

## GLOBAL MARKETS

## Creditless bubbles and logical fallacies

## INVESTMENT STRATEGY

Some argue that the current risk rally is soundly based because it is not accompanied by a rise in credit. It's true that bank credit is not rising, but it is not the only form of liquidity funded by borrowing. Overall credit in the major economies is still rising because private sector deleveraging has been replaced by government debt issuance and central bank liquidity injections. This is promoting new bubbles in financial assets (Figure 1).

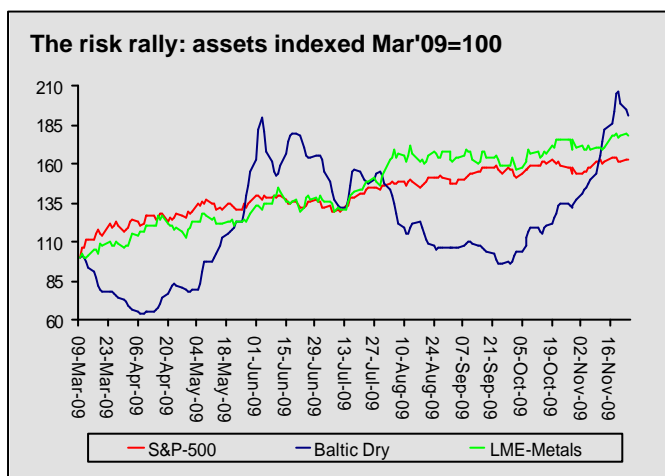


Figure 1. Source: Datastream

Asset bubbles can occur without a rise in credit because money is fungible. But when they burst, the damage is greater when they have been generated by leverage. That's because when asset prices fall, the value of the debt does not, so the hit to net worth (after debt is deducted) is relatively larger.

So when these current bubbles burst, the ensuing asset price deflation could be worse than in the previous credit crunch. That's why we remain underweight equities (with the emphasis on holding defensive sectors); underweight government bonds (especially US treasuries); and short industrial commodities.

## ANALYSIS

## Credit and liquidity

There is a thesis that asset bubbles that are not financed by credit are economically harmless. The thesis claims that, as the Fed is printing money that is not being lent on as credit by banks, the asset bubbles we are witnessing are benign, possibly even virtuous. Only leveraged asset bubbles are economically damaging; unleveraged asset bubbles are not. This concept is worth reflection and dissection. Does it provide a rationale for Fed action?

26 November 2009

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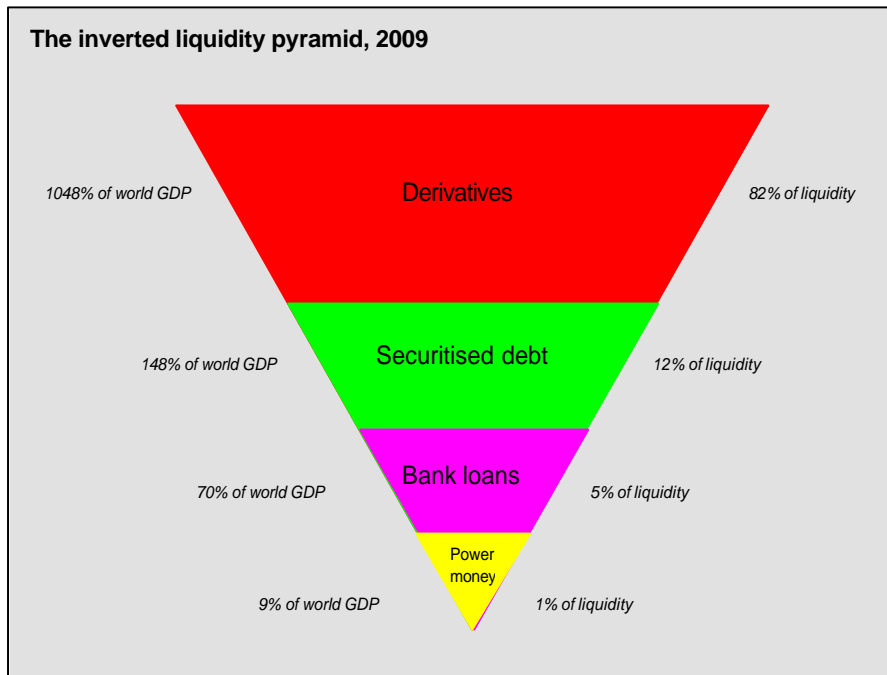


Figure 2. Source: IMF, BIS, Independent Strategy

Can there be asset bubbles without credit? The answer is yes. But for financial assets, it is rare because investors commonly apply leverage and use it to increase their returns. All asset bubbles are financed by monetary liquidity, but its source can be wealth (net worth), income or borrowing. Credit is a good proxy for liquidity most of the time, particularly for financial asset bubbles, but it is not the unique potential source. It is just the biggest source of monetary liquidity to finance asset bubbles.

