

**Should Monetary Policy Respond to Asset Price Bubbles?  
Revisiting the Debate**

**By  
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**Should Monetary Policy Respond to Asset Price Bubbles?  
Revisiting the Debate**

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**Keynote speech at the SUERF COLLOQUIUM, Munich**

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## **SUMMARY**

### **1) THE CASE FOR “LEANING AGAINST THE WIND”:- (LATW hereafter)**

We argue that central banks can improve macroeconomic performance by reacting to asset price misalignments over and above their reaction to fixed horizon inflation forecasts. This is because such countercyclical monetary policy tends to offset the impact on output and inflation of such bubbles. In addition, if it were known ex ante that monetary policy would LATW in this way, it might reduce the probability of bubbles arising at all.

### **2) “PRACTICAL” OBJECTIONS TO LATW:-**

Although bubble identification is difficult, there is no significant difference between the informational requirements of any form of monetary policy rule that requires a reasonably accurate aggregate demand forecast versus a LATW rule. Also, central banks are better equipped to LATW because they are less subject to short-termist performance pressures. Some argue that one would need to create a recession to prick a bubble. However, LATW does not imply an attempt to prick bubbles, and is merely an attempt to improve overall macroeconomic stability.

### **3) ARE WE BETTER OFF JUST MOPPING UP AFTER THE BUBBLE BURSTS?**

We strongly disagree with relying on “mopping up.” The inherent asymmetry is likely to reinforce the procyclicality of the financial system. Further, a central bank may find itself unable to mop up after a bubble bursts (e.g. an external inflation shock that makes it difficult to cut rates, or a credit crunch that impairs the transmission mechanism). This “nightmare scenario” is alas, only too real at the moment.

### **4) CAN WE JUST RELY ON AN INFLATION TARGETING SYSTEM?**

In practice, the answer is probably no, as asset price misalignments often cause difficulties at time horizons well beyond the one-three year period that are typically considered. Since a LATW is wholly consistent with the remit of the MPC in the UK, there may well be a case for the Government encouraging the MPC to discharge its remit more effectively in this regard. To those who regard LATW as “impractical”, we remind them that the Swedish Riksbank has done it in the context of an inflation-targeting regime.

### **5) POTENTIAL CHANGES TO THE REGULATORY FRAMEWORK:-**

Since using monetary policy to LATW is unlikely to be enough, it is important to also examine other regulatory changes that might help (e.g. requiring more bank capital in good times, or maximum loan-to-value-ratios). Also, tax policy may also be considered.

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## I. INTRODUCTION<sup>1</sup>

It is a great privilege to be here today at the SUERF colloquium.

When Professor David Llewellyn kindly invited me to speak, it was with some trepidation that I suggested that I attempt to revisit the debate on whether monetary policy should respond to asset price misalignments. It had become a deeply unfashionable subject, and I was also conscious that I had battled the central banking consensus on this subject for at least nine years.<sup>(2)</sup>

Indeed, when Stephen Cecchetti, Hans Genberg, John Lipsky and I (CGLW hereafter) published a report on “Asset Prices and Central Bank Policy” arguing that central banks should “lean against the wind” (LATW hereafter) in early 2000, I recall that a major newspaper largely neglected it, which was in sharp contrast to, say, The Economist, which made our report the foundation for their cover story. When I politely questioned a journalist at this newspaper about this anomaly, I was informed that the powers-that-be had told all journalists to steer away from “abstract” and “academic” material that was not of “practical” interest.

You can therefore imagine my feeling of relief when the organisers told me that the other keynote speaker this morning, Professor Axel Weber of the Bundesbank, was also going to, among other things, discuss central banks and financial markets, and I am greatly looking forward to his remarks this morning.

The recent credit crisis appears to have had a significant impact on the importance attached to this debate. For example, the Financial Times informs us:-

*“The US Federal Reserve is reconsidering the way it deals with asset price bubbles in the wake of the housing and credit bust, in a move that could see the central bank using extra regulation – or even interest rates to fight unjustified increases.”* May 14, 2008

Moreover the US Treasury has proposed that the Federal Reserve be given new powers as a stability regulator in the hope that it would reduce the risk of asset bubbles.

