



The PBOC in a Monetary Tangle

By John Greenwood

Overview

- In the first half of this year the yield on 10-year Chinese government bonds (CGBs) fell sharply. The declines were so steep that they caused the People's Bank of China (PBOC) to worry that a bond bubble was under way.
- In response, plans were disclosed on July 1st for the PBOC to borrow CGBs from state-owned institutions and sell them into the market. On its own, the announcement temporarily pushed up yields from around 2.18% to 2.30%.
- But on July 22 the PBOC reversed course, announcing that it was cutting three policy rates (repo, 7-day reverse repo, and SLF) and the loan prime rate by 10 b.p. Then on July 25 it cut the medium-term lending facility (MLF) by 20 b.p.
- With the economy growing at a slow pace, housing still in a slump, and retail sales not reviving, no fiscal/investment bazooka has been launched to boost growth.
- Until the PBOC's recent rate moves, monetary policy had been on the sidelines. But now that the PBOC has entered the fray, the new dilemma is how to reconcile boosting the weak economy (which normally implies cutting rates) with the avoidance of a bubble in the bond market?
- Said differently and more positively, if China is in a balance sheet recession or on the threshold of debt deflation, how should the PBOC engineer an exit?
- The underlying problem is one that is encountered by all central banks when they try to implement **an interest-rate-only strategy**.
- The key issue is that interest rates are not the true driver of monetary policy.
- Interest rates respond to changes in money growth, but they respond in two distinct stages. In response to significantly more **rapid** money growth, interest rates first fall, and later rise (as they did in the western world following the surge of money growth in response to Covid in 2020-21).
- In response to significantly **slower** money growth, the opposite is true. Interest rates first rise (or stay level) and later fall. In contrast to much of the rest of the world, China, which did not boost money growth during Covid, is now in the second stage of a slower money growth phase. Market rates are therefore falling, no matter what the central bank does in the short term.
- China's current problem is that money growth has been too slow, but trying to solve it with an interest-rate-only cutting strategy will almost certainly fail.

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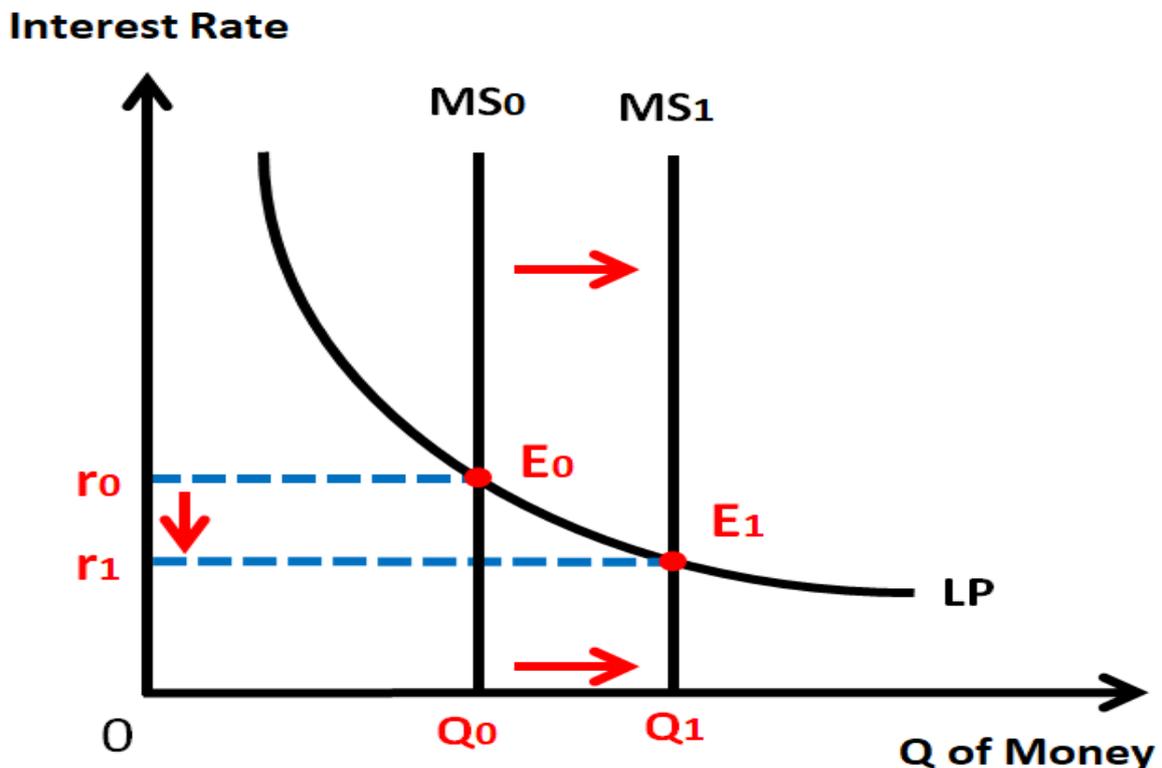
Introduction: The Fundamentals

