

David Hume & The PBOC: He Who Laughs Last... (02/12/19)

Your analyst has been working hard in the data mines through November researching the new quarterly report - *Inflation, Disinflation & Deflation: Their Impact on Equities & Problems for Europe* (Solid Ground 4Q 2019). The report utilizes the approach in the Practical History of Financial Markets course to assess the outlook for US and European equities from rising inflation, disinflation and deflation given current levels of inflation. The conclusions are very different for the US than they are for Europe. As with the 3Q 2019 report (*When Debt Matters: Where to Expect Credit Crises in the Next Recession*), the conclusions are dire for European equities and for the financial, economic and political stability of Europe should disinflation continue.

However, should *The Solid Ground's* prognosis for disinflation and deflation be wrong, and higher inflation results, this would be very positive for European equities. Thus the key call for investors remains whether a reflation is under way or whether the steady disinflation that has been extant through 2019 will now continue or reverse? Your analyst is not in the camp that sees a move to reflation and believes the rally in equity prices, particularly in Europe, is not sustainable. There is a much greater prospect of a continued disinflation than a reflation and, as ever, the key cause of this is the failure of Chinese reflation.

It is hardly news to any investor that a country with a managed exchange rate running no external surplus will struggle to reflate its economy. It's hardly news because David Hume was explaining the operation of that particular monetary mechanism as early as the eighteenth century.

Suppose four-fifths of all the money in GREAT BRITAIN to be annihilated in one night, and the nation reduced to the same condition, with regard to specie, as in the reigns of the HARRYS and EDWARDS, what would be the consequence? Must not the price of all labour and commodities sink in proportion, and every thing be sold as cheap as they were in those ages? What nation could then dispute with us in any foreign market, or pretend to navigate or to sell manufactures at the same price, which to us would afford sufficient profit? In how little time, therefore, must this bring back the money which we had lost, and raise us to the level of all the neighbouring nations? Where, after we have arrived, we immediately lose the advantage of the cheapness of labour and commodities; and the farther flowing in of money is stopped by our fulness and repletion.

Again, suppose, that all the money of GREAT BRITAIN were multiplied fivefold in a night, must not the contrary effect follow? Must not all labour and commodities rise to such an exorbitant height, that no neighbouring nations could afford to buy from us; while their commodities, on the other hand, became comparatively so cheap, that, in spite of all the laws which could be formed, they would be run in upon us, and our money flow out; till we fall to a level with foreigners, and lose that great superiority of riches, which had laid us under such disadvantages?

David Hume¹

Hume's analysis looked at the flow of money, then primarily gold and silver, cross-border in an age when the authorities sought to keep the value of their money steady relative to gold. Today the PBOC, and others, seek to maintain the value of their exchange rate relative to a basket of other currencies. The target may be different but the mechanism remains the same in that a central bank with such a target allows the supply of reserve money, the modern equivalent of gold and silver, to be determined by the condition of their external accounts. When there is upward pressure on the RMB, the PBOC intervenes in the foreign exchange market, adding to its foreign exchange reserves and creating commercial bank reserves. When there is downward pressure on the RMB, foreign exchange reserves shrink and commercial bank reserves also shrink. This forced contraction and expansion of commercial

¹ On The Balance of Trade 1752

bank reserves is tantamount to quantitative easing and quantitative tightening, with the crucial difference being that the PBOC's assets are comprised of foreign currency bonds and not local currency bonds.

With commercial bank reserves fulfilling the role for the financial system once fulfilled by specie/gold-silver, Hume would recognise the version of what is called the price-specie flow system operating in China today. He would also recognise how the PBOC is not allowing the system to work, by its success in artificially boosting broad money growth, and is thus simply delaying the price adjustment the mechanism dictates. The consequences of keeping too much money in the system were clear to Hume - *'we immediately lose the advantage of the cheapness of labour and commodities; and the farther flowing in of money is stopped by our fulness and repletion'*. Investors, of course, cheer this 'fulness and repletion', in the form of higher nominal GDP growth than would otherwise pertain, and chose to ignore how *'the farther flowing in of money is stopped.'* And stopped it now has.