I will now begin by restating the case we have previously made for central banks to “lean against the wind” in situations involving asset price misalignments and then turn to a review of the debate. I shall also consider alternative policies designed to make the financial system less cyclical.

<sup>1</sup> I am greatly indebted to Stephen Cecchetti and Hans Genberg, with whom I have had the privilege of working in this area over the past years. I am also very grateful to Roy Cromb for his advice and help on this speech. Of course, I bear responsibility for all errors.

<sup>(2)</sup> - See Wadhvani (1999) and CGLW (2000), though, of course, among others, economists at the BIS (see, e.g. Borio and Lowe (2002) and White (2006)) have also disagreed with the consensus view and made many valuable contributions to the debate.

## II. THE CASE FOR “LEANING AGAINST THE WIND”

In this section I simply restate the arguments presented in CGLW (2000) and CGW (2002) for how asset price misalignments should be used to guide central bank policy. We were primarily interested in examining whether and how asset price misalignments should influence monetary policy once other factors, such as the short-term inflation outlook and the output gap, have been taken into account.

One should not neglect the fact that bubbles can be costly. The 2003 IMF World Economic Outlook estimates that the average equity price bust lasts for 2 ½ years and is associated with a 4 per cent GDP loss. Housing busts are around twice as long and are associated with output losses that are about twice as large.

To avoid confusion or misunderstanding, I want to emphasize that we are **not** advocating that asset prices should be **targets** for monetary policy, neither in the conventional sense that they belong in the objective function of the central bank, nor in the sense that they should be included in the inflation measure targeted by the monetary authorities. Instead our principal claim was that central banks can improve macroeconomic performance by reacting systematically to asset price misalignments, over and above their reaction to inflation forecasts and output gaps. It is our view that central banks seeking to smooth output and inflation fluctuations can improve these macroeconomic outcomes by setting interest rates with an eye toward asset prices in general, and misalignments in particular. The main reason for this is that asset price bubbles create distortions in investment and consumption, leading to excessive increases and then falls in both real output and inflation. Raising interest rates modestly as asset prices rise above what are estimated to be warranted levels, and lowering interest rates modestly when asset prices fall below warranted levels, will tend to offset the impact on output and inflation of these bubbles, thereby enhancing overall macroeconomic stability. In addition, if it were known ex ante that monetary policy would act to “lean against the wind” in this way, it might reduce the probability of bubbles arising at all, which would also be a contribution to greater macroeconomic stability.

The rationale for our conclusions comes both from the intuition gained from simple theoretical models and from quantitative simulation results.

As I said back in 2002 (see CGW (2002)), the first illustration of the potential usefulness of reacting to asset prices is an application of the basic insight of Poole (1970), that leaning against the wind of interest rate changes is useful when disturbances originate in the money market. In CGLW we generalized this argument slightly to allow for movements in equity (or real estate) prices in an economy where the stock market (or the housing sector) is particularly important and to allow for changes in the exchange rate in an economy where the external sector is crucial.

A straightforward application of Poole’s analysis shows that moderating changes in asset prices diminishes fluctuations in economic activity so long as the underlying reason for the asset price movement can be traced to a disturbance in the demand and/or the supply of the asset in question. To be sure, the same logic implies that when asset prices change as a result of disturbances in other markets, for example if equity prices increase because of favourable productivity shocks, then the case for

leaning against the wind of the asset price change disappears. It is important not to react automatically to any and all changes in asset prices, but to evaluate each situation separately and act accordingly.

The second illustration given in CGLW is based on a model due to Kent and Lowe (1997). Their model is dynamic and explicitly incorporates the notion of asset price misalignments. In their setup, when a bubble develops in equity markets, standard wealth effects drive current inflation up. Importantly, though, expected inflation may not change since there is a probability that the bubble will disappear by itself, reducing future inflationary pressures. A forward-looking central bank that sets the current interest rate in response to expected inflation (and does not take the equity price bubble into account) would not tighten monetary policy under such circumstances. As a result the bubble in the equity market will bring about even higher inflation in the future if it continues and an even stronger economic slow-down if it collapses from an even higher level. Although expected inflation (i.e. the probability weighted average of these two future scenarios) may be on target, the country will suffer from highly variable economic activity as a result of the stance of monetary policy. By contrast, a policy of pre-emptively tightening in response to the emerging equity price bubble reduces this variability.

