



May 2005

The Burden of Sisyphus

(Preventing Deflation:

Revisiting the lessons from Japan's
experience in the 1990s)

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The Burden of Sisyphus¹

(Preventing Deflation: Revisiting the lessons from Japan's experience in the 1990s)

Introduction

In March of this year, in response to the apparently anomalous behavior of government bond markets, we at Deutsche Bank published 'The Bond Puzzle', a document drawing together our research groups' various, and in places discordant, thoughts on the bond markets. For us the project triggered an invaluable internal debate. In many areas we were able to identify common ground in our thinking, but, perhaps more interestingly, in others we were only able to better specify the areas of contention.

The following paper tackles one of these contentious issues, namely: **What part do asset prices play in the determination of interest rates?**

For those of us in Deutsche Bank's Fixed Income Research group, this question has been at the core of our strategy thinking for a number of years, and remains central to our thinking at present. This article attempts to articulate our thoughts on asset price dynamics as an integral part of the interest rate puzzle, while at the same time explaining why improving balance sheets, surging profits, and for that matter higher GDP growth, have carried such little weight in our analysis of late.

As the paper's subtitle suggests, in part this paper can also be considered as a belated reply to the Federal Reserve's 2002 paper: 'Preventing Deflation: Lessons from Japan's experience in the 1990s.' In line with the thinking of the Fed's paper, it has become accepted wisdom that monetary and fiscal stimulus failed in Japan because it was applied too-little and too-late. By contrast, the discussion we present here argues the stimulus failed for the opposite reason: it was applied too-much and, more importantly, too-early.

We discuss the implications of our analysis for the likely long-run success of monetary and fiscal stimulus in the US, and thereby offer another way to understand the behavior of long-term US real rates.

A key element of the following discussion concerns financial market stability, or the lack thereof: **Is the economy a naturally stable or unstable system?** This issue resurfaces regularly, usually in the aftermath of an asset price bubble. The list of authors on the topic is impressive: Irving Fisher's "The Debt-Deflation Theory of Great Depressions", Keynes's "General Theory of Employment, Interest, and Money", and Hyman

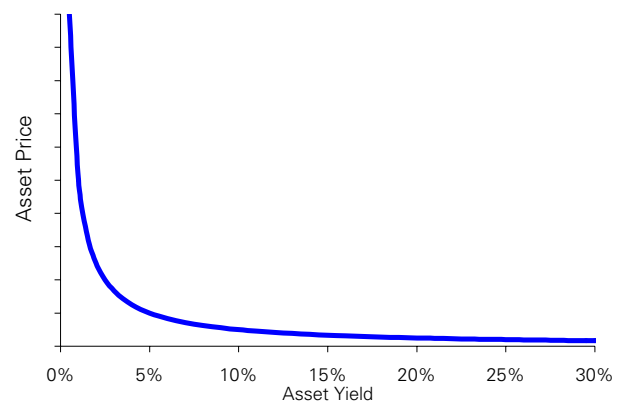
Minsky's "Financial Instability Hypothesis"² to name but a few. Despite this impressive cast, the notion of financial instability receives short shrift from mainstream thinking. Given the wealth of events suggesting its existence and its potential importance for investment strategies, we see this as an unfortunate oversight. Here we do our best to present a distillation of the ideas we have drawn from our readings on this topic, adding our own particular interpretation of their relevance to current interest rate policy, bond yields, and asset valuations more broadly.

Pricing Financial Assets

As this article touches on some contentious themes we shall start from a point on which, hopefully, everyone can agree: when yields fall asset prices rise. More specifically: the net-present-value of future cash flows increase when the discount rate of those cash flows falls. Since financial assets represent a claim on future cash flows this process drives current valuations.

For simplicity's sake, in the following discussion, we will model all assets as perpetuities. This simplifying assumption allows us to consider the net-present-value of an asset as proportional to $1/r$, where r is the discount rate. The relationship between asset prices and discount rates (yields) is shown below.

