The Great Unwind

TAMRIS Perspectives on Capitalism in Crisis

Risk and uncertainty over the magnitude of risk is a fact of life. Investment discipline within the portfolio context is structured around this reality. There are times, however when the risk event is of a potentially far greater magnitude and of far longer duration than would be considered normal and manageable within a sensible portfolio construct. The question is, are we in such a period at this moment in time and to what extent?

Perspective 1

Money supply, interest rates and inflation

The beginnings of the current risk event can be traced directly back to the economic and market excesses of the late 1990s although many of the reinforcing trends (falling interest rates and inflation and increasing financial innovation) have been developing for much longer.

Of particular importance during the late 1990s were the US Federal Reserve's low interest rate policy and its failure to raise interest rates to control asset price inflation from 1995/1996 onwards.

Chart 1

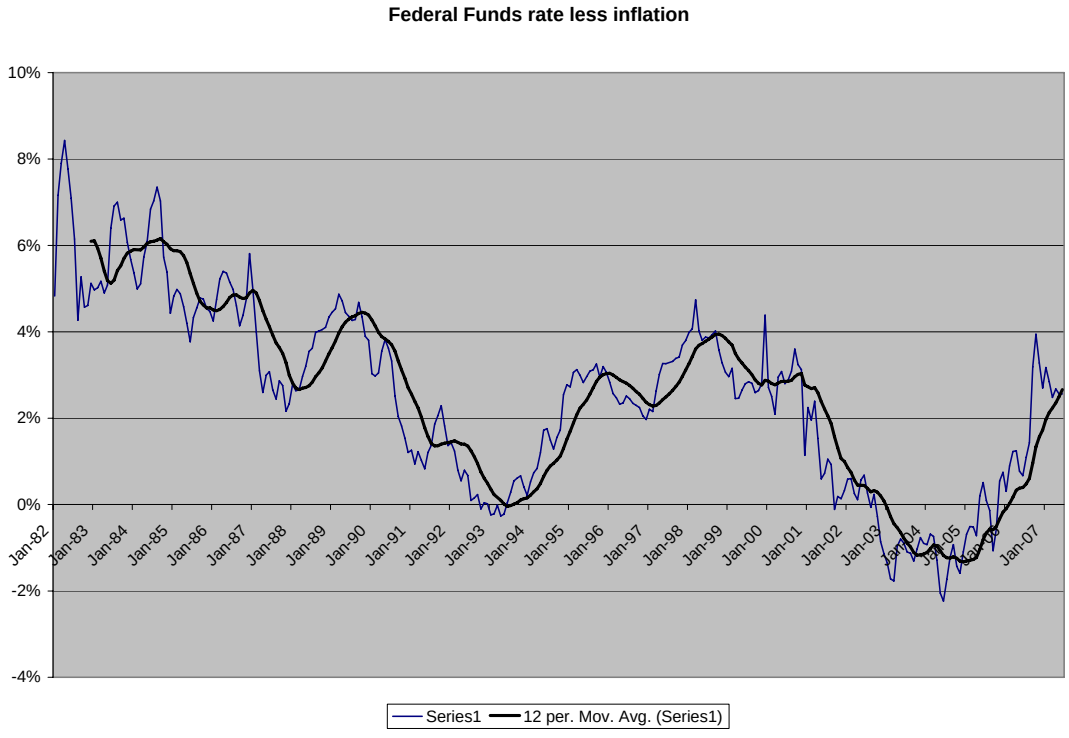


Chart 1 shows the Federal Funds rate less inflation from 1982 to 2007. It clearly and importantly shows a pronounced decline in the cyclical real interest rate differential. While it shows that monetary policy appeared to be relatively tight in the 1990s relative to consumer price inflation (see following analysis) it also highlights the period 2001 to 2005 when interest rates were held more or less at or below the rate of inflation for a long period of

time. The very aggressive policy of low interest rates confirms the weight of the economic risks of the time; highly indebted US consumers, over investment and excess industrial capacity globally and domestically and, high inventories and excessively overvalued stock markets.

Importantly the summer of 2005 marked the peak of the real estate boom in the US, a time when real interest rates were still negative. The sub prime crisis started to unfold in 2006; in June 2006 there was a real Federal Funds rate of 0.7%, similar to the real rate of 1993 when the US economy still had some 7 years of expansion ahead of it. The subsequent recovery in real rates would ordinarily have been held for a longer period of time in a robust economic cycle (note the length of time real interest rates were held at comparable levels during the 1990s). That the US economic cycle was at risk from a credit crunch and a recession in the housing market at such an early period in the real interest rate cycle should be a concern.

