to the party, too.*" Jennifer Hughes, FT, Dec 21, 2022.

"*…after the Bank of Japan surprised investors by raising the cap on a benchmark rate, inching away from its **ultra-relaxed monetary policies**.*" Will Horner, WSJ, Dec 20, 2022.

Figure 1. Ever since Japan's Bubble Burst in 1990-91, Interest Rates and Bond Yields have Remained very Low



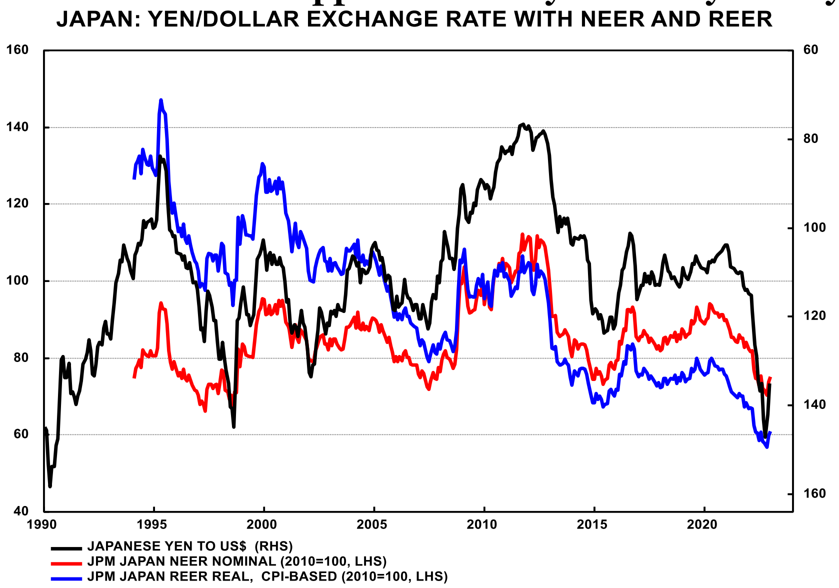
The reason that commentators say that monetary policy is loose or relaxed in Japan is that they judge the stance of monetary policy **solely in terms of the level of interest rates.** Figure 1 shows how Japanese rates tumbled after the stock market crash of the early 1990s, with short-term rates falling to 0.5% by September 1995 and 10-year JGB yields falling below 3% by May 1995. Since the 1990s both sets of rates have fallen even further, with the BOJ's overnight rates falling to zero by 1999 and

10-year JGB yields falling below 1% in September 1998 and ultimately going negative in early 2016.

The myth of easy money in Japan has been sustained, especially in recent months, by the weakness of the yen on foreign exchange markets. It seems logical to say that "ultra-loose" monetary policies have led to an ultra-weak Japanese yen.

Excluding the periods between April 1990 and April 1995 (when the yen climbed from 158 against the USD to 84 per USD) and June 2007 to September 2011 (when the yen climbed from 122 to an all-time high of 76 per USD), the real effective exchange rate (REER) for the yen has been on a generally downward track since 1995 (see blue line in Figure 2). Since June 2020 the REER for the JPY has fallen from 80 to 57 in November 2022.