China's foreign exchange reserves have stopped growing and its commercial bank reserves are contracting. If Hume is correct, the only answer now is that the 'fulness and repletion' must end, prices decline and then *'what nation could then dispute with us in any foreign market, or pretend to navigate or to sell manufactures at the same price, which to us would afford sufficient profit'*. Less fullness in modern terminology is the decline in internal prices that can lead once again to a balance of payments surplus, a growth in foreign exchange reserves and a growth in commercial bank reserves. The PBOC has acted to stop such an adjustment with increasingly dire consequences.

The fluctuating monetary factor driving price changes in China should be the movement of bank reserves. It is their automatic adjustment, driven by the condition of the external accounts, that should act to adjust the growth rate in the total money supply. By impacting the growth in broad money, it will then impact nominal GDP growth and as part of that the rate of inflation or deflation. However, in recent years the PBOC has taken action to keep broad money growth at a higher level than resulted from the contraction in foreign exchange reserves and thus commercial bank reserves. Investors have cheered this combination of a somewhat stable exchange rate and a monetary policy they believe is sufficient to facilitate economic growth. The 'fulness' is sustained but at the price of a continued flow of money out of China. That outflow of money is driven by a large and growing capital account deficit, as a direct result of the refusal of the Chinese authorities to permit the necessary internal price adjustments.

The result of the PBOC interference in the price-specie mechanism is that China has had zero growth in commercial bank reserves since the end of 2016! Indeed, the current level of reserve money in China is almost back to a level first recorded in February 2015! This is a dramatic tightening in monetary policy in a country where the PBOC has been promoting a reflation for over 18 months! While that tightening intensifies, analysts continue to focus on the PBOC drive for reflation and ignore the fact that the PBOC balance sheet has stopped growing. What are the chances of a global reflation when the central bank of the world's second largest economy is witnessing a forced contraction in its balance sheet? So how has the PBOC bucked the price-specie flow mechanism and how much longer can they do so? How, ultimately, can PBOC policy be consistent with a stable exchange rate?

Any analyst looking at a country with zero growth in commercial bank reserves for almost three years, as China has just witnessed, would probably assume that that country was reporting very low or perhaps no nominal GDP growth. Chinese nominal GDP growth is indeed very low by historical standards at just 7.6% in 3Q 2019. While nominal GDP growth has been below that level before, it has only been so during the Asian Economic Crisis, the Great Financial Crisis and in the commodity price slump from 2015-2016. However, 7.6% growth in nominal GDP remains impressive when commercial bank reserves are now contracting year on year. Was David Hume wrong? Is it possible to operate a managed exchange rate and somehow buck the market that dictates tighter monetary policy and slower growth when there is no external surplus?

Investors are betting upon some unique features in the Chinese monetary system that will allow the PBOC to prove David Hume wrong by creating strong GDP growth while operating a managed exchange rate without an external surplus. In particular the Chinese authorities' ability to restrict the free movement of capital and their direct ownership of the commercial banking system are features that

many believe simply mean that China can have its managed exchange rate and an independent monetary policy. There is no doubt that these key features **do** provide greater monetary flexibility to Chinese policy makers and have accounted for the ability of the Chinese economy to grow even as China's external accounts have moved from surplus to deficit.

Before looking at the major structural problems China has in bucking the market, we should focus on a key technical mechanism that has allowed the PBOC to seemingly prove Hume wrong. China has actually managed to keep narrow money growing, if only just, since the peak of its foreign exchange reserves in 2014. A key way that the growth in reserves was initially maintained was in reversing the sterilization process that had been used to constrain bank reserve growth. The PBOC began to issue bonds as early as 2002. In this operation liquidity was removed from the system. While with one hand the PBOC created bank reserves, through daily intervention in the foreign exchange market, with the other it took liquidity from the banks, partially offsetting the earlier creation.