Based on recent developments, it appears that China's central bank, the People's Bank of China or PBOC, is inadvertently drifting towards **an interest-rate-only monetary policy**. After years during which the PBOC has been one of the few central banks to publish and pay heed to monetary growth targets, and when inflation has been kept subdued largely as a result, this could potentially set the scene for a serious policy error.

The problem with “**interest-rate-only**” models is both theoretical and empirical. On the theoretical side, interest rates are not the price of money, only the price of renting money (i.e., credit) for a specified period. To see the difference, think about a change in the demand for money and a change in the demand for credit. If the demand for money rises (i.e., more money to hold relative to other assets), interest rates will decline, but if the demand for credit rises, interest rates will increase.

On the empirical side, the experience of the world is the exact opposite of what every student learns from **the Keynesian downward-sloping liquidity preference function**. For example, the liquidity preference function implies that an increased quantity of money produces lower interest rates (Figure 1), and conversely that a reduction in the quantity of money produces higher interest rates. (The same applies to FCIs, or Financial Conditions Indicators, also much loved by central bankers.)

Figure 1. The Downward-Sloping Liquidity Preference Function is Highly Misleading.



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But these results are consistently contradicted by real world experience. For example, we typically find very high nominal interest rates in economies like Venezuela, Argentina and Turkey which have been **increasing** the quantity of money rapidly, and we find low interest rates in countries like Japan and Switzerland that have had very **low** money growth. These results are the exact opposite of those proposed by the Keynesian liquidity preference function in textbooks.

The reason for these seemingly paradoxical results is that interest rates are not the causative driver of economic growth or inflation. Rather, interest rates are a symptom of prior money growth rates. Past money growth is the underlying driver.

What is the explanation for the famous liquidity preference chart being so misleading?

In cases where there has been a **substantial and sustained** acceleration of broad money growth, the first effect is that rates decline. But then asset prices rise, the economy starts to revive and the demand for credit rises. Finally, inflation increases, and lenders protect themselves by raising lending rates. In short, the **first** effect of rapid money growth is **lower** rates, but the **second** – and more long-lasting – effect is **higher** rates. The latter is known as the Fisher effect, after Irving Fisher.¹

The opposite is true for cases where there has been a **substantial and sustained** slowdown of money growth. The first effect of slower money growth is **higher** rates, but the second – and more long-lasting – effect is **lower** rates

It follows that low rates can reflect the early stages of a period of rapid money growth or the late stages of a period of very slow money growth. Conversely, high rates may reflect the start of a period of much slower money growth, or equally the late stages of a period of very rapid money growth. For these reasons it is a fundamentally bad idea to rely on interest rates when judging the stance of monetary policy. Yet central bankers and most economists perennially discuss monetary policy in terms of interest rate settings, or more recently and equivalently in terms of Financial Conditions Indicators (FCIs) which are based on rates, spreads, and financial market prices, but not on quantities such as the growth of broad money.