Figure 2. A Weak JPY has Supported the Myth of Easy Money in Japan

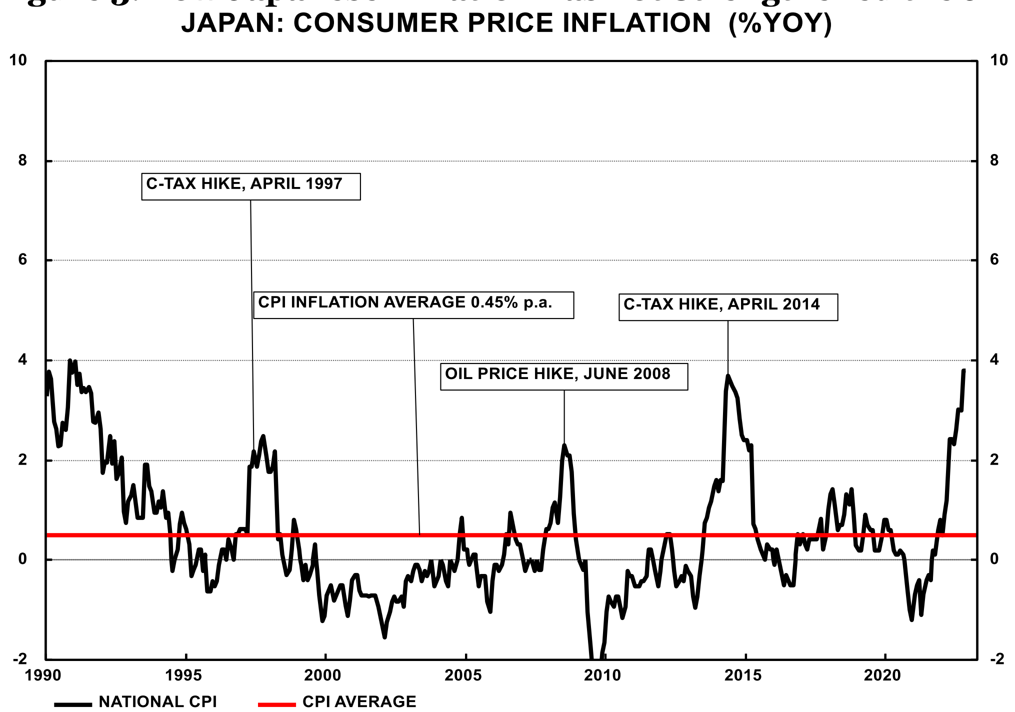


Source: Refinitiv Datastream

Along with the apparent looseness of monetary policy, we have the paradox that Japanese inflation has also remained remarkably low for most of the last three decades. The only occasions when inflation has risen have been those episodes when the consumption tax (a retail or sales tax) was raised, the oil price increase in June 2008, and the recent mild episode of inflation as a result of the BOJ's Covid countermeasures (see Figure 3 below, which uses the same scales as Figure 1 showing interest rates). Even including those episodes due to tax increases -- which are not really inflation but administered price changes -- Japanese inflation between 1990 and 2022 has averaged only 0.49% p.a., as shown by the red line in Figure 2. (For more on the BOJ's countermeasures see below, p. 11-12).

On a purchasing power parity basis, the weakness of the yen does not make sense. Japan has had lower inflation than most of its trading partners and therefore one would expect the JPY to have appreciated over the long-term. The extent of the currency weakness must therefore reflect, to a considerable degree, the attractions of the yen as a funding currency for carry traders.

Figure 3. Low Japanese Inflation has not Strengthened the JPY



Source: Refinitiv Datastream

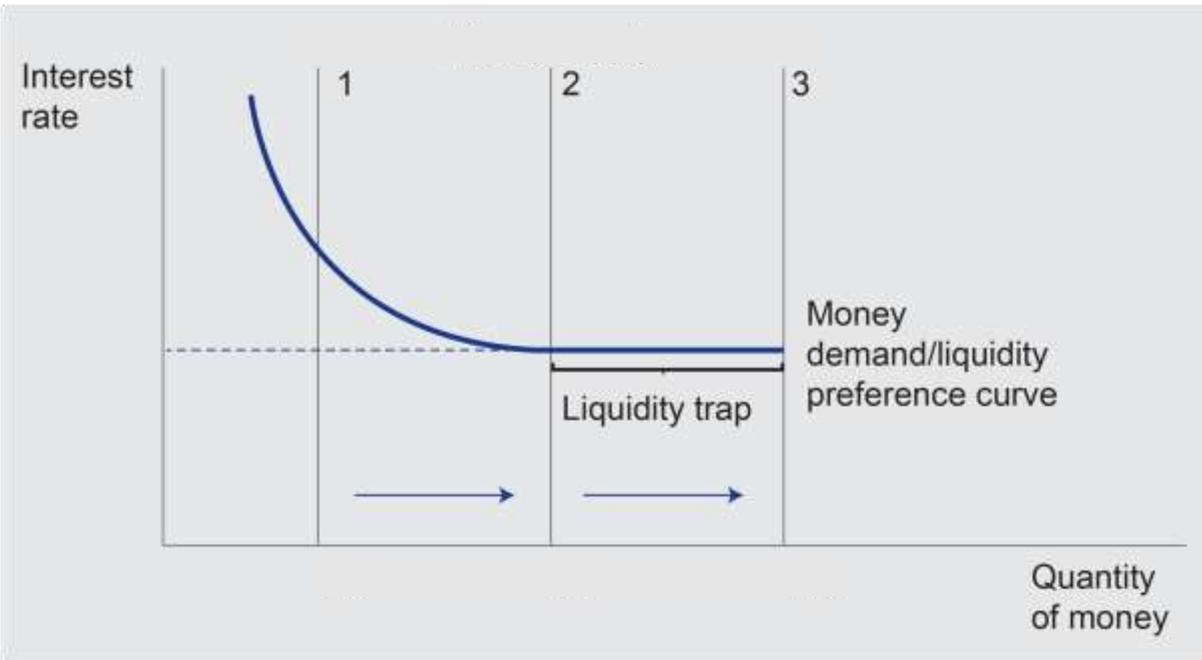
2. The Reality: Why Japanese rates and inflation are so low, or Fisher versus Keynes

John Maynard Keynes devised the theory of liquidity preference in the 1930s as a hypothesis to explain why the US & UK economies were not recovering from the Great Depression. His liquidity preference theory describes the relationship between the willingness of the public to hold money and the level of interest rates. The higher rates are, the less (noninterest bearing) money people will be willing to hold; the lower interest rates are, the more money people will be willing to hold.