By the middle of 2010 the total value of PBOC bonds had swollen to RMB4.7trn. From 2010 the growth in foreign reserves began to slow and the pace at which the PBOC was forced to create reserves thus slowed, and this slowing turned into a contraction by 2014. The PBOC's response to this was to buy back the PBOC bonds held by the banks and thus create a growth in reserves at a time when their actions in the foreign exchange market was forcing them to destroy reserves. The problem, of course, is that there was only, at the peak, a total of RMB4.7trn outstanding and by September 2016 they had bought virtually all of those bonds back. The ability to boost bank reserves through that operation had thus ceased and today commercial bank reserves are only marginally higher than they were when the PBOC ran out of bonds to buy back in September 2016. That particular rabbit has already been pulled out of the hat.

Another mechanism the PBOC used to dampen the growth in commercial bank reserves from 2002 to 2011 was to increase the reserve ratio of the commercial banks. This is the ratio of bank reserves that commercial banks must hold in relation to their liabilities. By increasing the reserve ratio the PBOC sought to neutralize the impact of the growth in reserves by forcing banks to hold higher levels of reserves. A rising reserve ratio restricted the ability of the commercial banking system to grow their balance sheets and thus restricted their ability to create money. When the PBOC exchange rate policy resulted in a slowdown in the growth of commercial bank reserves, the reserve ratio was cut.

The required reserve ratio for Chinese commercial banks has now reduced from a peak of 21.5% in 2011 to 13.0%. This reduction in the reserve ratio, at a time when the growth in reserves has slowed and now stopped, has allowed commercial banks to continue to grow their balance sheets and in the process create money. Thus, by reducing the required reserve ratio, the PBOC has been able to keep the growth in broad money much higher than it would have been had the banks' balance sheets been constrained by the lack of growth in their reserves. Of course, this can continue and the required reserve ratio could decline much further from its current 13.0%; it was as low as 6.0% at the beginning of this millennium.

Hume understood how the growth in broad money could decouple from the growth in specie/bank reserves. Hume lived in an age of paper money, though in his own country paper money was not yet one hundred years old when he wrote his analysis in 1752. Hume realised the role that commercial banks creating money could play in inflating the money supply beyond the flow of specie (gold and silver) that was dictated by the condition of the country's external accounts. This inflation of money, to the extent that it kept a country's costs higher than they would otherwise be, simply delayed the operation of the positive flow of specie that occurred when a nation was competitive. Everything is relative in the competitiveness game, but if such a paper inflation kept a country too full and too replete it would negatively impact the external account and the flow of specie to that country and the creation of what we now call bank reserves.

Hume could not have conceived of the scale of the paper money creation in China over the past decade that decoupled broad money growth from the growth in commercial bank reserves. Nor could Hume have foreseen a system in which all the banks that have created this mountain of credit and paper

money were ultimately mandated to do so by the state. In China this state ownership of the 'commercial' banking system allows the state to mandate high growth in bank assets, and thus the creation of money, even when the growth in bank reserves would normally dictate no growth in bank balance sheets.

Investors cheer this flexibility but, as we have seen above, this merely maintains the 'fulness and repleteness' that prevents any improvement in the external accounts and a return to the growth in bank reserves. It is no secret to readers that portfolio investors have very short-term time horizons. Thus portfolio capital not only cheers on price distortion, but often exacerbates it. The extended distortion has kept the exchange rate steady and the economy growing, but it has come at the cost of preventing an external surplus and has now lead to a contraction in bank reserves. All monetary distortions have consequences and the price for China is a stubbornly large and growing capital account deficit.

The Chinese authorities are very aware that their days of running large current account surpluses are over. The days of continued current account surplus are over because China is now the world's second largest economy and it is politically impossible that an economy of such a size could base its growth on running current account surpluses. The arrival of Donald Trump in the White House is simply evidence of this particular new normal. So even if the authorities were prepared to accept the downward adjustment in internal prices dictated by their monetary policy, it would likely still leave them with a political conflict regarding the size of their current account surplus. Knowing this dynamic, the Chinese authorities have sought for many years now to positively adjust their capital account to permit the country to continue to run a balance of payments surplus even as the current account surplus declines and disappears.