We first introduced the idea of monitoring monetary liquidity by measuring total credit (not just bank

credit) using our liquidity pyramid. This was because traditional measures of liquidity only captured the liability (deposit) side of the banking system (see our report, *The liquidity pyramid*, 10 March 2006). Traditional measures didn't include all the credit and liquidity created outside the banking sector, as in securitised debt and derivative markets (Figure 2).

The liquidity pyramid concept expanded observed liquidity from one year to more than 12 years of annual global GDP. But it is still only a proxy for monetary liquidity because other sources, such as net worth, are not fully represented (Figure 3).

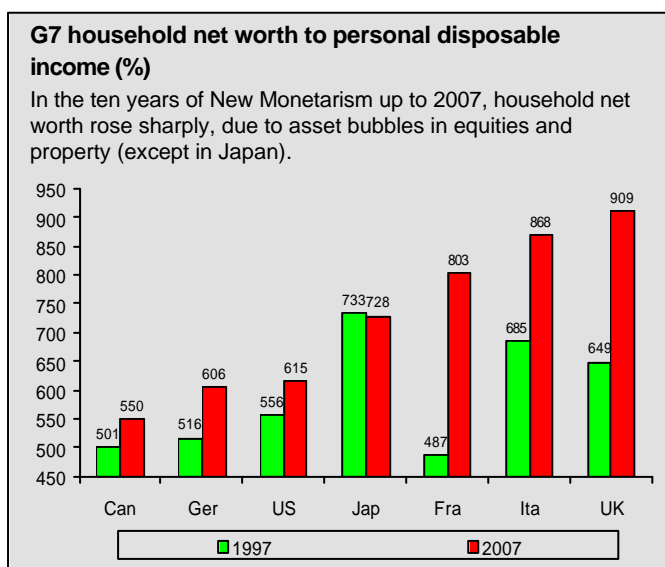


Figure 3. Source: OECD, Independent Strategy

## Bubbles and mania

The psychological driver of all bubbles is 'mania'. The human proclivity is strong to act irrationally *en masse*, which is why the hypothesis underlying the theory of efficient markets is flawed from the outset. Indeed, we often shoal like sardines in pursuit of desires. And we now know that sardines, like strategists and economists, think individually, but act in unison.

Nowhere is this more in evidence today than in Wall Street economists' and strategists' 'convictions'. They were collectively ultra free-market liberals as long as the credit bubble benefited them. Now that they need the authorities to dispense massive liquidity to drive asset prices higher and to save the institutions that employ them, they are all Keynesians. It is indeed lonely to be a solitary, unemployed sardine!

There is no reason why unborrowed resources should not be irrationally concentrated on possessing an object (or service), causing its price to rise. It becomes a bubble if the price rises to a level greater than the object's sustainable economic value.

The sustainable economic value for an investable asset is simply the present value of the object's future income stream — real or imputed. For a consumer product, it is the utility or pleasure of consuming it — an immeasurable concept, but one that increases in a mania for that product and collapses when it's over.

Bubbles happen in consumer products. People shoaled to buy limited edition *Tamagochi* electronic baby 'pets' for \$1000; they waited five years and paid \$50,000 to receive their orders for Hermes' *le Kelly Bag* in crocodile skin; and they queued all night to procure McDonalds' latest plastic figurines by eating a burger.

All were consumer product bubbles. But consumer product bubbles cause less damage than financial asset bubbles because they involve a mania about discrete products with very wide ownership distribution, representing a small part of what households buy and own. This is unlike the post-bubble distribution of bad debts and dud assets, representing a significant proportion of bank capital, credit and GDP, and which is focused in relatively few financial institutions.

Consumer product bubbles absorb relatively little leverage. But the key point is that same shoaling psychology lies behind both forms of bubbles and credit is not always the driver. Indeed, it almost never is in consumer product bubbles.

## Bursting bubbles hurt

However, all asset bubbles, whether they use leverage or not, are economically damaging. They misallocate resources, devoting too much to producing the object of the mania and not enough of other things. Once the bubble bursts, the aftermath is an overhang of excess capacity in the bubble product sector that has to be worked off. In the case of financial asset bubbles, this workout can depress aggregate demand and output for a considerable period (Figure 4).