> Note the relationship between interest rates, inflation and financial innovation and the rise in consumer debt to income ratios. This relationship has come under strain with a reversal of interest rates, inflation and will be further stressed with the reduced availability of credit and higher interest rate spreads. Many have under played the risks of high levels of consumer debt but the risks and their impact are clearly evident from the physics of chart 1 and 2 and the ongoing credit crisis.

The following chart shows the real annual increase in US commercial bank liabilities divided by the US inflation since January 1993. Commercial bank liabilities have been chosen in preference to M1 and M2 since it is a much broader measure of money supply growth (M3 being discontinued in 2006) and therefore better able to capture the impact of broader monetary aggregates on asset prices.

Chart 2

Real annual growth US Commerial Bank Liabilities/inflation (denominator)

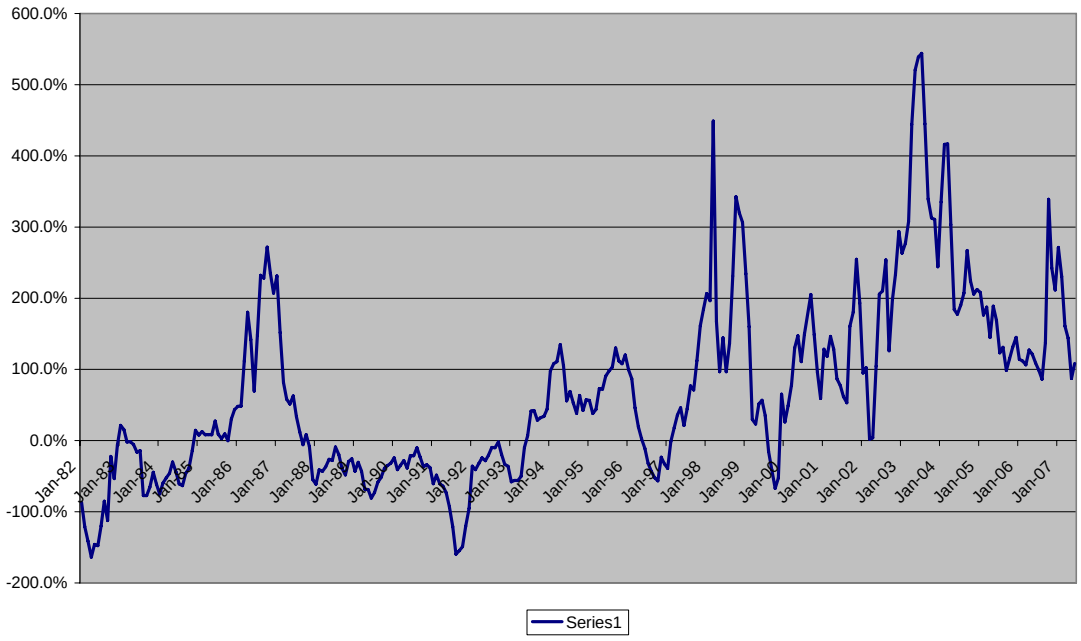


Chart 2 shows that the real growth rate of broad money supply relative to inflation was running at high levels during the 1990s, and especially so from 2001 onwards. That strong money supply growth has not translated into higher inflation is due partly to the fact that much of this money supply growth has gone towards assets and property in particular (note also the boom in commodity prices). While US demand for imports would have resulted in a reduction in money supply (due to increases in foreign Central Bank holdings of US dollars), this has been counteracted by purchases of US securities by foreign investors and central banks; much of the excess US

consumer demand for goods met by foreign suppliers has been recycled into US and other assets. It is also probable that the constant recycling (or employment) of broad money supply into real estate and other assets has prevented money supply growth from filtering directly into higher consumer prices. Excess money supply growth has also gone hand in hand with financial innovation and the proliferation of asset focussed hedge funds and private equity vehicles and much of broad money supply would appear to be firmly focussed on assets as opposed to consumption and production.