Exhibit 1: The Price-Yield relationship for a perpetuity



Source: DB Global Markets Research

The above chart demonstrates two points important to the following discussion: firstly, there is no upper limit to the net present value of a perpetuity asset; secondly, when yields are low asset valuations become highly sensitive to changing yields. In the parlance of the bond markets, assets with a low yield have a high duration. More specifically, the price sensitivity of the asset to a change in its yield is also proportional to $1/r$, and therefore follows the same form as shown above.

¹ This is a slightly extended version of a paper originally published in Deutsche Bank's May 6th Fixed Income Weekly.

² This paper draws heavily on Minsky's ideas (which he himself attributed to Keynes) but with one small modification: we give greater weight to the marginal pricing of assets.

Assets Priced at the Margin

Now we consider a stylized world in which, at any given moment, investors are faced with an array of possible new investment projects, each offering a different potential return on capital. Being rational agents, investors rank these potential projects according to expected returns. They then begin funding these projects, working progressively through the list, from the most, towards the least attractive projects. At some point, investors reach a point at which the next investment offers a potential return below their own required return on capital. Being unwilling to fund this project, investment ceases at this point. The last investment made then represents the marginal investment, its yield being the marginal required return on capital.

In tandem with the above process, it is reasonable to believe investors are also constantly reassessing the viability and value of their existing stock of investments, comparing them with other opportunities available. This leads investors to re-value their existing stock of investments into equilibrium with the yield on the marginal investment. Any existing investment now found to offer a potential return below that of the marginal investment should be divested.

Risk Premia and Marginal Returns

We now consider the marginal required return on capital. Again in a very stylized world, we assume all investments are funded with cash. We then assume that the required marginal return on investment is set as the investors expected cost of funding (expected cash rate) plus some risk premium. This risk premium being a function of investors' confidence: confidence in the likely cash rate; confidence in their own financial position; and confidence in the future returns on investments.

Now we ask: what happens when the marginal investor's risk premia changes? Consider first a slight shift towards a lower risk premia. This change lowers the marginal investor's required return on capital triggering two distinct events: firstly, the pool of viable investments is expanded, and previously unfunded projects now receive finance (new credit creation); secondly, the stock of existing investments is re-priced to higher valuations, into equilibrium with the new lower discount rate.

By contrast, consider a slight increase in the risk premia. Firstly this move pushes up the required return on capital, shrinking the pool of viable investments, and triggering the withdrawal of funds from some existing projects (divestment). Secondly the existing stock of investments is re-priced to a lower valuation, into equilibrium with the new higher discount rate.

Hopefully, by this point we have said nothing controversial: asset prices are set at the margin, by discount rates; discount rates are set by expected

funding costs plus some risk premia; investment projects are only funded when their prospective returns exceed the marginal required return on capital.

Now we begin to get to the interesting part.

Beware The Balance Sheet

The above model suggests the possibility of a perverse relationship between investor confidence and balance sheet ratios. In an environment of improving confidence we should see falling risk premia and correspondingly lower discount rates. Presumably this environment of improving confidence would also be one in which investors were willing to accept greater leverage ratios (balance sheet deterioration). Fortunately a falling risk premium brings new investments into the pool of viable projects, providing the mechanism for investors to express their higher confidence with greater leverage. However, the lower discount rate also triggers capital gains within the investors existing stock of investments, acting to decrease leverage ratios.

As a result, if capital gains on the existing stock of investments are sufficiently large, investors could find themselves simultaneously enjoying improving confidence, increasing absolute levels of leverage but, perversely, improving leverage ratios. Importantly, due to the heightened price sensitivity of assets at low yields, this capital gain effect is likely to be more prevalent when yields are already low.

Conversely, in an environment of falling confidence, and rising discount rates, some projects will begin leaving the pool of viable investments. Investors should therefore begin liquidating these investments in an attempt to reduce their leverage ratios. But again, if the price sensitivity of the existing pool of assets is sufficiently large, the downward revaluation of the remaining assets may cause balance sheet deterioration, even while absolute levels of leverage are falling. As before this problem is likely to be more prevalent when yields are already low.