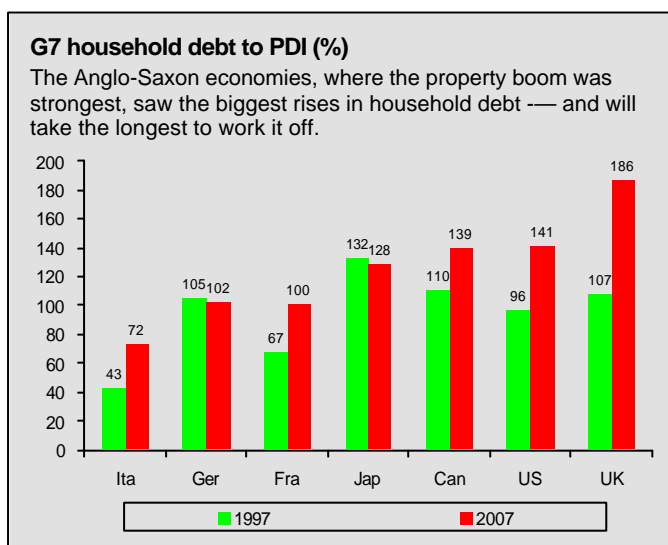


Figure 4. Source: OECD, *Independent Strategy*

However, asset bubbles are more damaging to the economy if they are financed with credit. This is because when the bubble asset price falls the value of the debt used to finance it does not.

Take an example. A bubble asset's price is \$100 and then falls to \$60 when the bubble bursts. If no leverage was used to buy it, net worth has been reduced by \$40 (40%). If leverage of \$20 and net worth of \$80 was used to buy the asset initially, when the asset price falls by \$40, all the reduction in value must be absorbed by net worth. Leverage is unaltered, so net worth has now dropped to \$40 (\$60 asset price less \$20 debt) from \$80. That's a reduction of \$40, or a 50% fall in net worth.

So, depending on the degree of leverage in the economy and the involvement of credit intermediaries in financing the mania, bursting bubbles will cause bankruptcies, credit contraction, wealth destruction and loss of jobs. These deepen and spread the economic cost. At the extreme, debt deflation can occur.

## The current bubbles

Are the current asset bubbles in equities, commodities and many forms of debt (e.g. treasuries) financed with debt or are they of the creditless 'harmless' variety?

It is here that the theory of harmless, unleveraged bubbles falls down. A bursting asset bubble will not do equal damage if it is financed with debt or if it isn't, but the level of debt that is relevant is unrelated to credit used to invest in the bubble asset. It is the existing aggregate leverage of the investor (or, in a macro sense, the economy) that counts, not the marginal amount of debt used to buy the asset.