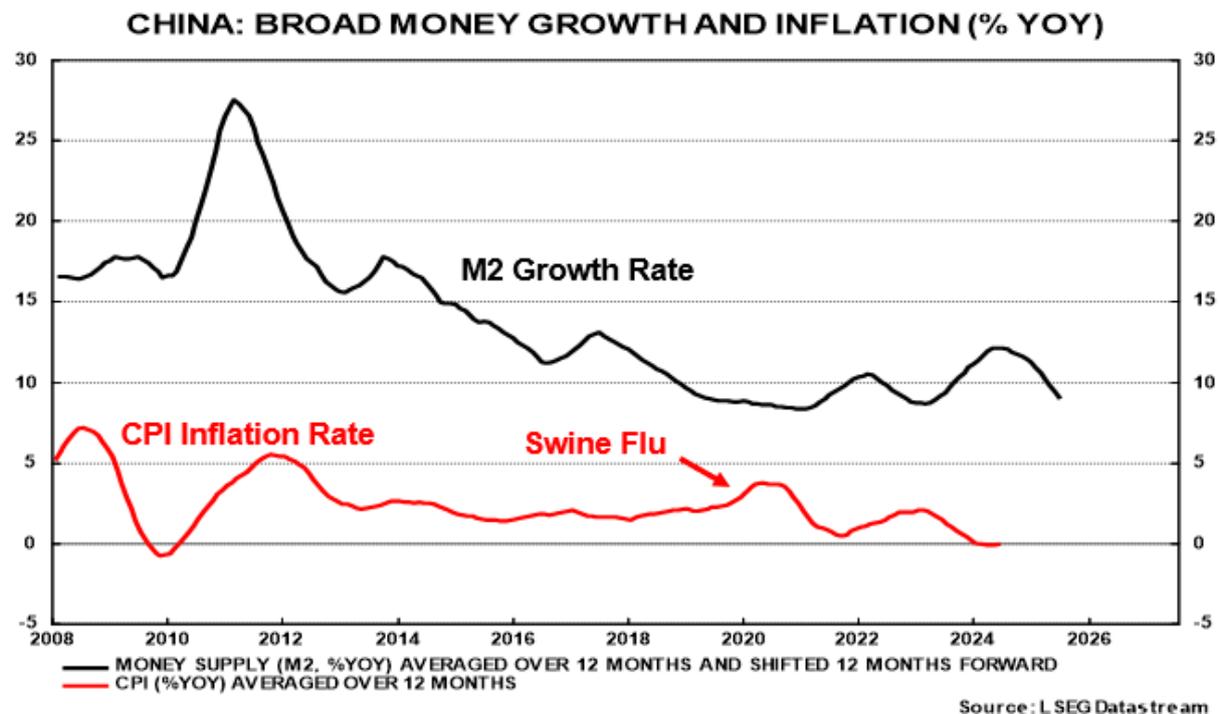
This Newsletter provides a “monetarist” account of China’s monetary policy over the last decade and a half and uses that framework to analyse what has gone wrong. Implicitly, the framework provides a roadmap of how to conduct monetary policy going forward, but it is worthwhile spelling out the implications for asset prices, growth, interest rates, and inflation.

¹ For example, when Covid struck the US in February/March 2020, the Fed cut the Fed funds rate and increased money growth massively through QE. The first effect was that market rates fell, with 10-year T-bond yields falling from just below 2% to 0.543% by August 2020. But then as the economy recovered, loan demand and inflation expectations began to rise, 10-year Treasury bond yields increased to 1.746% by March 2021, rising to a peak of 4.938% in October 2023. Lower rates lasted about six months; higher rates have lasted four years so far. It would be hard to find a better illustration of the Fisher effect.