Making the small step of assuming investor confidence is itself a function of both their leverage ratios and recent experience it is easy to see the formation of an unstable positive-feedback system³: falling risk premia trigger capital gains and lower leverage ratios which spurs rising confidence and still lower risk premia. Or less happily: rising risk premia triggers capital losses, pushing up leverage ratios, undermining confidence thereby sending risk premia still higher. All of which

³ A system exhibiting positive-feedback is one in which a change to the system produces conditions to increase the magnitude of that change. Such systems are unstable. By contrast, a system with negative-feedback will tend to bring about changes in the system in order to return the system to back to its starting equilibrium position. These systems are stable. For example: a marble balanced on an upturned bowl is an example of an unstable, positive-feedback, system; a marble in an upright bowl is an example of a stable, negative-feedback, system.

suggests, in environments of either rising or falling confidence, investors could find themselves chasing their tails in a futile effort to shift leverage ratios.

Viewed from this perspective, at the macro level, balance sheet analysis may not just fail to warn of the onset of a financial bubble it may actively mask its formation. Far from being a tool to identify financial bubbles balance sheet analysis may be considered an integral part of their formation, providing a ready method to rationalize their inflation, and in the down-cycle their deflation. For this reason, we take little solace from recent improvements in either corporate or household balance sheets.

Beware The Income Statement

Having thrown balance sheet analysis out of the tool box we now move to cash flow analysis. Here there are also problems. As discussed, an environment of improving confidence will tend to bring previously unattractive investments into the pool of viable projects. This will lead to a net increase in borrowing as these investments receive finance (credit creation). However, as we know from the national accounts identities: income is equal to expenditure. As a result any additional credit creation (expenditure) to fund these new investments will inevitably find its way onto the income side of the accounts identity, most likely boosting corporate profits and/or wages. This in turn will boost GDP and most likely other measures of economic activity. Conversely any increase in risk premia should lead to de-leveraging (saving), reducing expenditures and incomes and thereby dragging down economic activity.

Here again we have all the elements of an unstable, positive-feedback, process: improving confidence increases investment, thereby boosting incomes, causing confidence to rise still further; falling confidence reduces investment, thereby cutting incomes, triggering another fall in confidence.

This leads us to conclude that the analysis of income accounts – wages, profits and taxes – will also do little to help identify the formation of financial bubbles. Indeed, as with balance sheet analysis, income analysis may actively mislead, encouraging both the inflation and deflation of financial bubbles.

At the macro level, unfortunately, even the most diligent analysis of balance sheets and cash flows may serve only to turn sober heads into giddy new-paradigm cheerleaders.

(At the current juncture we believe the recent surge in US corporate profitability can be traced back to credit creation through the mortgage refinance process, linking the income and asset price dynamics in the way we describe above. We therefore do not believe corporate profits will remain robust in the face of slowing refinance activity, triggered by higher mortgage rates. This we see as a key process providing a

negative-feedback loop restraining a rise of long term US rates.)

Positive Feedback Negative Consequences

Putting all this together, we are suggesting that asset-prices, confidence, incomes, and investment activity together form a self-reinforcing positive-feedback loop: once an upswing is started it will continue, driving asset prices and economic activity to arbitrarily high levels; once a downswing is started it will also continue, driving asset prices and economic activity to arbitrarily low levels.

Within this system there is no natural restoring process to reverse either the expansion or contraction. However, if we overlay this process with exogenous random shocks to investor confidence, then perhaps we arrive at a picture closer to the real world. When yields are low (asset prices high) small exogenous shocks to confidence can produce large swings in asset prices, with the potential to quickly turn an upswing into a downswing: asset bubbles may be able to rise arbitrarily high but are unlikely to persist for very long. By contrast when yields are very high (asset prices low) small exogenous shocks to confidence will produce very little movement in asset prices, suggesting difficulty in triggering an upswing once an economy is already in a slump: slumps may persist indefinitely. In other words bubbles are unstable while depressions are stable. (See Exhibit 1.)

The negative cycle we have presented here is of course none other than the famous Keynesian 'paradox of thrift'. We have merely articulated its mirror, a 'paradox of excess'.

Rational Markets?

At this point it is worth pausing to take stock of where we are. From some unremarkable, even banal, assumptions we have arrived at some very controversial conclusions: firstly, asset markets are inherently unstable, with this instability acting to destabilize investment activity in the real economy; secondly, random exogenous shocks are a valuable part of the economy's equilibrating process, and not, as is widely assumed, the main source of disequilibrium. Interestingly, under this model the economy has neither a stable equilibrium nor a regular periodic cycle.