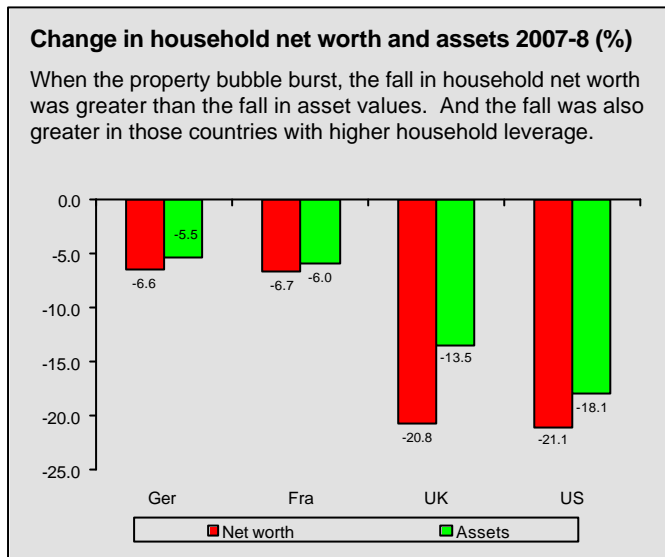


Figure 5. Source: OECD, Independent Strategy

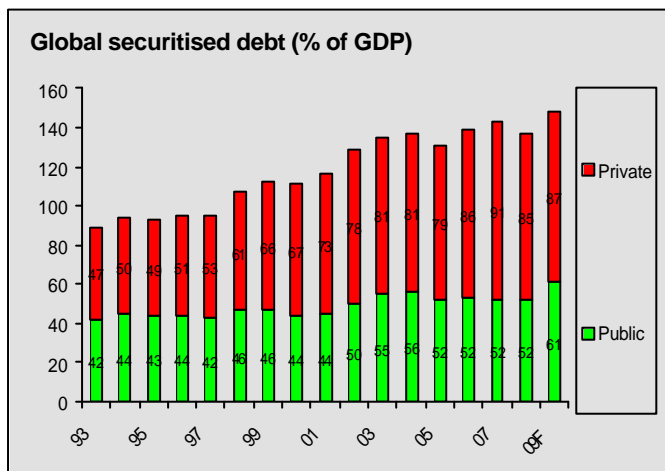


Figure 6. Source: IMF, BIS, Independent Strategy

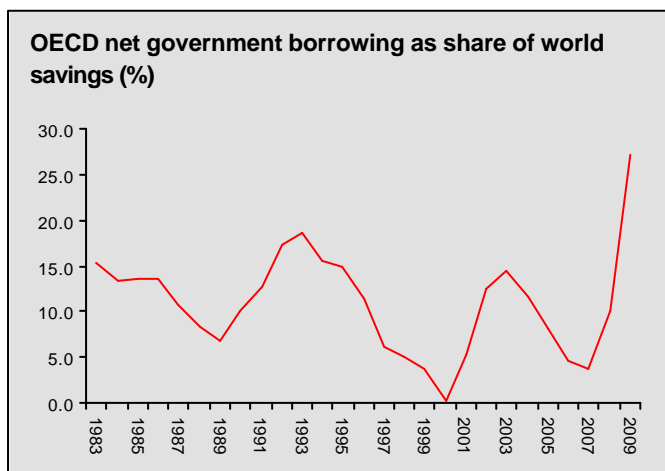


Figure 7. Source: IMF, Independent Strategy

To prove this, refer to the above numeric example again. In the leveraged example, the damage to net worth from a 40% fall in the asset's price is the same whether the debt of \$20 were incurred to buy the asset or was simply an existing liability unrelated to the purchase of the bubble asset.

In other words, leverage of \$20 on the purchaser's balance sheet, whether existing independently of the purchase of the asset or used to buy it, results in the same 50% reduction in net worth when the price of the bubble asset falls 40%. And that loss is 10 percentage points more of net worth than it would be if there were no leverage (Figure 5).

To take the analysis further, the risk of contagion to the wider economy of the damage from a collapsing bubble rises with leverage. By destroying more than \$1 of net worth for every \$1 decline in the bubble asset's price, leverage increases the risk that the bursting bubble will set in motion the chain reaction of bankruptcies, debt default, destruction of bank capital and credit contraction — even debt deflation.

But the danger is proportionate to general leverage in the economy, not to leverage specific to the bubble. For example, corporations can go bust and default on their debts, even if those debts were not used to fund the firm's excessive exposure to the bubble assets that caused it to fail.

This is relevant because the stock of global debt has not contracted since the credit crisis began, although its growth rate has (Figure 6).

Moreover, moving from households to the total economy, leverage has risen dramatically due to government borrowing (Figure 7). If it is generalised leverage that matters, the pain from collapsing asset bubbles could be worse next time.