An example of the relationship is shown in Figure 4. By increasing the supply of money (a shift to the right in the money supply from position 1 to position 2), the central bank could, in Keynes's analysis, lower interest rates. Lower interest rates would, in turn, boost investment spending, raise the output of the economy (via the multiplier effect) and push up prices. However, Keynes argued that during the depression of the 1930s, when interest rates were already very low, the demand curve for money had become horizontal and any further expansion of the money supply (from position 2 to position 3 in Figure 4) would not lead to lower interest rates. Monetary policy was no longer effective; the economy was in a "liquidity trap". Increasing the money supply was like pushing on a string. In these circumstances, Keynes strongly advocated an expansionary fiscal policy to revive economic growth and employment.[1]

[1] J M Keynes The General Theory of Employment, Interest and Money, pp. 165-174 (Palgrave Macmillan, 1936)

Figure 4. Keynes' Downward-Sloping Liquidity Preference Function



Nowadays every student of economics learns in class about the relationship between money and interest rates from the downward-sloping liquidity preference function. He or she learns that if the quantity of money is increased, or grows rapidly, interest rates will decline – and conversely, that if interest rates decline the quantity of money will increase. In the same way, the liquidity preference theory teaches that if money is decreased, or grows more slowly, interest rates will rise.

The problem with these conclusions of the theory is that they are in direct contradiction with the evidence from around the world. If rates fall with more money, how is it that interest rates are so high in Venezuela or Argentina? Similarly, if rates rise with less money, how is it that rates are so low in Japan and Switzerland? In effect, the liquidity preference theory leaves out any consideration of inflation.

To resolve the contradiction, we must turn to Fisher and Friedman. Early in his career Irving Fisher had pointed out that interest rates were composed of two elements -- a real component and an inflationary component. Later, using data from the UK and the US he did statistical research showing that high interest rates were generally found where prices or inflation were high, and conversely, low interest rates were found where prices or inflation were low:

"Furthermore the results and other evidence, indicate that, over long periods at least, interest rates *follow* price movements. The reverse, which some writers have asserted, seems to find little support. [...] Our investigations thus corroborate convincingly the theory that a direct relation exists between *inflation* and *interest rates,* the price changes usually preceding and determining like changes in interest rates."[2]

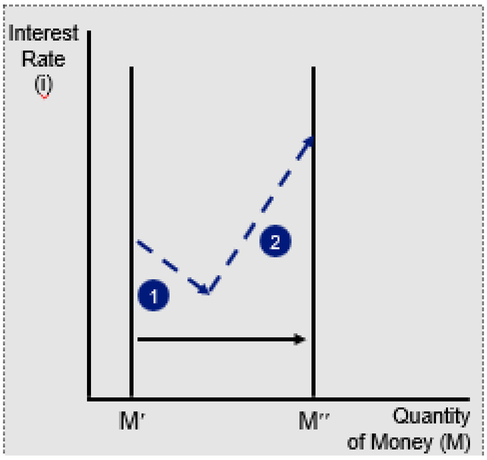
[2] Irving Fisher, *The Theory of Interest* (1930), final paragraph of Ch XIX, section 6. The next quote (PTO) relates to his Chart 52.

"These highly significant correlations seem to establish definitely that over long periods of time high or low interest rates follow high or low prices by about one year."

The seeming contradiction between liquidity preference theory and Fisher's ideas can be resolved if we hypothesize that the impact of money growth on interest rates operates in a two-stage process. This is what Milton Friedman and Anna Schwartz did in Chapter 10 of their book, *"Monetary Trends in the United States and the United Kingdom" (1982).*

If the growth of money doubles, for example, and the higher money growth rate persists, interest rates would initially fall. Later, as the economy strengthened and the demand for loans increased, inflation would increase, and interest rates would rise. The first effect of easy money was therefore to lower rates. This is the "liquidity effect". But the second and more permanent effect was to raise rates. This is the "Fisher effect". The two stages are illustrated in Figure 5.