We are aware these points challenge the cherished notion of efficient markets acting to push the economy towards an optimal capital allocation, in a stable equilibrium. Under this model Adam Smith's invisible hand is no longer the benevolent force guiding us towards the best of possible worlds, but rather a malevolent force, endlessly bouncing the economy back and forth from fleeting boom to protracted bust. (For the diehard Austrians amongst you don't give up now. We will concede some ground later.)



Measuring Financial Fragility

If correct in our assessment of the limitations of balance sheet and cash flow analysis for the identification of financial bubbles, we appear to have built a powerful case in defense of Mr. Greenspan's contention that asset price bubbles cannot be reliably identified before they have burst⁴.

However, in our view, it is unnecessary to take such a defeatist position. We believe, even in the absence of useful balance sheet and income analysis, there are still valid alternative tools for the identification of asset bubbles. Aside from the very obvious – asset price inflation running persistently ahead of economic growth – two metrics spring to mind: credit formation and real yields.

As argued above, one symptom of a financial bubble is investors' willingness to fund a broadening pool of investments. This suggests monitoring the credit markets for unusual levels of credit creation may provide a warning signal of problems to come. In our view this explains the ECB's continued adherence to money supply as its second pillar of monetary policy. However money supply and credit creation, as a warning signal of bubbles, has its problems: what happens if credit creation is growing because of a genuine surge in investment opportunities? An overly zealous central bank may tighten policy and thwart or delay a genuine opportunity.

Here yields may provide the answer (more specifically real yields). As discussed above asset prices become particularly sensitive to changes in investors' required risk premia when those premia are already very low. Furthermore abnormally low real yields may be taken as a symptom of investors having driven down their marginal required return on capital, which would be consistent with them moving further through the pool of investments towards ever more questionable projects. Both of these points suggest abnormally low real yields should provide a warning signal of an unstable asset price dynamic. Furthermore real yields should provide a useful check on the signal from the credit markets: rapid credit creation and rapid asset price inflation together with high or rising real yields may well signal a genuine 'new era' of broadening investment opportunities; by contrast rapid credit creation, rapid asset price inflation, and falling yields look much more like our unsustainable paradox of excess.

⁴ Strictly speaking this is not true. The arguments we present suggest balance sheet and income analysis should be equally useless in flagging a bursting bubble. However, this point serves only to highlight a logical flaw in the current thinking on bubbles: a bursting bubble is supposedly easy to identify, we assume from abnormal declines in asset prices and a weakening economy, however the opposite process, abnormal rises in asset prices and a strengthening economy, is not considered sufficient evidence of a bubble's formation.

For this reason, we continue to give prominence to monitoring asset yields – real bond yields, rental yields, equity yields, and credit spreads – as a method of tempering our euphoria for some of the more bullish signals on the economy.

Negative Feedback: The Role of Central Banks

We now ask: what role do central banks play in unstable asset markets?

In our view it is possible to regard the market instability described above as providing the *raison d'être* of central banks. Arguably the role of the central bank is to provide the market's missing stabilizing negative-feedback force, needed to prevent asset price dynamics from coming to dominate the real economy.

Perhaps in a kind of Darwinian selection process those economies that happened to evolve lenders of last resort were able to avoid the protracted debt-deflation traps described above. These economies then prospered relative to others, encouraging their institutions to be mimicked in other economies. In a sense central banks owe their existence to the destabilizing positive-feedback in the financial markets.

In a period of very low asset prices (high real yields) and depressed economic activity the function of the central bank is easy to understand. They are there to provide a large exogenous positive shock to the system, triggering a reversal of the self fulfilling slump. This is achieved by driving down risk premia via a commitment to supply capital at very cheap rates, and perhaps even through pushing up asset prices directly with open market purchases.

The above policy prescription for dealing with a slump is now largely accepted wisdom – we'll come back to the dissenters later. But this policy deals with only one side of the story: the self reinforcing slump. What if anything should be done about the self reinforcing boom? This is a more contentious issue.