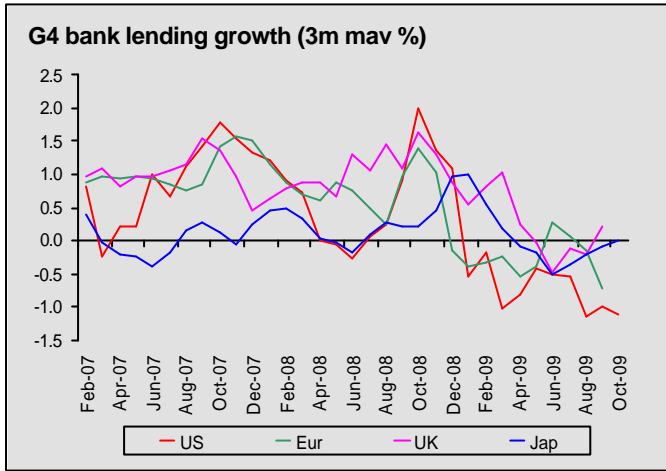


Figure 8. Source: Datastream

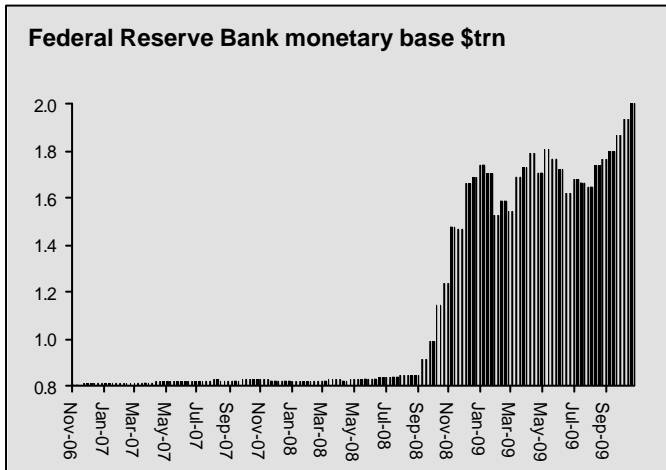


Figure 9. Source: Datastream

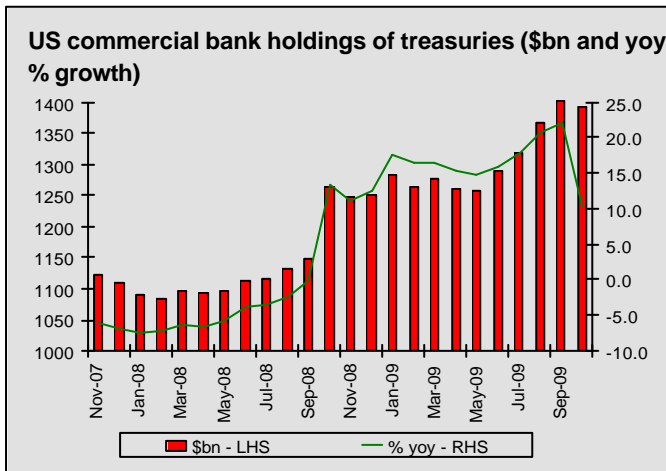


Figure 10. Source: Datastream, Independent Strategy

The theory's observations that the current asset bubbles are not financed with leverage are also wrong. The fact that banks are not extending credit is relevant but insufficient to prove the point (Figure 8).

Let us dissect the credit flows driving asset prices. First, take the Fed. The Fed buys assets and creates money to do so. This money is paid to the seller of the asset. It shows up on the Fed's balance sheet on the liability side as either notes or coins in circulation or liquid reserves of the banking system.

This is an increase in Fed leverage — which currently stands at \$2trn (Figure 9). Increased leverage has been used by the Fed to sustain asset prices, because if the Fed were not a buyer, the prices would be lower.

Let us now assume that the sellers of the assets to the Fed are commercial banks and insurance companies. Each has now got cash. What do they do with it?

The banks, being loath to lend to risky private borrowers, might buy treasuries. This perpetuates low yields and finances government leverage directly or indirectly. It therefore perpetuates a bubble — this time in treasuries (Figure 10).

The insurance company might choose to increase its equity exposure adding to the bubble in that asset category. Same conclusion!

It is the increase in Fed leverage (buying an asset and printing money) that lies at the base of this process. Thus it is inaccurate to describe the asset bubble to which it contributes as being of the unleveraged variety.

Let us extend the range of possibilities. Suppose the proceeds from the Fed liquidity injection were lent to a portfolio manager who might invest it in (his expectation of) a higher return asset domestically or exchange