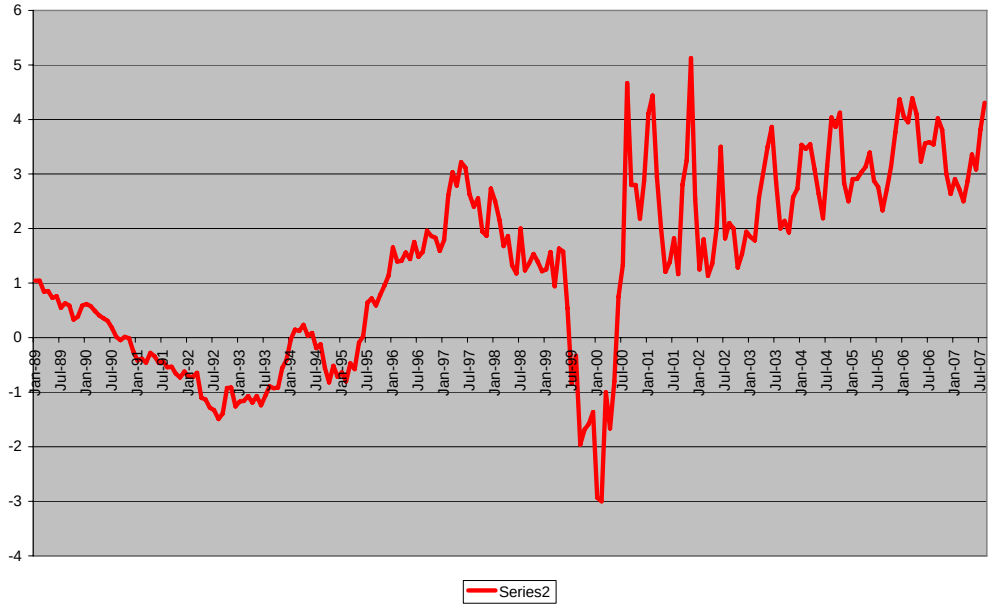
> It is worthwhile pointing out that China's massive trade surplus and foreign reserves have only really developed post 2001, coinciding with US and others low interest rate policies. Paper number 0507, Centre for International Economic Studies states, "*The country's (China) current account shifted to a surplus from 1997 onwards, though the capital account surplus diminished, while capital flight continued unabated. In aggregate, between 1997 and 2000, China's reserves remained more or less stagnant. Since 2001, China has experienced large and growing surpluses on both the capital and current accounts, while even the errors and omissions balance turned positive. Thus, reserves increased markedly during this period -- almost threefold*"[1]

The money supply and inflation relationship in the US (and by implication demand for real assets) is all the more interesting given the relatively low rate of capital investment and GDP growth in the current US economic cycle and relatively low wage growth since 2001. While real interest rates appeared to be high relative to economic activity in the late 1990s we can actually discern from this angle (chart 2) that interest rate policy was ignoring a significant element of broad money supply growth and that this broad money supply growth has impacted asset price inflation up to 1999 and from 2001 onwards.

We can also look at graphics for UK broad money supply (M4) less interest rates relative to consumer price inflation (Real M4/Inflation CPI). Here as with the US we see a large expansion in broad money supply post 2001.

Chart 3

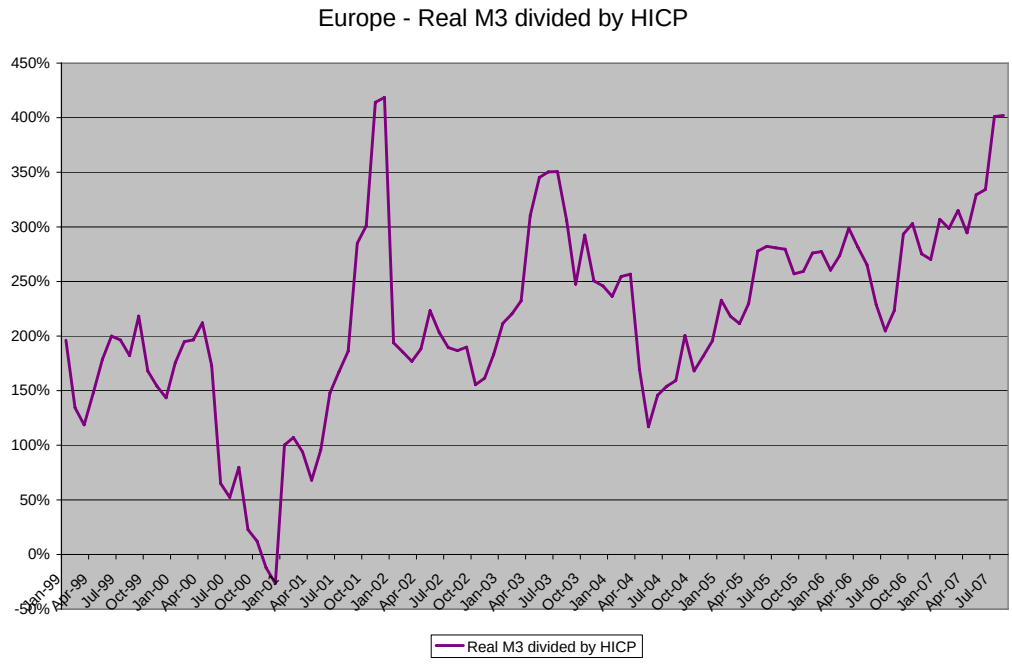
Sterling M4 lending less base rate / inflation (denominator)