Until recently the pre-emptive tightening strategy was accepted as the correct way to deal with excessive booms, as wonderfully articulated by former Fed governor William McChesney Martin: *"The job of the Federal Reserve is to take away the punchbowl just when the party gets going"*. Rather less poetically we can see a tentative shadow of the same philosophy in some recent statements by the ECB, which has suggested it may be necessary to "lean against the wind" by running a policy that appears overly restrictive in the current conditions in order to forestall future problems⁵. We shall term the policy prescription of hiking in a boom and cutting in a slump as the symmetric intervention policy.

⁵ See for example: The economic outlook and the ECB's monetary policy: some key issues. Lucas Papademos, November 2004.

More recently, following Chairman Greenspan's assertion that bubbles cannot be identified before they burst, tightening in a boom has fallen out of favor. This has produced a second policy strategy, which we shall call the asymmetric intervention policy – ease in a slump, do nothing in a boom.

Though we take the view that asset bubbles can be identified, a policy of pre-emptive tightening, in the hands of an overly zealous central bank, could lead to an unnecessarily restrictive policy in the long run. Given that, as we argue, bubbles are unstable and therefore short lived it can be argued it is better to just ignore them.

The third policy prescription – do nothing in a boom or a bust – we shall call the pure *laissez faire* approach. This tends to be the favored prescription of the most ardent supporters of free markets. Proponents of this approach argue, left to their own devices, markets would self regulate: investors fearful of capital losses would avoid bidding assets to excessive valuations precisely because they knew there was no safety net, in the form of a central bank bail-out. This self discipline would therefore also avoid the damaging aftershocks of asset price crashes. We have sympathy with the logic of this argument; it may be self discipline that usually prevents the self reinforcing booms we describe from turning into outright bubbles. However, in our view, history shows that bubbles do form even in the absence of a lender of last resort. For this reason we side with those arguing intervention is required from time to time.

Nevertheless, the *laissez faire* argument does highlight a key problem with what we have dubbed the asymmetric intervention policy. If investors become trained to believe stimulus will always be forthcoming in a slump, but never withdrawn in a boom, then it is reasonable to believe their average marginal required return on capital will shift down (risk appetite shift up). As a result the economy will tend to operate with higher asset valuations, and therefore higher price sensitivities to changing confidence, than would otherwise be the case. This in turn will tend to make the economy more prone to booms and busts. Arguably, if an asymmetric stimulus policy is retained it will result in asset price cycles of greater magnitude than would otherwise be the case.

We see this argument as sufficient in itself to eschew the asymmetric stimulus policy. But this is not what keeps us awake at night. Our insomnia arises from another class of policy prescriptions which we call indiscriminate-asymmetric and strong-indiscriminate-asymmetric stimulus.

The Burden of Sisyphus

We mean by 'indiscriminate-asymmetric stimulus' a policy of stimulating when economic growth is weak, while doing nothing to counter strong growth.

At first sight this policy looks beguilingly similar to our earlier definition of asymmetric stimulus. There is however one important difference. Under this policy the stimulus is triggered not by a subdued level of activity but rather by a subdued rate of growth of activity. That is, stimulus is triggered when growth is weak, in a size aimed to restore growth. Importantly, the policy is indiscriminate to the starting point from which the weakening occurs – the policy is as likely to be enacted to hold the economy in a boom as it is to push it out of a slump.

For completeness, we dub the 'strong-indiscriminate-asymmetric stimulus' policy as one in which stimulus is triggered not weakening growth but rather by an *anticipated* slowing in the rate of growth, again regardless of the starting point from which the weakening is occurring.

For those of a mathematical bent, asymmetric, indiscriminate-asymmetric, and strong-indiscriminate-asymmetric stimulus could perhaps be defined as stimulus being triggered by weakness in respectively: the level, the first time derivative (rate), and second time derivative (acceleration), of activity.

We believe it is now widely accepted that monetary and fiscal policy should be run along lines described by the indiscriminate or strong-indiscriminate-asymmetric stimulus policies⁶. However, we believe, policy driven by the rate of change of activity, or worse still its anticipated rate of change, regardless of the level of activity, has some important undesirable side effects.