Similar mechanisms play a pivotal role in models in which monetary policy is transmitted via credit channels, and where the financial accelerator plays a significant role. In these cases, an emerging financial market bubble leads to higher investment as, given the higher value of their collateral, firms find it easier to borrow. More investment does stimulate aggregate demand and output in the short run, but in the end creates overcapacity and results in a sharp downturn. Even if average inflation is not affected significantly, the asset market bubble leads to higher output volatility. A central bank that reacts to the root cause of the instability - the asset price misalignment - will reduce the overall volatility in economic activity.

At an intuitive level, these arguments establish a *prima facie* case for taking asset price misalignments into account in the normal course of determining monetary policy, not only because they have an impact on expected inflation, but also because misalignments lead to unnecessarily large business cycle fluctuations. These conclusions were confirmed by the simulation results which we presented in CGLW (2000).

Of course, there are some alternative simulation results (e.g. Bernanke and Gertler (1991, 2001)) which have yielded different results. However, as we discuss in some detail in CGW (2002), as long as the central bank can and does distinguish between moves in asset prices that originate in that market versus other markets (e.g. productivity shocks), then we would stand by our original simulation results. Since, in any case, we do not believe that the central bank should lean against the wind if asset prices rise because of sound fundamental reasons, that is as it should be.

It is also worth emphasising that, in any case, these simulation exercises probably underestimate the gains from LATW. First, these models do not allow for the possibility that if it were known *ex ante* that the central bank would take this into account, then this would likely reduce both the probability and the eventual size of any bubble. Indeed, arguably this may be an even more important effect of LATW

than is incorporated in these simulation exercises, (see also Allen and Gale (2000) for a theoretical model which incorporates such an effect).

Second, asset price bubbles tend to produce distortions (e.g. overinvestment in the internet sector in 1999-2000, and in construction during the recent US house price bubble). These distortions may be costly over and above their effect on output and inflation volatility. Once again, the simulation exercises tend to ignore these additional social costs imposed by these distortions.

Notwithstanding the above arguments, LATW is opposed by many thoughtful and highly respected central bankers. In some cases they are willing to accept the theoretical presumption in favour of LATW, but oppose it on practical grounds. Hence, for example, Bernanke (2002), who dubs a LATW policy as “*bubble insurance*”, argues that “...it is rarely the case in economics that the optimal amount of insurance in any situation is zero. On that principle, proponents of leaning against the bubble have argued that completely ignoring incipient potential bubbles, if in fact they can be identified, can't possibly be the best policy.... I believe that, nevertheless, “leaning against the bubble” is unlikely to be productive in practice.”

Therefore, it is to some of the “practical” objections to LATW that I turn to next.

### **III. COMMONLY ADVANCED OBJECTIONS TO LATW**

#### **III.A PROBLEMS VIS-À-VIS IDENTIFYING A BUBBLE:-**

Many central bankers and academics have argued that the difficulties associated with identifying a bubble makes LATW impractical.<sup>(3)</sup> Typically, the argument is that central bankers have neither more information nor greater expertise in valuing a particular asset than private market participants. Moreover, there are concerns that if central bank judgements replace those of the market in valuing assets, financial market efficiency may be compromised.

I would not want to quarrel with the notion that it is difficult to identify bubbles. However, I do not believe that bubble identification is a problem that is unique to a LATW policy. It is also a problem for inflation forecast-targeting policy, and/or monetary policy that uses an interest rate reaction function that uses the output gap as an input. The absence/presence of a bubble can have a large effect on one's inflation forecast, as I recall from my own experience of attempting to set monetary policy in 2000-2001 within the inflation targeting regime in the UK (as the equity price “bubble” was bursting). Specifically, it is very difficult to accurately forecast aggregate demand (e.g. because of wealth effects on consumption and overinvestment by the corporate sector because of bubbles in the equity or housing markets) without forming a view on whether there is a bubble, and one's judgement on its likely persistence. Hence, *I do not see any significant difference between the informational requirements of any form of monetary policy rule that requires a reasonably accurate aggregate demand forecast, versus a LATW rule.* The problems associated with bubble identification makes the setting of monetary policy difficult irrespective of whether or not one has a LATW bias.