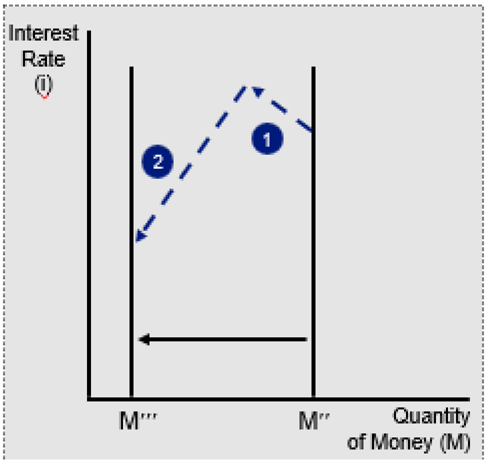
Figure 5. The two-stage impact of increased money growth on interest rates



This analysis explains why high inflation countries tend to have high interest rates: interest rates tend to be high in economies where money growth ***has been*** too rapid.

The process also operates in reverse after periods of tight money. If the growth of money halves, for example, and the lower money growth rate persists, interest rates would initially rise. Later, as the economy weakened and the demand for loans decreased, inflation would decline, and interest rates would fall. The first effect of tight money was to raise rates. This is the "liquidity effect". But the second and more permanent effect was to lower rates. This is the "Fisher effect". These two stages are illustrated in Figure 6.

Figure 6. The two-stage impact of decreased money growth on interest rates



The analysis explains why low inflation countries tend to have low interest rates: interest rates tend to be low in economies where money growth ***has been*** too slow. This, of course, is exactly what we find in Japan.

Figure 7. How Japan fell into the low interest rate trap

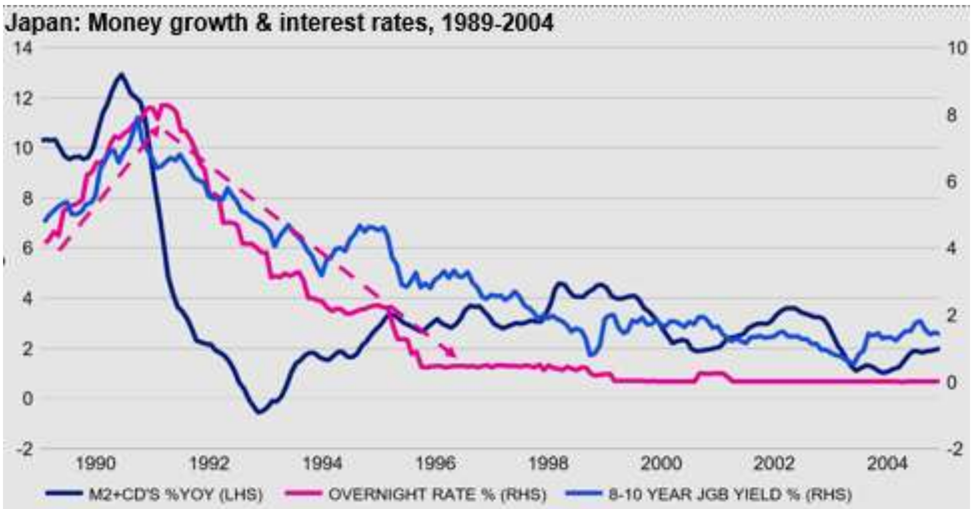


Figure 7 shows the impact of the tightening of Japanese monetary policy from May 1989 into the early 1990s both in terms of money growth (M2+CDs) and in terms of interest rates (the overnight rate and JGB yields). [In Figure 6, the horizontal axis showed the quantity of money; in Figure 7 we switch to the horizontal axis showing time.] The Bank of Japan's discount rate was raised from 2.5% in April 1989 to 6.0% by August 1990 but was not lowered until July 1991 by which time M2 growth had already tumbled from 13.0% in May 1990 to 3.3% in July 1991. The stock market had peaked in December 1989 and by July 1991 was down by 40% from its peak.

What matters here is that as asset prices and the economy weakened in face of the BOJ's 1989-1991 squeeze on interest rates and money, the demand for credit fell abruptly and the economy slumped, causing market interest rates to fall rapidly. As implied by the Fisher diagram in Figure 6, having first risen as money was initially squeezed, rates then fell for a prolonged period. This is portrayed by the pink dashed arrow in Figure 7. Subsequently money growth revived only modestly, averaging only 2.8% p.a. for the years 1991-99 (compared with 9.3% p.a. for the period 1981-90). In effect, money growth accommodated to the low level of interest rates and the falling inflation rate.

Throughout the remainder of the 1990s the Japanese authorities vainly attempted to restore the kind of growth rate that Japan had enjoyed before the asset bubble burst. Large scale fiscal expansion was employed, but to no effect. At times the yen was allowed to weaken in an effort to boost exports, again without the spillover effects needed to boost the entire economy. Short-term interest rates continued to be lowered until they hit zero in mid-1999, a policy that was labelled ZIRP for Zero Interest Rate Policy. It was all to no avail.

However, the one thing that was not attempted and was not achieved was any significant acceleration of broad monetary growth. M2 growth remained on the floor.