Since it is Mr. Keynes's thesis we are discussing here, we shall solicit his views on the issue: *"Thus public works even of doubtful utility may pay for themselves over and over again at a time of severe unemployment...but they become a more doubtful proposition as a state of full employment is approached."* and *"...as we approach full employment, it follows that it will become more and more troublesome to secure a further given increase of employment by further increasing investment"*⁷. To our view, these statements suggest: stimulate when activity is low, don't when it's high.

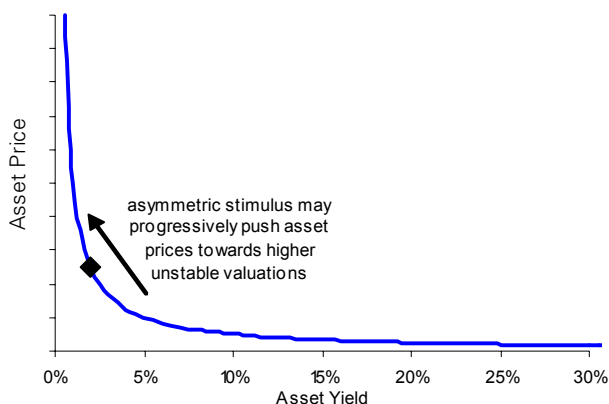
This brings us to our concerns. In choosing to implement a stimulus policy from a position of already high levels of economic activity, when that activity has itself been driven by asset price inflation (falling yields), the central bank is effectively undertaking to maintain asset prices at these already elevated levels and even to drive them higher still. Furthermore, if the policy

⁶ See: 'Risk and Uncertainty in Monetary Policy', Alan Greenspan, January 3rd 2004 : "Such a cost-benefit analysis is an ongoing part of monetary policy decision-making and causes us to tip more toward monetary ease when a contractionary event, such as the Russian default, seems especially likely or the costs associated with it seem especially high."

⁷ "The General Theory of Employment Interest and Money" Page 127. J.M. Keynes

action proves successful in underwriting asset valuations it is reasonable to expect investors to 'learn' from the experience and further lower their risk premia. This may trigger another round of the self-perpetuating expansion we describe above. However this second leg of the expansion will be starting from already elevated asset prices and subdued real yields. As a consequence, the new expansion will be more sensitive to adverse shocks. At the same time the more elevated asset prices will have the potential to cause greater trauma to the real economy should they begin deflating. As a result the probability of the economy requiring still more stimulus will rise.

Exhibit 2: Asymmetric stimulus pushing assets to the left, causing low yields and unstable valuations



Source: DB Global Markets Research

Viewed in this way, the decision to deploy monetary stimulus, aggressively, from a point of already extended asset valuations, may radically shift the bank's influence on market dynamics. The stimulus tool may no longer provide the stabilizing (negative feedback) force but rather a destabilizing (positive feedback) force, pushing the economy further towards a state of dangerously inflated asset prices, turning the central bank into the antithesis of its original purpose. Taken to its logical conclusion, one would expect this policy prescription to lead to an ongoing cycle of ever larger stimulus packages, coupled with a trend decline in the real rates on assets.

Put differently, the use of policy to thwart the impact of negative exogenous shocks, with rapid or even pre-emptive stimulus, undermines the role these shocks play in checking unsustainable asset inflation.

More picturesquely, this policy amounts to the bank taking on its own particular version of the burden of Sisyphus: attempting the futile task of eternally pushing asset prices up an ever steepening valuation slope. (In Exhibit 2 this corresponds to driving asset prices to the left, towards higher prices and lower yields.)

In our view, the Keynesian stimulus tool does not offer a way to painlessly counter the negative effect of a

deflating asset price bubble. Rather it offers a way to avoid remaining indefinitely in the slump that is likely to follow its deflation. The catch – the stimulus policy will not generate a genuine self-sustaining upswing without the economy having first gone into the slump. Schumpeter's creative destruction cannot be denied forever.