Section 1. A Monetarist Summary of Chinese Monetary Policy since 2009

Chinese monetary policy started out the decade of the 2010s with a huge increase in the growth of M2. Although the policy was labelled an RMB4 trillion fiscal stimulus, the important part of the stimulus came from monetary growth. The annual growth rate of M2 roughly doubled from 15% to 30% in 2009 (see Figure 2 but note that the M2 growth rate has been averaged over 12 months and shifted forward by one year. This is legitimate because it takes 1-2 years for the effects of faster or slower money growth to show up in inflation). This produced a rise in inflation from -1.8% in July 2009 to a peak of 6.5% in July 2011. (Again, note the CPI in Figure 2 is smoothed.)

Figure 2. Over the Past Decade, Lower M2 Growth has Lowered Inflation.



For the remainder of the decade 2011-19, M2 growth was on a slowing trend. Consequently, after 2011 inflation returned to a very low average rate until the outbreak of African swine flu in 2018-19. The disease was so widespread in pig farms that it had the effect of pushing up pork prices sharply. Since pork is the staple meat in China, it has a large weight in the CPI and showed up as a distinct rise in the overall price index, even though pork prices are a relative price. However, now that the disease has been suppressed, inflation has fallen to a much lower rate.

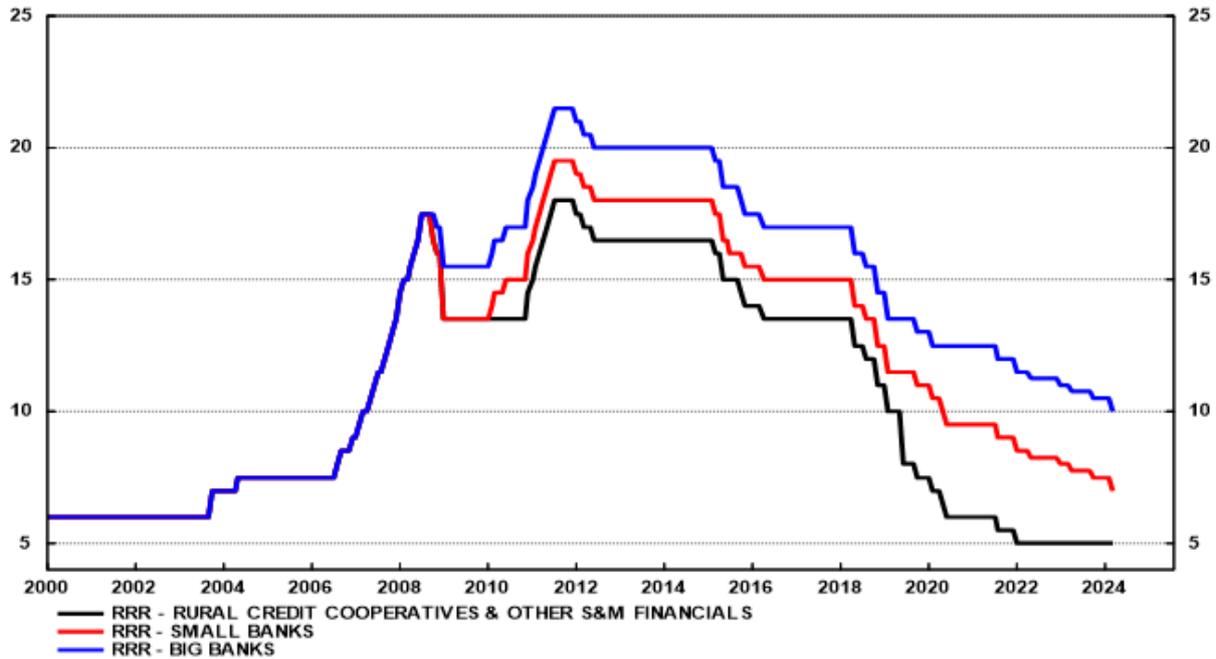
A virtually zero inflation rate in the early 2020s also makes sense given the low average growth of M2 in recent years. Since 2020 M2 growth has been a little “bumpy” but has averaged just 10.1% year-on-year, its lowest rate this century.