If we extend this analysis to the 2000s, the BOJ adopted the first QE programme in April 2001, continuing with it until March 2005. But the BOJ's brand of QE differed crucially from those adopted later (in 2009) by the Federal Reserve System and the Bank of England. In Japan's case the asset purchases were exclusively from banks, not from non-banks. This meant that when the BOJ purchased JGBs or other securities from the banks there was merely an asset swap between the central bank and the commercial banks. No new money was created or added to the monetary system. By contrast, when the Fed or the BOE bought assets, they bought them from non-banks such as insurance companies, pension funds, money managers and sovereign wealth funds. This required the central bank in each case to make a payment directly to the seller's deposit account, creating new money in the process. In other words, the BOJ's QE formula did not generate additional money growth, and as a result money growth remained anaemic. This remained the case when QE was implemented (reluctantly) by BOJ governor Shirakawa in 2011-12 and when it was adopted much more aggressively by Governor Kuroda under the grandiose label Quantitative and Qualitative Easing (QQE) from April 2013.

3. How to achieve breakout

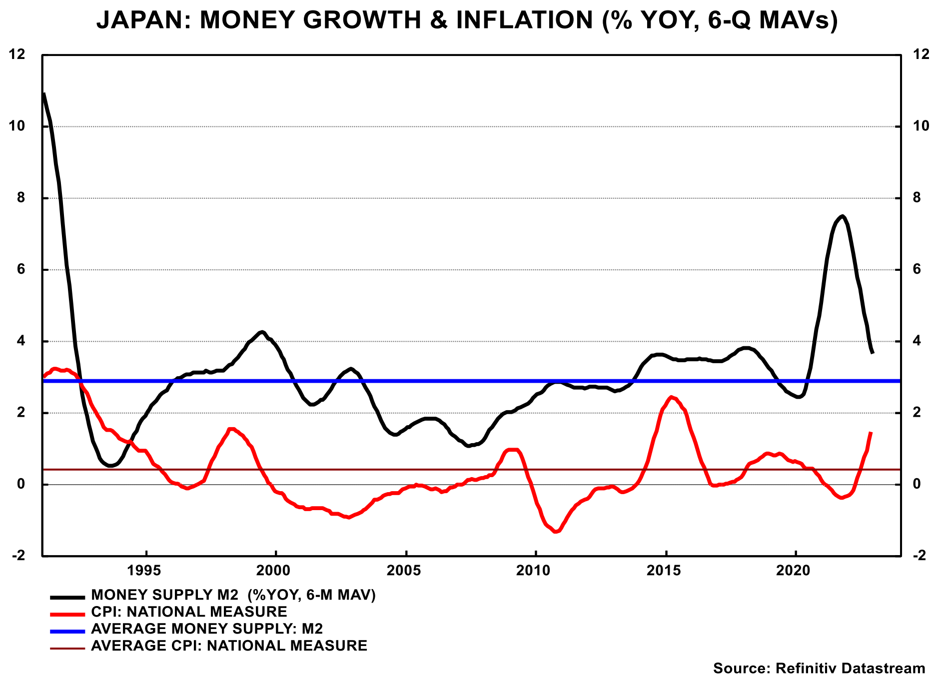
From all that has been said above it should be clear that two main actions need to be taken to shift Japan from its low inflation, low interest rate equilibrium to a higher level of inflation and interest rates.

First, the BOJ must abandon its exclusive focus on interest rates and yield curve control (YCC) as a way of managing the monetary system. It is far more important to increase the rate of growth of broad money (M2) from its sub-par growth rate of most of the past three decades. As shown in Figure 8, M2 growth has averaged just 2.6% p.a. from 1991-2019, and it needs to be substantially higher. That low growth rate has generated an average inflation rate of just 0.4% p.a. (also shown in Figure

8). In the past I have calculated the appropriate M2 growth rate required for Japan to reach the 2% inflation target as 5-6% p.a. This is comprised of 1% for real GDP growth, plus 2.4% for the annual addition to money balances (the inverse of income velocity), plus the 2% inflation target. The figure achieved does not need to be exact, nor does the target need to be reached every month, but as long as the M2 growth rate is somewhere close to the 5-6% range, asset prices will improve dramatically, the economy will perform much better, and inflation will gradually rise to the 2% level, fluctuating around that target.

Second, a necessary condition for achieving the first aim is to revise the method of conducting QE operations. Instead of purchasing securities and other assets from banks, the BOJ should conduct its QE transactions with non-bank counterparties. This may require some change in the regulations, permitting brokers and others to open accounts with the Bank of Japan. This would replicate the system in the US where the Fed has accounts for all the Primary Dealers as well as for Money Market Funds and other entities that use its Reverse Repo window. Similarly in England, the Bank of England conducts transactions with the government broker and others who maintain accounts at the Bank.