<sup>(3)</sup> - (Bernanke (2002), Gertler (1998) and Issing (1978))



Moreover, it is not immediately obvious to me that it is any easier to estimate the output gap than to identify bubbles. Indeed, any credible estimate of the prospective output gap depends, in any case, on bubble identification. Not only is the absence/presence of a bubble relevant to an aggregate demand forecast, but it also affects estimates of aggregate supply (as a bubble can affect corporate investment and observed productivity growth). In practice, Orphanides (1998) shows that over the period 1980-1992, the real time estimate of the output gap averaged -3.99%, while, by 1994, the revised figures suggested an average output gap estimate of -1.64%. If one had inserted these output gap estimates mechanically into a Taylor rule, the implied difference in interest rates would have been over 100bp!

I wonder whether some of those who object to a LATW-tilt in monetary policy on the grounds that bubble identification is too difficult are really saying that they would rather carry out inflation forecast-targeting policy on the assumption that financial markets are efficient and there are no bubbles. Indeed, this predisposition to believe that financial markets are efficient on the part of some members was a frequent source of disagreement when I was a member of the MPC at the Bank of England. For example, when I joined the committee, it was conventional to project the exchange rate assuming uncovered interest parity, even though there was a large body of research documenting that this was likely to be a biased predictor (see e.g. Wadhvani (1999)). Similarly, in early 2000, at what proved to be the peak of the NASDAQ market, there was considerable resistance on the part of some colleagues to allow for the likelihood that corporate investment would be weak after the bubble burst.

It is also important to emphasise that, often, recognising a bubble does not necessarily require central bankers to have more information or any greater insight than some private sector financial market participants. During bubbles, it is not unusual for at least some private sector participants to be aware that the market is “overvalued”, but yet, to be unwilling or unable to bet against it. This relates to Keynes’ dictum that markets can remain irrational longer than an individual investor may remain solvent.<sup>(4)</sup> Of course, the central bank has significant institutional advantages over its private sector counterparts. The central bank is much less subject to short-termist performance pressures

However, in a stimulating and important paper, Gruen, Plumb and Stone (2005, GPS hereafter) come up with a sophisticated example of a situation where not knowing enough about the stochastic properties of a bubble can lead to a LATW tilt being sub-optimal relative to doing nothing. Essentially, the LATW policy-maker needs to worry about the countervailing influences. On the one hand, policy needs to be tighter than a fixed horizon inflation-targeting benchmark to counter the expansionary effects of future expected growth in the bubble and to increase the probability that the bubble will burst. On the other hand, policy needs to be looser to prepare the economy for the possibility that the bubble may have burst by the time policy is having its impact on the economy. It is this latter effect that complicates the task of the policy maker who is attempting to use a LATW tilt.

<sup>(4)</sup> - (See, e.g. Stein (2004) for a model where a bubble can persist even though everyone knows the bubble is there).

GPS contend that because the information requirements of following a policy with a LATW tilt may be so great (to make sure that one does not tighten policy when it might be the optimal policy to ease) that it might, indeed, be optimal under certain circumstances to be a policy “sceptic” and completely ignore the future possible path for the asset price bubble in setting policy). While GPS make an important and interesting point, we should note that, even within their own model, LATW is optimal in all scenarios if one, plausibly, believes that the distortions induced by a bubble imposes efficiency losses on the economy. Moreover, Haugh (2008) shows that the GPS result is special. If, instead one modifies their model a little in a more realistic direction (whereby the output gap depends on the size of the asset price bubble in addition to its growth rate), then, in general for asset prices changes that are sufficiently large, it is optimal to LATW.