All of this leads to some unfashionable thoughts on the optimal conduct of monetary policy. Firstly, we take issue with the notion that pre-emptive policy action, aimed to mitigate the negative impact of an exogenous shock, is a good idea. In our view stimulus should be enacted only reactively, once its necessity is clear. Secondly, our analysis places the role of checking asset price cycles, in a symmetric manner, at the core of a central bank's function. By contrast most central banks have now publicly disavowed an understanding of, or responsibility for, asset price movements. In our view, this stance arises from a misplaced deference to the efficiency and stability of capital markets.

Lessons from Japan

These thoughts lead us to reexamine and reinterpret Japan's experience in the 1990s.

In our view, it is widely accepted that monetary and fiscal stimulus failed in Japan because it was enacted too-little and too-late. To quote the Fed's 2002 paper: "...we draw the general lesson from Japan's experience that when inflation and interest rates have fallen close to zero, and the risk of deflation is high, stimulus – both monetary and fiscal – should go beyond levels conventionally implied by baseline forecasts of future inflation and economic activity."⁸

We believe taken together the arguments we have set out here leave room for a second interpretation of the events in Japan. In our view, Japan adopted indiscriminate-asymmetric stimulus policy. Having failed to tighten into the upswing a policy of aggressive stimulus was enacted, from a point of still excessive investment. As a result the best it was able to achieve was to prevent the scrapping of this overinvestment. However, since the excess investment remained the policy was unable to trigger a genuine self-sustaining recovery, and instead locked the Japanese economy into an indefinite period of abnormally low interest rates. Put differently, the stimulus failed because it came too-much and too-early.

Our suggested alternative diagnosis of the Japanese problem has some disquieting implications for current policy in other regions. Most obviously, if the Japanese stimulus program came too-much too-soon then the US prescription for avoiding the same fate – even-more even-earlier – may fair no better: the difference

⁸ "Preventing Deflation: Lessons from Japan's Experience in the 1990s", June 2002 Ahearne et al.

between indiscriminate and strong-indiscriminate asymmetric stimulus is only one of degree.

We believe the best that can be hoped for from such a policy is to postpone a corrective downturn. However, even this delay may only be bought at the heavy price of encouraging still more unsustainable asset price inflation and credit creation. This we believe risks leaving the economy in a state of even greater fragility, potentially making the eventual downturn more severe than would otherwise have been the case. From this perspective declining long-term yields may be interpreted as signaling an economy painted into a corner: moving rates higher from here may undermine asset prices, triggering a self reinforcing downswing obliging another round of stimulus.

In our opinion this diagnosis is consistent with the generalized collapse in the return on capital we describe in our recent publication 'The Bond Puzzle'⁹.

Conclusions

In our view, it is important to consider asset price inflation, GDP growth, income growth, and balance sheet leverage ratios in the context of credit formation and particularly the level of real yields. We believe taken in isolation both balance sheets and income statements will, at best, fail to inform investors of the onset of financial bubbles and, at worst, may actively mislead them.

We argue that at a fundamental level financial markets suffer an unfortunate positive-feedback characteristic leading towards an unstable dynamic behavior. Furthermore, inherent in this instability is its destabilizing influence on investment in the real economy.

We suggest a key role of central banks is to thwart this instability with active policy intervention. However, we also argue, to prevent exacerbating asset price swings, the implementation of intervention should be based on the level rather than the rate of change of activity, and should be applied and withdrawn in a symmetric manner.

We believe a policy of preemptive asymmetric stimulus will, in the long run, lead to an unstable economy characterized by a trend decline in real rates coupled with a trend rise in the size of required stimulus packages.

Based on the above analysis, we believe, the barriers to the removal of the current fiscal and monetary stimulus remain considerable. This view continues to guide our ongoing broadly constructive position on bond markets.

A few final thoughts

As an aside, conventional economic thinking based on a stable equilibrium struggles to explain the existence of fat-tailed distributions, trending markets and the success of trend following investment strategies. These are all much more comprehensible if one is willing to contemplate positive-feedback, self-reinforcing, processes within the economy. But we will save that for another day.

Ironically – we are all now slaves to Keynes, a dead, misread economist.

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⁹ "The Bond Puzzle – 'A Strategic Perspective'" March 2005 Deutsche Bank.



Disclosures

Additional Information Available upon Request

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