Figure 8. Low M2 growth is responsible for Japan's sub-target inflation



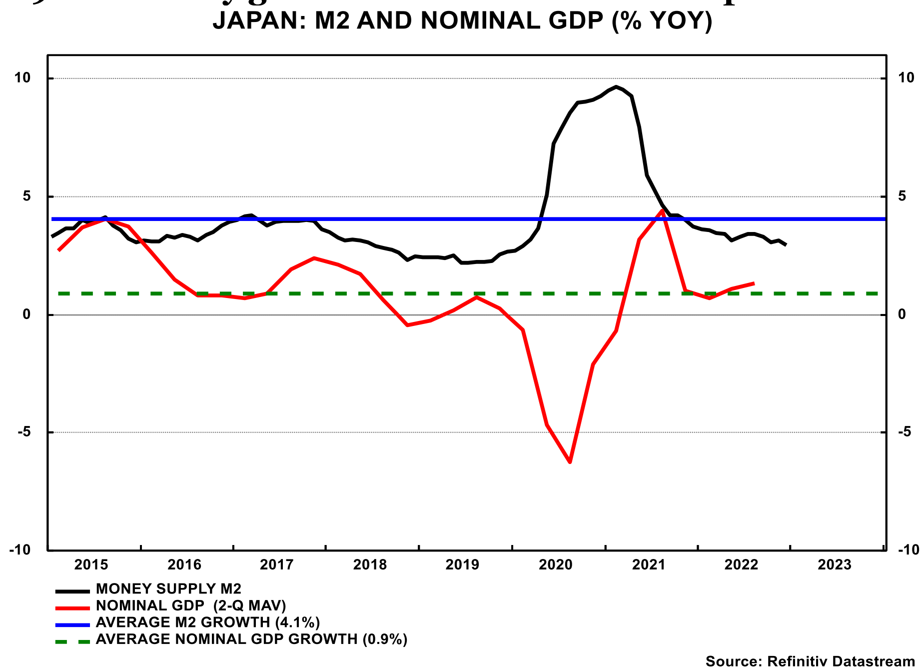
In the absence of the changes suggested here, it is highly likely that after the current episode of mild inflation (which is due to the BOJ's short-term Covid countermeasures) the economy will return to the kind of performance experienced in most of the past two decades – i.e., anaemic growth, sub-target inflation, and interest rates and bond yields that will hover around zero.

4. The medium-term outlook after the adjustment of the YCC bands

When the Bank of Japan announced on December 20th that it had decided to widen the trading bands for the yield on 10-year JGBs to +/-0.5% instead of +/- 0.25%, Governor Kuroda took care to emphasise that the BOJ was not going to follow other central banks that had been tightening monetary policy in recent months by raising interest rates. This should have been evident from the fact that the BOJ also announced increases in its planned purchases of JGBs at forthcoming auctions from 7.3 trillion yen per month to 9 trillion yen per month. After all, an increase in the central bank's balance sheet is normally an expansionary move.

Predictably, market participants were not persuaded. The consensus view, as explained at the start of Section 1, is that by keeping rates very low the BOJ has been pursuing a very "easy" or even "ultra-easy" monetary policy. Market participants and most commentators therefore saw the BOJ move as going along with the trend displayed by other central banks and indicating the start of a tightening cycle. The BOJ may not be prepared to raise the overnight rate, they reasoned, but this was a step in that direction. Even though, in the days that followed, the BOJ had to increase its purchases of JGBs to prevent the yield exceeding the specified limits, market observers still insisted this was a tightening move. Yields on JGBs increased almost immediately to near the 0.5% ceiling.

Figure 9. M2 Money growth has slowed almost to pre-Covid average



In my view none of these developments is likely to influence the rate of growth of broad money (M2), and therefore the underlying rate of inflation will not be affected materially. The key current influences on the rate of inflation are as follows:

1. The sharply slowing rate of growth of M2.
2. The weakness of the yen, giving rise to a temporary bout of imported inflation.
3. The repayment of Covid-era loans by banks to the BOJ.

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I will therefore address each of these topics in turn.

As Figure 9 shows, M2 has slowed from a peak of 9.6% in February 2021 to 2.9% in December 2022, close to the pre-Covid average of 1992-2019 quoted above. There can be little doubt that the current episode of inflation in Japan, with the CPI at 3.8% year-on-year in November, is due largely to the brief period of acceleration of M2 in 2020-21 – unique in the post-bubble era – exacerbated by yen weakness.