In general, I would not wish to imply that a LATW policy will not occasionally lead to the central bank tightening when it should have eased. However, such errors are inevitable in any process of setting policy under uncertainty. My own, strong presumption, based on my reading of the literature, is that a LATW policy will, on average, improve social welfare.

Given the frequency with which bubbles have occurred historically, it does seem unwise to ignore bubbles when setting monetary policy. Substituting monetary policy with a LATW tilt by going for inflation forecast-targeting assuming financial market efficiency is likely to lead to poor monetary policy.

### **III.B THE DIFFICULTY OF “SAFE POPPING”:-**

Bernanke (2002) argues that “...my suspicion is that bubbles can normally be arrested only by an increase in interest rates sharp enough to materially slow the whole economy. In short, we cannot produce “safe popping”, at least not with the blunt tool of monetary policy.”

Greenspan (2007) has made a similar argument. However, I believe that this argument only applies to those that are actually using monetary policy to actively prick bubbles. As already discussed, this is not what a LATW-tilt to monetary policy involves. Such a tilt is directed towards improving macroeconomic stability, not to pricking bubbles per se. Note that the degree of the “tilt” imparted to monetary policy is designed to optimise macroeconomic stability, and is most unlikely to involve creating a recession to prick a bubble. Recall that the simulation results in CGLW (2000) suggested that the LATW-tilt helped stabilise output and inflation relative to the no-tilt scenario even when monetary policy does not directly affect the bubble.

### **III.C THE FEDERAL RESERVE IN THE 1920’s:-**

Bernanke (2002), in discussing the 1920’s, argues “...that monetary policy tried over zealously to stop the rise in stock prices. But the main effect of the tight monetary policy....was to slow the economy.....The slowing economy, together with rising interest rates, was in turn a major factor in precipitating the US stock market crash.” He, and others, have argued that this illustrates the dangers of bubble popping by a central bank.

However, Bernanke (2002) himself says that in early 1928, the “...*Fed passed into the control of a coterie of aggressive bubble-poppers.*” It is my belief that we would all agree that a LATW-tilt to monetary policy in an attempt to enhance macroeconomic stability is wholly different from aggressive bubble-popping, and, therefore, the experience of the 1920’s in the US sheds little light on the optimality of a LATW-tilt.

### **III.D CAN ONE USE A LATW TILT IN A SMALL, OPEN ECONOMY?**

An objection to a LATW tilt policy is that if an equity price misalignment is caused mainly by developments in financial markets elsewhere, then changes in monetary policy in a small, open economy will not be able to affect the level of equity prices significantly. However, this does not invalidate the use of a LATW tilt. Remember that one is not trying to target a particular level of share prices, but react to them. One can respond to the potentially destabilising effects of these equity price changes in the interests of improving macroeconomic stability regardless of what causes these misalignments.

### **IV. ARE WE BETTER OFF JUST MOPPING UP AFTER THE BUBBLE BURSTS?:-**

Greenspan (1999) formally argued that it was important to focus on policies “to mitigate the fallout when it occurs and, hopefully, ease the transition to the next expansion.” Not only has the Federal Reserve explicitly followed such a policy, but many other central bankers (as, for example represented by Bean (2003) of the Bank of England) also appear to be sympathetic to this notion.

However, relying purely on mopping up after the event is dangerous for a variety of reasons.

First, the inherent asymmetry of this policy seems to make it a rather dangerous strategy to pursue. If the Greenspan “risk management” approach implies doing nothing when asset prices rise alongside rapid credit expansion, but then reacting aggressively by cutting interest rates when asset prices fall, then some argue that this could contribute to moral hazard, excessive risk-taking and possible damage to the credibility of the central bank (see, e.g. White (2006)). Kohn (2006) counters that the Federal Reserve has not been asymmetric, but that the shocks have been asymmetric. Of course, in these matters, perceptions trump reality. I would venture that the vast majority of financial market participants perceive the Fed to have been asymmetric and one imagines that this has affected their behaviour, and, thereby, reinforced the pro-cyclicality of the financial system.

It is perhaps no coincidence that some critics regard the Federal Reserve as having become a “serial bubble blower”.