The UK has many problems similar to the US with much more highly indebted consumers. A similar pattern has been seen with European broad money supply growth, note the chart below.

[1] http://www.adelaide.edu.au/cies/papers/0507.pdf

Chart 4



In point of fact money supply has been growing globally with most of this increase coming from emerging markets. Research from BNP Paribas[2] shows global money supply currently running at close to 88% of world GDP up from 70% of GDP in 1996.

> *"the expansion in liquidity has been a global, rather than a purely national, phenomenon. The increased integration of international capital markets means that the consequences of a loose monetary policy now spill across national borders. Thus investors have taken advantage of ample liquidity and unusually low interest rates in e.g. Japan to borrow in order to invest in higher yielding assets overseas, boosting asset prices internationally[3]".*

The relationship between money supply (narrow and broad), money supply growth and inflation is no longer considered stable enough on which to base monetary policy. Most central banks (with the exception of the European Central Bank) no longer target money supply growth when setting interest rate policy and the Federal Reserve no longer even tracks broad money supply aggregates (M3). However, this does not mean that excess money supply growth does not have a significant and ultimately just as important an impact on economic stability or on future inflation.

While consumer price inflation adjusts supply of and demand for money by raising the price of consumer goods and the factors of production, asset price inflation adjusts the price of real assets relative to the monetary demand for those assets without necessarily adjusting for real economic relationships. Excessive asset price inflation has potential negative secondary consequences.

1. On the one hand we have seen rising real estate prices influencing home equity withdrawals and consumer demand. Therefore, a portion of home equity, or the rise in home equity, has become a conduit for broader money supply growth to impact economic activity.

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[2] http://economic-research.bnpparibas.com/applis/www/RechEco.nsf/Conjoncture%20By%20DateEN/94E55D408DAF88EFC1257317002CD67A/$File/C0708_A1.pdf?OpenElement

[3] http://www.bankofengland.co.uk/publications/other/monetary/treasurycommittee/mpc/tsc070219.pdf

2. On the other hand we have seen increasing speculation and a focus on the securitisation of higher risk mortgage debt and consumer credit. While the process of securitisation has allowed broad money supply to become increasingly focussed on real assets (recycling of broad money supply towards assets) it has also served to significantly increase consumer debt/asset prices relative to incomes and economic growth. The allocation of broad money supply growth to asset classes typically purchased via high levels of leverage has also developed a more substantial and direct relationship between broad money supply growth, asset prices and consumer demand[4]. With US consumer demand to a greater extent dependent on home equity withdrawals and consumer demand and incomes more exposed to mortgage debt than before, so is broad money supply growth and consumer demand more dependent on asset prices.

A collapse in the value of the collateral (real estate values and potentially the banking systems loan assets) and the ability of consumers to finance the outstanding debt (declining economic growth, rising interest rates) could ultimately result in a fall in broad money supply given the relationship between broad money supply growth and asset prices. Since debt is an asset on a bank's balance sheet, loan defaults impacts on its ability to lend and to meet its liabilities (depositors assets).

As long as the debt is held off banks' balance sheets, the immediate direct impact on credit creation and money supply growth within the financial system of a decline in asset values should be limited. However, much of the collateralised debt obligations (and Collateralised Loan Obligations), asset backed commercial paper and other debt instruments held by bank backed SIVs and conduits are moving back onto bank balance sheets, meaning that declining asset values are directly impacting the availability of credit and hence broad money supply. We have already seen a substantial decline in the value of the asset backed commercial paper market, a movement of debt back onto bank balance sheets and the write down of substantial mortgage debt assets. Add to this a decreased willingness to lend, to take on board mortgage and other higher risk credit securitisations and higher credit spreads and we already have a number of substantial routes through which money supply growth can fall. Additionally, many hedge funds hold leveraged positions in increasingly illiquid assets, leverage supplied by the banking system to provide yet another mechanism for a decline in broad money supply.