Two other aspects of Chinese monetary policy need mentioning here. First, since 2012 the RRR (reserve requirement ratio) applicable to banks’ deposits has been steadily lowered from a level of 21.5% to 10.0% (for big banks). The RRR (Figure 3)



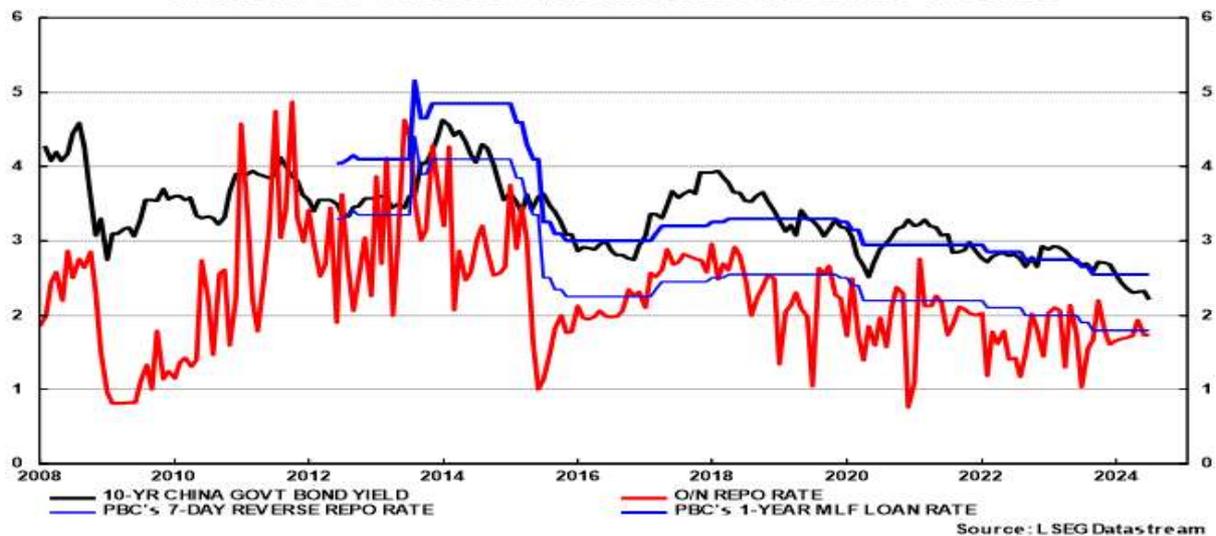
should be viewed as part of the PBOC’s sterilisation toolkit. When the authorities were pegging the RMB and capital inflows from the carry trade were large, increases of the RRR were a way of preventing some of those inflows from causing inflationary increases in M2. Once the policy of holding down the RMB was abandoned in 2015-16, such sterilisation became redundant and the PBOC has been able to reduce the level of the RRRs.

Figure 3. The PBOC Unwound Sterilisation by Lowering RRRs.
CHINA: RESERVE REQUIREMENT RATIOS (%)



The second aspect of China’s domestic monetary policy that deserves mention is the development of a series of instruments by the PBOC to manage domestic money markets. These include the MLF (medium-term lending facility), the SLF (short-term lending facility), the repo and reverse repo rates, as well as others (Figure 4).