A second difficulty with the Greenspan doctrine of mopping up after the event is that, thereby, the central bank misses the opportunity afforded by a LATW-tilt to monetary policy to reduce the size of the bubble by affecting expectations.

Third, and perhaps most importantly, the central bank may find itself unable to mop up and, hence, a deep and prolonged recession might occur after a bubble bursts. For

example in Wadhvani (2007), I argued that it was not difficult to envisage circumstances where an external inflation shock might lead the MPC of the Bank of England to raise interest rates even as the house price “bubble” unwound. This “nightmare scenario” is, alas, only too real at the moment. If we do now get a recession in the UK, a part of the blame for this must lie with the Bank of England for not being more willing to have a LATW-tilt while house prices were rising.

Another possible scenario that should worry those who rely on mopping up is the possibility that monetary policy becomes less effective once bank balance sheets are hurt. This appears to have played some role in the explaining the “lost decade” in Japan. Again, alas it is a feature of the current conjuncture, and were significant further shocks to hit bank balance sheets, we might yet find that central banks find it difficult to stimulate economies through interest rate cuts.

Hence, to summarise, I do not believe that the “conventional” wisdom of doing nothing as asset prices rise, but relying on “mopping up” after the bubble bursts is either a desirable or a reliable way of running monetary policy. If we are to reduce the likelihood of deep and prolonged recessions, we need to find a better way.

## **V. CAN WE JUST RELY ON AN INFLATION TARGETING SYSTEM?**

Some authors (e.g. Bean (2003)) have argued that, in a flexible inflation targeting framework, if you look at the entire future path of expected inflation and growth, there is no independent role for asset prices.

Of course, as a purely theoretical proposition, we agree, and CGLW (2000) explicitly asserted this. Indeed CGW (2002) say “this paper is not about what the central bank objective should be. Instead, we concurred with how an inflation-targeting central bank can most efficiently fulfil its objectives.”

### **V.A SO WHAT THEN IS THE CONTROVERSY ABOUT?**

The key issue in the debate, in my opinion, is that in practice much of interest rate setting is not driven by looking at inflation and growth forecasts at all horizons, but is based on rules of thumb. In particular, inflation targeting is usually based on inflation forecasts one to three years out, often with a focus on a fixed horizon such as two years. This can have the effect that asset price misalignments get an insufficient weight in policymaking.

At the Geneva conference when we first presented our work in 2000, Ueda-san argued that a Japanese central banker who was looking 10 years out would have been raising rates in 1987-88. But, given that the central bank was focused on inflation only one or two years out, it was more difficult to justify raising rates (see CGLW (2000), pp 111-12).

This is why just lengthening the inflation forecast horizon from, say, 2 years to 3 years (as supposedly happened in the UK) is unlikely to be enough.<sup>(5)</sup>

<sup>(5)</sup> – I say “supposedly”, as in its May 2008 Inflation Report, the Bank of England published a 3-year-ahead inflation forecast which is below target, but did not explain why it had not led them to cut rates.

We are simply proposing that, where the reaction function includes fixed-horizon inflation forecasts, it should also incorporate asset price misalignments.

As we said in 2000:

*“A purist might argue that the central bank should really look at inflation forecasts at several (all) future time periods ... such a policy might not be easy to implement ... The proposal for incorporating asset price misalignments can be interpreted as an alternative way of allowing for considerations relating to longer time-horizons”* (CGLW (2000) p 51).

Hence, our view was simply that including asset price misalignments would help us to do better than existing rules of thumb.

## **V.B BUT WHY FOCUS ON RULES OF THUMB?**

There are those like Bean (2003), who argue that improving on existing rules of thumb is not interesting or relevant. Instead, one should just use the theoretically “optimal” policy rule. Recall that, in this case, that might involve reacting to a 10-year-ahead inflation profile. My heart sinks at the thought of having to attempt to implement such a rule.

**(1) Practical considerations.** It is very time-consuming to agree on a two-year profile for inflation, let alone going out many years into the future. Also many of the econometric models that underlie such forecasts perform particularly badly at longer horizons.