There have been a myriad of policy changes in China designed to attract foreign capital, in tandem with a myriad of policy changes in China designed to prevent local capital outflow. Despite these policy changes, China continues to run a capital account deficit as witnessed by its stable-to-declining foreign exchange reserves at a time when they are reporting a material current account surplus. This could, of course, change and the flood of money expected from MSCI and Barclays Bloomberg index inclusion could suddenly start to overwhelm the massive capital outflow, most of it illegal, that has drained China's foreign reserves. Your analyst believes that that is unlikely. The drain of capital from China simply reflects the excessive repleteness and fullness of the economy that Hume showed could not be sustained while operating a managed exchange rate.

Price distortions in China are undermining returns on capital and spurring capital outflow. In China many selling prices can be adjusted by state-run industry where prices are mandated not by the search for good returns on capital but the pursuit of the Chinese Communist Party for social stability. Such prices can keep a current account more competitive than it would otherwise be. However, by driving down returns on capital, it also drives out capital. When this is combined with PBOC action to keep broad money growth and prices too high, returns for capital are depressed. While Hume focused on the flow of goods and their role in altering the external accounts in China, it is private capital that flows out in response to the over 'fulness and repleteness' due to price distortions and the ensuing poor returns on capital. The need to control prices is indicative of a more general need for control by the Chinese state. Savers know the negative consequences of such control and are removing their savings as fast as they are able. The drive for greater control, seemingly of every fact of life in China, will continue to drive savings and people from China. That exodus is not compatible with growth and inflation and a stable exchange rate.

All that this monetary *legerdemain* of the PBOC ultimately achieves is to maintain the 'fulness and repletion' that prevents money flowing in through a balance of payments surplus and a return to the creation of commercial bank reserves. It's a suspension of the price-specie flow mechanism that is doomed to failure as it prevents the internal price adjustments which Hume showed in 1752 are the key to the operation of a managed exchange rate. This suspension of the mechanism indicates just how worried the Chinese authorities are about moving from 'fulness and repletion' to a period when 'the price of all labour and commodities sink in proportion' to the contraction in supply of money.

There is very good reason for them to be concerned as they have a level of debt-to-GDP and crucially a growth level in the debt-to-GDP ratio (see When Debt Matters: Where to Expect Credit Crises in the Next Recession 3Q 2019) which makes it essential that they push nominal GDP growth higher rather than allow 'the price of all labour and commodities sink in proportion' with the associated negative impacts on solvency. In the last available quarter of data, China's debt rose by 5.4% of GDP to a new all-time high of 259.4%. This is not a country which can permit the contraction in commercial bank reserves, mandated by its external deficit, to bring the internal deflation which the managed exchange rate policy now demands.

The PBOC continues to wait for its *deus ex machina* in the form of accelerated capital inflow. It is a wait that seems to be increasingly in vain as the US administration increasingly realises that restricting capital inflow to China is an important part of the new containment policy. As long as this capital does not arrive, the PBOC faces a choice between allowing a deflation which would be highly dangerous given the level and growth in the country's debt-to-GDP ratio. It can either do this or abandon its managed exchange rate policy.

With foreign reserves contracting, commercial bank reserves contracting, and the debt-to-GDP ratio soaring, the time is now near when the Chinese authorities realise that only a floating exchange rate can provide the opportunity to inflate away those debts. That float, a *de facto* devaluation, will bring a great wave of deflation to the world and the global equity rally, based upon a move to reflation, will be seen to be false. The alternative is to cling onto the managed exchange rate policy and accept the lower nominal GDP growth that follows, given that commercial bank reserves are now contracting and the external accounts not improving.

Declining growth in China, while debt-to-GDP moves ever higher, is not good news for a global reflation. Whichever route Chinese policy makers choose, China will continue to be a disinflationary drag upon global growth and probably, in the opinion of this analyst, a force for deflation. The attempt to buck the market has simply increased the scale of the fullness and allowed that fullness to be matched by excessive levels of debt. Both are precursors to deflation and not inflation.

In short, a government has great reason to preserve with care its people and its manufactures. Its money, it may safely trust to the course of human affairs without fear of jealousy. Or if it ever give attention to this latter circumstance, it ought only to be so far as it affects the former.

David Hume: *On The Balance of Trade* 1752

By failing to trust its money to the course of human affairs, the CCP is ultimately destroying its people and its manufactures.