Figure 10. Under QQE, M2 growth has been driven by commercial bank lending, not by BOJ purchases

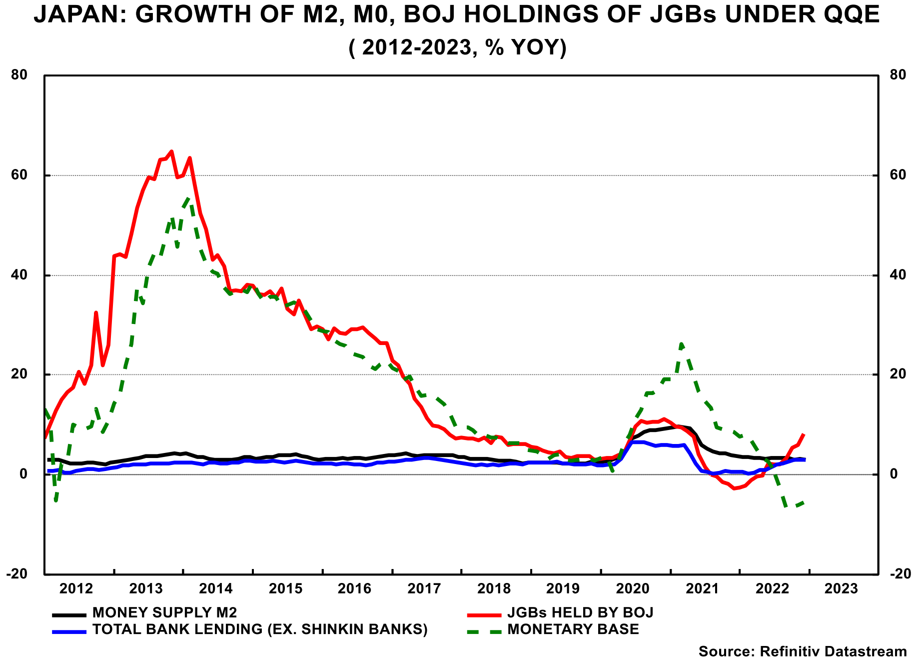


Figure 10 shows that during the QQE period from 2013 onwards the growth of M2 has been largely impervious to the huge surge in the monetary base (essentially the size of the BOJ balance sheet) or to the BOJ's purchases of JGBs during QQE. The main driver of M2 growth has been Japanese commercial bank lending shown by the blue line. As explained above, the reason why BOJ purchases do not create money (M2) is that the purchases are from banks. Conversely, the reason M2 growth is dominated by commercial bank loan growth is that loans to the non-bank public ***do*** create money. With QQE misfiring, low bank lending growth has resulted in low M2 growth.

However, even during the Covid period 2020-21, the BOJ's purchases of JGBs and other assets (J-REITS and ETFs) were not the main driving force for the acceleration of M2. The key change was the decision by the BOJ to make loans to banks modelled on the Bank of England's Funding for Lending scheme – i.e., loans were made to banks on condition that these were passed on to non-financial businesses including SMEs (in the case of the BOE). The blue line in Figure 10 shows the uptick in this kind of lending by commercial banks, while the blue line in Figure 11 shows the corresponding increase of this kind of lending by the Bank of Japan. Figure 12 shows the contribution to the year-on-year change in the monetary base from the elements on the BOJ's balance sheet.

However, since mid-2022 the repayment of these loans has started, hence the downturn in both the monetary base and the contribution of the BOJ loans to the total monetary base. Again, this is the driving force behind the current slowdown in broad money (M2) growth.

Figure 11. The main driver f BOJ balance sheet growth during Covid was the increase in BOJ loans, not QQE purchases of JGBs