**(2) It is what most central banks do in practice.** Therefore, unsurprisingly, for most of the period I was on the Bank of England Monetary Policy Committee (MPC), the emphasis was on the two-year ahead horizon. This was reflected in the substantial time spent on deciding whether the inflation forecast was 2.4, 2.5 or 2.6% at the two-year-ahead horizon. Of course, towards the end of my term on the MPC, the relationship may have become a little less tight. But, even then, for the majority of members of the committee, the two-year-ahead point forecasts remained central.

**(3) Ease of communication.** Both internally and in terms of how policy is communicated to the public, simple rules are much easier to work with. In particular, if the inflation target is more easily understood, inflation expectations will be better anchored, providing crucial support to the success of monetary policy.

**(4) Accountability.** If the framework is vague, it is difficult to make the central bank accountable.

## **V.C AVOIDING BUBBLES**

Bean (2003) asserts that:

*“... the design of monetary policy does not require a change in the formal structure of inflation targets”* (p 18).

I wonder.

A clear and explicitly enunciated role for asset prices in the inflation targeting framework has the advantage that bubbles will be discouraged. Having a transparent reaction function consisting of the two-year-ahead inflation forecast plus an asset price misalignment adjustment could potentially make bubbles less likely to occur.

As already discussed above, one key point is that the simulation work in the literature significantly understates the benefits of including asset price misalignments in the reaction function. It doesn't allow for the Kent-Lowe (1997)/Allen-Gale (2000) effect – i.e. the impact that the central bank can have on the probability of the bubble growing, by signalling that it will respond.

Over the years, several current and former members of the MPC at the Bank of England have expressed scepticism about a LATW tilt to monetary policy. In the absence of the MPC unanimously agreeing to a LATW tilt, and it being clearly understood by the wider public that policy would react to a growing bubble, one is unlikely to see the benefits of such a policy. Note that the remit already requires that the MPC look at potential inflation deviations from target “at all times”, but the committee has chosen to interpret this, as something closer to fixed horizon inflation-targeting. This is a pity. If we are to make our financial framework less- procyclical, it is important that the MPC, at a minimum, explicitly say that they will look at asset price misalignments in addition to a fixed horizon inflation target. The Government must ensure that the MPC do so, because this clarification of the remit would make what the MPC actually does closer to what the remit already says it should do. It would be easy to do so through, say, a letter from the Chancellor to the MPC.

Of course, as a political matter, having a consumer price index measure in which the prices of houses played an important role would have gone some way towards imparting a LATW tilt to monetary policy.

While I believe that the measure of inflation chosen to target should ultimately be the measure that is conceptually most appropriate, this may have been a pragmatic way of, at least, getting the MPC to focus a bit more on a proxy for asset price misalignments. In that regard, it is a pity that the UK switched from the RPI-X measure to the current HICP measure, that excludes housing costs.

#### **V.D LACK OF CLARITY OF THE CURRENT UK FRAMEWORK**

While the current UK framework has many advantages, there is a lack of clarity on asset prices and imbalances. The “flexibility” of the framework in this area has meant that MPC members have, in the last two to three years, had a whole host of views on how they should react to the imbalances. This has therefore been confusing to the public.

In particular, some members have reacted differently to the exchange rate “misalignment” and the house price/consumption “misalignment”. According to our suggested rule of thumb:

- (1) Since unsustainable house price growth could lead to a crash and very low inflation three to four years out, interest rates should initially have been higher

than warranted by the two-year-ahead forecast to prevent a build-up of debt and house prices.

- (2) But, acting in the opposite direction, since the exchange rate was higher than warranted, interest rates should have initially been set lower than otherwise. This would have helped keep the exchange rate lower, thereby reducing the size of its eventual crash.

However, some members did not apply this same logic to both misalignments. The same members argued for higher interest rates because of the housing market, in line with our proposed rule of thumb. But, at the same time, these members argued that the strength of sterling also argued for higher interest rates. The reasoning was that this meant there was a risk of future exchange rate falls, stimulating inflation at some uncertain point.

Therefore, so-called flexible inflation targeting allows people to be inconsistent in their treatment of misalignments in different asset markets. It would be much better to have a transparent and consistent rule of thumb in that case.