Falling asset prices will ultimately impact consumer demand unless wage growth increases and/or domestic demand in Japan, Asia and Europe take up the economic slack. Much of the current monetary demand for US real estate and collateralised debt obligations (including those issued by countries such as the UK) have come from foreign investors as global savings have been recycled into the US debt markets. Falling demand for exports by US consumers will halt a great deal of US dollar recycling and place further pressure on asset values and US consumer demand.

Nevertheless the current credit crunch and the unwinding of complex credit derivatives is still in its infancy. As such the bulk of broad money supply remains virtually undented and free to move to alternative asset classes. In this context it is worthwhile noting the strong rebound in world equity markets (money flowing out of a focus towards credit derivatives and new money flows directed into equities), especially emerging markets and the continuing decline in the US property market and asset backed commercial payments. The recent cut in US interest rates has been made principally to stem the risk of a worsening credit/solvency crisis.

The understanding of money supply growth has become increasingly complex since 2000. Aggressive and sustained easing of global interest rates have played a large part in a significant and sustained increase in broad global money supply and corresponding debt. The US trade deficit and corresponding current account surpluses have also played a part in increasing global money supply as central banks (in particular China) purchase US dollars and only partially sterilise the resulting increases in their own monetary bases. Low interest rates and the large interest differentials between short term central bank rates and longer term higher risk debt have also played a significant part in diverting money supply growth into asset prices as has the explosion in hedge fund and private equity capital, over the counter derivatives markets and financial leverage in general. The world

[4] http://www.bankofengland.co.uk/publications/other/monetary/treasurycommittee/mpc/tsc070219.pdf *"the recent rapid growth in the money supply has been concentrated in the holdings of Other Financial Companies. This is a collection of heterogeneous institutions that includes pension and private equity funds, entities which in effect intermediate funds between different banks, and financial vehicles whose object is to shift risk off banks' balance sheets. The implications of the activities of each of these for asset prices and future movements in nominal demand are not easy to gauge.*

today is a totally different world from the one we lived only seven years ago. Inflation is not the specific focus of the current perspective but it is worthwhile noting that inflationary risks were increasing prior to the current credit crunch and capacity constraints were starting to appear in most developed economies (note the large increases in non residential capital investment in the UK and the US). Lower interest rates designed to prevent a collapse in the availability and cost of credit would maintain many of the developing inflationary forces.

References

1. Treasury Committee Inquiry Into The Monetary Policy Committee Of The Bank Of England
2. BNP Paribas Emerging Markets Overview July 2007
3. FT May 22 2007 – ECB use of money supply figures defended
4. Society General Constructing a monetary and financial conditions index for the United States
5. Citigroup – Currency implications of market turbulence
6. Federal Reserve Bank of Cleveland – Economic Trends February 2007
7. Federal Reserve Bank of Cleveland – Global Risks to US Monetary Policy
8. Federal Reserve Bank Of Cleveland – Where Is All the US Currency Hiding?
9. The Economist August 2007 – The Mandarins of Money; Central banks in the rich world no longer determine global monetary conditions
10. The Economist October 2007 – Spooking Investors
11. Federal Reserve Board Washington; Measurement of monetary aggregates across countries 2007
12. Federal Reserve Board of Dallas; The Changing Meaning of Money 1995
13. Federal Reserve Bank of New York and Princeton University; Money Liquidity and Financial Cycles.
14. Federal Reserve Bank of new York; Foreign Exchange Market Activities of the US Treasury and Federak Reserve.
15. ECB; Central Banks and Financial Stability, Exploring a Land Between 2002.
16. ECB; Why Has Broad Money Demand Been More Stable In the Euro Area Than In Other Economies? September 2003.
17. FEER June 2007; Satisfy China's Demand For Money
18. Bank of England; Monetary statistics and the monetary financial institutions consolidated balance sheet
19. RIETI; China In Transition
20. IMF – Sterilising Capital Inflows
21. Centre for International Economic Studies; Monetary Sterilisation In China Since the 1980s.
22. Banco De Espana; Global Financial Integration, Monetary Policy And Reserve Accumulation, Assessing the Limits in Emerging Economies.
23. BIS; The Monetisation of Japan's Government Debt
24. BIS; Quarterly Review September 2007
25. http://www.alliancebernstein.com/investments/us/StoryPage.aspx?nid=5343&cid=43713
26. http://www.economist.com/displaystory.cfm?story_id=9401752
27. Bank of England April 2007 Financial Stability Report
28. Institute of Economic Affairs; Tim Congdon, Money and Asset Prices in Boom and Bust