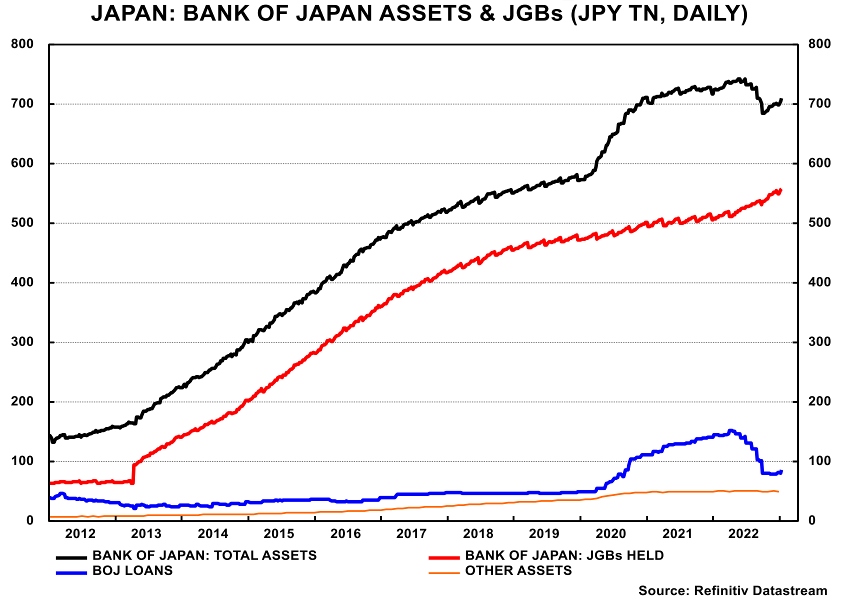
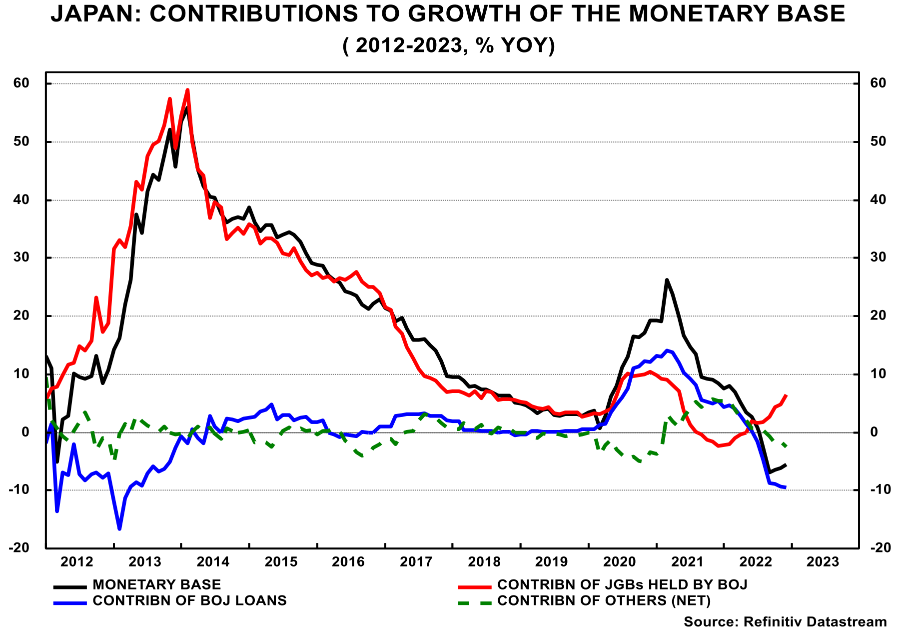


Figure 12. Under QQE, JGB purchases have dominated *except* during Covid



To summarise, for most of the past three decades broad money (M2) growth in Japan has been too low, averaging 2.6% p.a. This is the basic reason why asset prices have been disappointing, why growth has been anaemic and why inflation has been so low, at times degenerating into deflation. However, a significant exception has occurred during the Covid period 2020-21 when money growth accelerated from 2-3% p.a. to a peak of 9.6% in February 2021. It is this episode of monetary expansion that is behind the temporary upturn in Japan's inflation rate, helped to a degree by the recent depreciation of the yen.

Unless Governor Kuroda's successor makes a dramatic change in BOJ policy, the effects of the monetary acceleration in 2020-21 recede into the past, and the future will start to resemble the pre-Covid past. M2 growth has already slowed to below 3% (Figure 9) and this will start to show in both economic performance and inflation in 2023. Consumer price inflation will decline from its current 3.8% year-on-year level to something closer to 0.5%. This clearly has important implications for the JGB and Japanese corporate bond market. The recent sell-off prompted by the BOJ's change to the YCC trading bands will see a reversal, albeit limited by the extent of higher bond yields in other major economies.

Summary and Conclusions

- The oft-repeated view that Japanese monetary policy has been and remains "ultra-easy" is a myth. The truth is that low Japanese broad money growth – tight money – has kept Japanese nominal spending and inflation low for the past three decades.
- This is also the reason for very low Japanese interest rates, yields, and the indifferent long-term performance of Japanese asset prices.
- However, a recent brief exception has occurred. During Covid, Japanese money growth accelerated temporarily to 9.6%, driven not so much by QQE purchases of JGBs but by BOJ lending to banks on condition they on-lent to corporate borrowers.
- The BOJ's widening of the YCC trading band for the yield on 10-year JGBs to +/-0.5% led to a sell-off in the JGB market that is likely to prove short-lived.
- With the on-going deceleration of Japanese M2 growth to pre-Covid levels, CPI inflation will decline during 2023 from its recent peak of 3.8% and start heading back towards the 0-1% average of the past decade.
- Despite the short-term upward movement in JGB yields, the most likely direction over the next year or so is therefore a reversal back to lower yields, not higher yields.
- This in turn means that the yen is likely to remain weak, continuing to be a funding currency for carry trades.

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