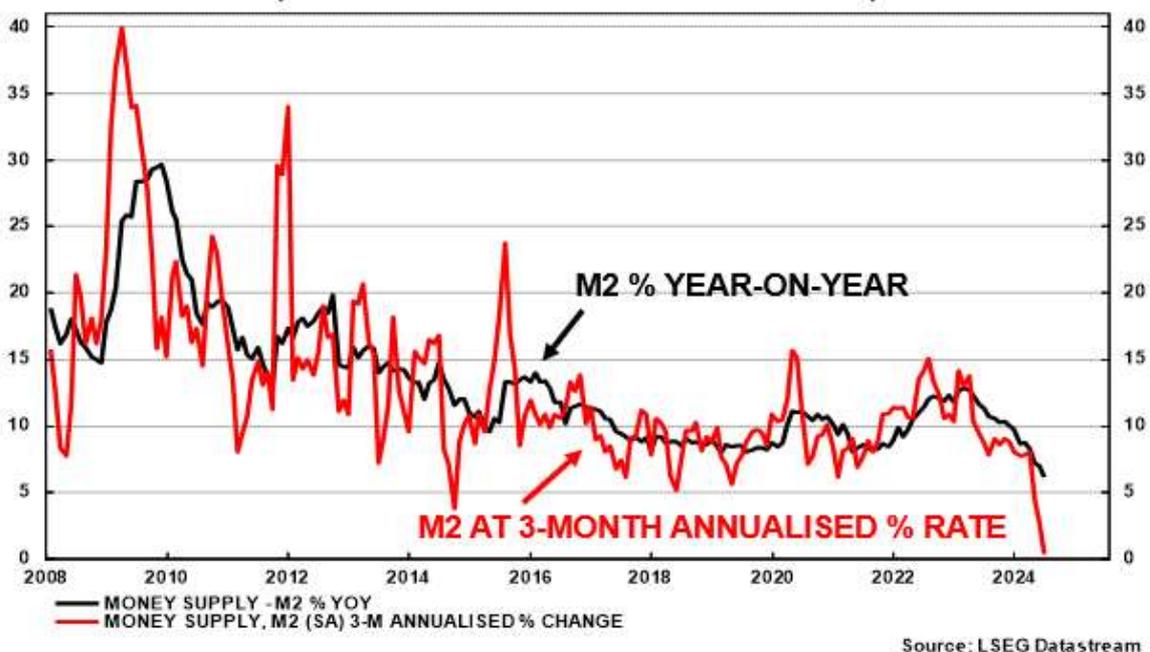
Figure 4. Market Rates on CGBs have Fallen more than Official Rates.
CHINA: PBOC RATES AND MARKET INTEREST RATES



However, in my judgment, the PBOC has not used its new credit instruments aggressively enough to change significantly the trajectory of M2 monetary growth. After the brief tightening of rates in 2012-13, China's economy slowed as export growth dived into negative territory in 2014 and 2015-16. Interest rates were therefore cut in 2015 and have generally stayed low ever since. It's true that the reverse repo rate was raised from 2.25% to 2.55%, but this was only 30 b.p. of rate hikes through 2017-19. On this basis, the PBOC's interest rates have largely followed the market, rather than set market rates or guided broad money growth.

Since January 2020, the PBOC's rates have again been gradually falling, but only by miniscule amounts (Figure 4), whereas 10-year CGB yields have fallen much more.

Figure 5. Money Growth has Plunged.
CHINA: M2 MONEY SUPPLY
 (% YOY & 3M % CHANGE AT ANNUAL RATE)



All this means that interest rate changes in China have not been enough to direct M2 growth significantly upwards or downwards. But since December 2023, M2 on a year-on-year basis has slowed from 9.7% to 6.2% in June (Figure 5), while on a 3-month annualised basis it has slowed from 7.8% in January to 0.4% in June. Both June figures are the lowest growth rates ever recorded on a year-on-year or annualised basis.

Against a background of a still-weakening property market and a crisis in the funding of local and provincial governments, the demand for credit appears to have weakened abruptly and with it, money growth. All these are symptoms of what Irving Fisher called “debt deflation” or what Richard Koo calls a “balance sheet recession”.