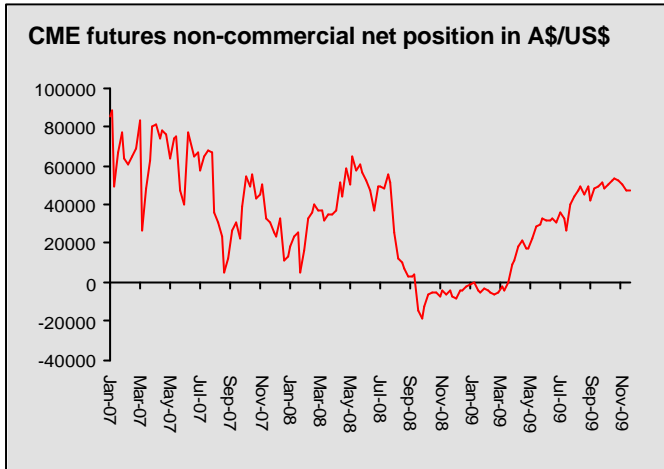


Figure 11. Source: Bloomberg

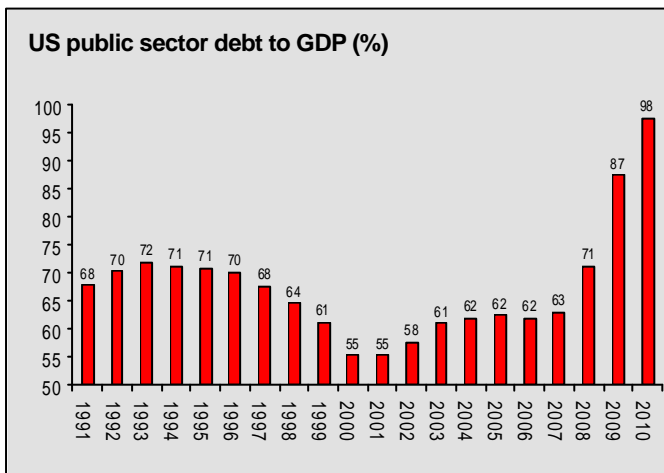


Figure 12. Source: OECD

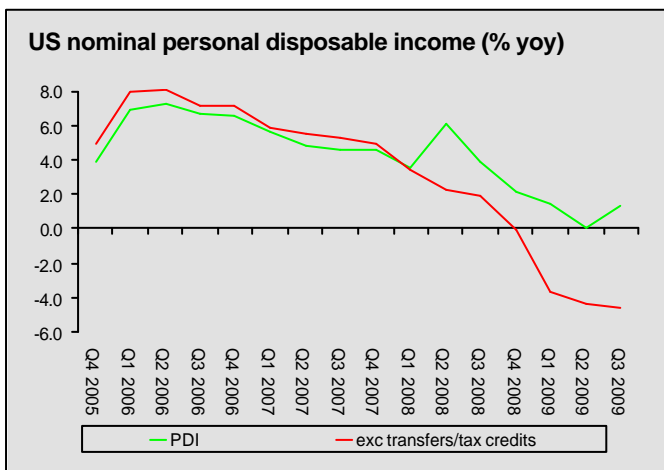


Figure 13. Source: Datastream, Independent Strategy

the dollars for an appreciating foreign currency. That is the carry trade (Figure 11).

It is entirely credit driven; borrowed dollars at low interest rates are invested in higher yielding or higher (expected) return assets, domestically and abroad. As the carry trade is the major driver of global equity, debt and commodity price bubbles, it is false to state that these bubbles are unleveraged.

Finally take the US government's role. It is engaged in massive borrowing that will increase the public sector debt to GDP ratio from 40% to 80% on the way to 100% by 2015 (Figure 12).

The proceeds of these borrowings are being distributed throughout the economy through transfers and asset purchases by the Treasury. Transfers sustain household purchasing power (Figure 13). This generates demand for goods and services. But it is the household balance sheet effect that interests us more. It reduces the incentive for households to deleverage and increases their demand for assets.

Policy thus contributes to sustaining the imbalance of excess consumption and inadequate household thrift, while adding a high dissaving ratio of its own. This is the direct result of increased government leverage. It is hard to argue that such policies do not seek to sustain old bubbles as much as create new ones. The government's ability to do so by issuing debt also makes nonsense of the claim that current bubbles are of the creditless variety.

Of course, leverage to inflate bubbles is not the same if it is government and not the private sector that does the borrowing, because government is unlikely to default when the asset bubbles deflate. This limits the contagion effect of bankruptcies and debt defaults transmitted via the financial system.

But default can take many forms. In the case of government that may be debasement of the real value

of the repaid debt. But the leveraged decline in the economy's net worth is still the same irrespective of who does the borrowing. If government is the debtor, the leveraged loss of economic net worth incurred when the bubbles deflate will have to be made up by increased taxation. Increased taxation will result in less GDP growth and wealth creation. So the pain of collapsing asset bubbles may be processed differently, but it is still there; the piper has to be paid!

The theory of harmless bubbles is thus flawed in logic and in observation. It is, at best, a subconscious exculpation of Fed policy from responsibility for creating current asset bubbles or for the damage that their inevitable collapse will do. As such, it adds to the long list of evidence that US policy is being conditioned by denial of psycho-economic proportions (see our recent report, *The gray anatomy of bubbles*, 20 October 2009).

Our conclusion is that economic damage and asset price deflation will be worse when the current asset bubbles collapse than in the preceding credit crunch, because the level of leverage involved today is greater and policy options to deal with the fallout are all but exhausted.