The outlook for the Chinese economy against this kind of background is not at all favourable. Of course, the growth rate of M2 could be reversed, but until it is any monetarist forecast must remain highly cautious about the outlook for nominal or

real growth. Mild inflation must be expected to turn to deflation, and with such weakness of demand, market interest rates – such as bond yields – will fall further.

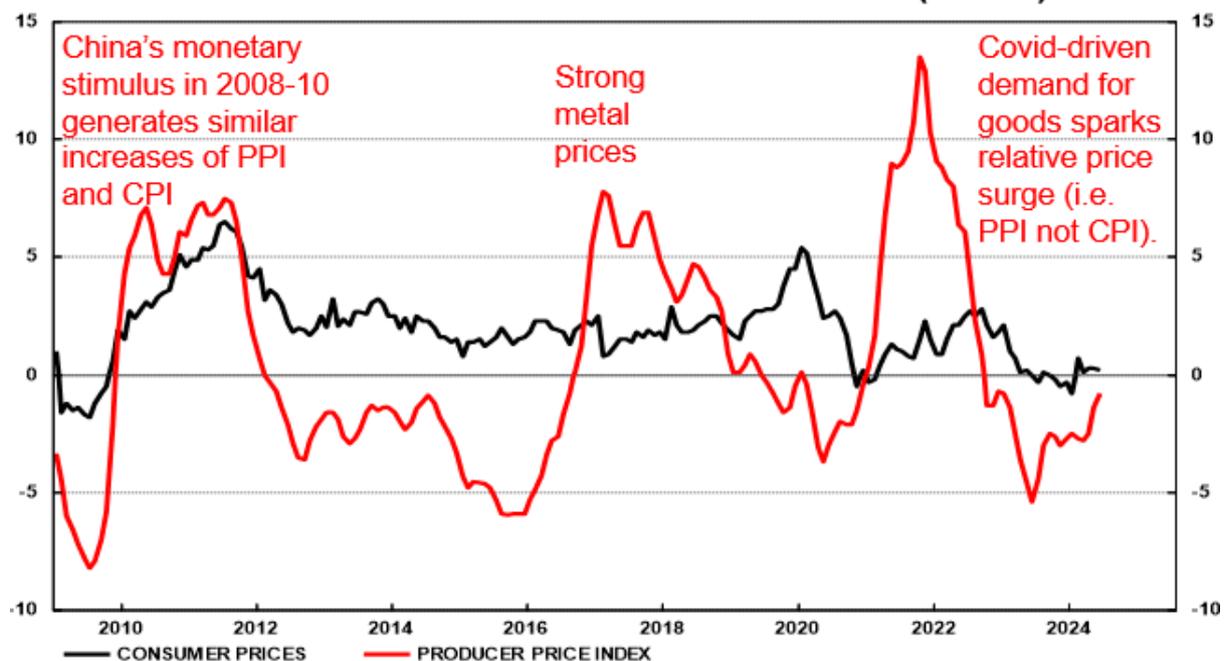
Section 2. How to Solve the Current Dilemma

In the Introduction of this Newsletter, I argued that in response to significantly **slower** money growth, interest rates first rise (or stay level) and later fall. Now recall that between 2009 and the end of 2013 China's M2 averaged 19% p.a. It then slowed gradually to average about 10% p.a. between 2014 and the end of 2023.

In contrast to much of the rest of the world which unnecessarily printed money in the face of the Covid pandemic, China did not boost money growth during the Covid pandemic. Economic activity was obviously disrupted temporarily by the repeated, often severe lockdowns, but the economy continued to grow at a modest rate. A more serious longer-term headwind was the continuing drag from the property market and the financial plight of local government entities. Leaving aside the swine flu episode, inflation also stayed low, thanks to the slower money growth.

As a result of these forces, interest rates remained fairly flat between 2016 and 2023 (Figure 4) with moves by the PBOC too small to have much impact on M2 either upwards or downwards. But since the start of this year M2 growth has declined even further (Figure 5) and therefore China is now in a third stage of slower money growth. According to the framework laid out above (pp. 2-3), if current rates of M2 growth persist, inflation will fall further and market interest rates will also fall, almost no matter what the central bank does in the short term.

Figure 6. With Sharply Lower M2 Growth, Inflation will Fall Further.
CHINA: CONSUMER & PRODUCER PRICES (%YOY)



To escape from this downward spiral the PBOC **needs to boost M2 growth in a steady and sustained manner – but the rate is critical**. It will not be a good idea to push too hard on the accelerator to generate, say, 15% M2 growth. Using China's M2, the best rate or “golden growth rate” to aim for is derived from the equation of exchange, $MV = Py$:

Inflation Target + Potential Real GDP Growth + Growth of M2 Demand = M2 growth

This works out as follows: 3% + 5% + 2.9% = 10.9% p.a.

Rounding and allowing for short-term errors, the M2 target should be set at 9-13% in current circumstances, perhaps later being narrowed to 10-12%.

Also, it would not be a good idea passively to lower rates by very small amounts (as the PBOC appears to have been doing) in the hope that firms and households will suddenly start to borrow at some threshold and thereby increase M2 growth. Firms and households will simply not behave like this against a background of conditions that resemble a balance sheet recession.

In other words, the **interest-rate-only strategy** advocated by major central banks and Keynesian academics the world over is fatally flawed. It will not ensure a recovery of broad money growth.

When households and firms are reluctant to borrow and banks are reluctant to lend, money is not being created and M2 growth may remain too low.

In these circumstances, the best strategy is for the central bank **to purchase securities from non-banks** (NOT from banks) i.e., **to do QE** because this will generate new flows of deposits into the banking system. *Note that this does **not** mean that short-term interest rates should be lowered to zero as major central banks did at the time of Covid. The securities could be purchased at market rates without embarking on a zero-interest rate strategy.*

The second-best strategy is to make loans to banks **on condition that** they on-lend to customers. The Bank of Japan did this during Covid, following the Bank of England's Funding for Lending scheme.

The third-best strategy – if legally permitted – is for the central bank to lend directly to the government and for the government to spend the funds. This is the least attractive solution because it means that the role of government is increased at the expense of the private sector at a time when policy should be aiming at reviving the private sector.

Summary and Investment Conclusions

- Chinese monetary policy is facing a conundrum: how to revive the economy without causing inflation or financial instability.



- The analysis explained how the PBOC had been successful, after the big stimulus of 2009-11, in gradually bringing down broad money growth to rates consistent with very low inflation. (The increase of leverage through the shadow banking markets was not addressed in this Newsletter as I have discussed it in detail elsewhere, e.g. in IMM Newsletter #23, August 2023.)
- Although the PBOC has developed a series of money market tools for lending, it has not utilised them in an aggressive manner, preferring to make very small changes in rates. As a result, the PBOC is gradually shifting towards **an interest-rate-only** strategy.
- The immediate problem is that M2 growth has tumbled. Based on its incremental interest rate strategy, the PBOC will struggle to restore M2 to a path of stable, healthy money growth.
- To restore economic growth, target inflation, and normal yields the PBOC needs to engineer a growth rate of M2 of 9-13%, initially at the high end of that range. This might require a temporary period of QE.
- On the current trajectory of broad money growth (well below 10% p.a.), nominal GDP and inflation, which are already very low, are likely to fall further in 2025 and 2026.
- Against this background, the Chinese currency will likely weaken, exacerbating trade tensions. If China did not have exchange controls, the very low interest rates in China would encourage an outbound carry trade (borrowing RMB to invest in higher yielding FX).
- Yields on CGBs will likely fall further, repeating the experience of JGBs in the 1990s and subsequently.
- Equity markets in China will not perform well until nominal GDP growth returns to faster growth because the monetary squeeze will limit sales growth and corporate earnings growth of domestically oriented companies.

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