## **VI. CAN LATW WORK IN PRACTICE? THE SWEDISH CASE**

There are those who argue that a LATW-style monetary policy is not feasible<sup>(6)</sup>

Yet, it would appear that Sweden does offer us a modern-day example of where policy with a LATW tilt has been used.

Lars Heikensten, the former governor of the Riksbank recently wrote

*“With house prices increasing drastically...On a few occasions in 2004-05 the Riksbank did for that reason not follow a strict inflation-targeting rule. We “leaned against the wind”, in the sense that we did not take rates down as quickly as we could have done considering the outlook for inflation alone....We explicitly referred to asset prices in our published minutes, press releases and speeches...”* (Heikensten (2008))

Of course, Heikensten openly acknowledges that LATW is not enough, and that, perhaps, more should have also been done with respect to better and more effective regulation or fiscal policy. It is also my belief that LATW monetary policy should be a part of a broader counter-cyclical financial framework. One does not want to overburden monetary policy and regulatory policy also needs to play a role. It is to this that we turn our attention next.

<sup>(6)</sup> – Greenspan is quoted in the *Financial Times* May 27, 2008 as saying that he would be “fully supportive” of “leaning against the wind” with interest rates when asset prices are rising if someone could provide a credible framework for doing so. He is quoted as saying “I have just not seen any evidence that it is feasible”.

## **VII. POTENTIAL CHANGES TO THE REGULATORY FRAMEWORK**

As discussed above, monetary policy has been perceived as asymmetric. White (2006) reminds us that the same has been true of our regulatory framework. A safety net is provided by features such as deposit insurance, a Lender of Last Resort function and the “too big to fail” doctrine. However, heretofore, the regulatory framework does not require that more capital is built up in good times. Specifically, Goodhart and Persaud (2008) have suggested that Basel II capital adequacy requirements be modified by a ratio linked to the “excessive” growth of the value of bank assets. This proposal seems to deserve further study.

There are also other sensible things that need to be investigated. In a UK context, one did not have to have a Ph.d in Economics to realise that a loan-to-value ratio of 125% might lead to difficulties, but our regulatory framework did nothing about it. Cecchetti (2006) argued that maximum loan-to-value ratios might have been considered, and also raises the possibility of using the tax system.

Having said that, in the current political atmosphere, it would not be difficult to see the “wrong” type of regulatory changes being implemented. Specifically, one might either see either harmful or ineffectual changes being proposed.

The assistant secretary for financial institutions, David Nason, is quoted in the Financial Times (April 30, 2008) as saying that the US central bank should use its proposed new powers as a stability regulator to force institutions to change their investment strategy if it is judged they threatened the wider economy. Even assuming that this was feasible, it is far from obvious that it would be socially desirable. It is also obviously important that we contemplate regulatory reforms that will make a difference. There might be a lot that is inappropriate about the compensation packages of the financial sector, but it is not obvious that changes in their remuneration structure would have made a significant difference e.g. whatever went wrong at Bear Stearns was not because the employees and shareholders did not know that they had plenty to lose.

In any case, these changes in the regulatory framework are to prevent a future build up of imbalances and the next crisis. In the here and now, we need to ensure that appropriate monetary, liquidity and regulatory policies are put in place in an attempt to protect the real economy from the downside risks associated with the current credit crisis.

## **VIII. APPROPRIATE POLICY AFTER A BUBBLE BURSTS**

We discussed in section IV above that aggressive interest rate cuts after a bubble bursts may create an unfortunate asymmetry (if one does not LATW when asset prices rise), and this may sow the seeds of the next crisis.

However, irrespective of whether one did LATW on the upside, once a bubble bursts, the lessons of history (e.g. see the discussion of monetary policy in the US after the 1929 crash, and in Japan after their 1989-90 fall in share prices in CGLW (2002)) are that aggressive interest rate cuts are desirable in order to reduce the probability of a long-lived recession.



As already noted, it is an unfortunate feature of the current conjuncture that the simultaneous rise in oil and food prices has made several central banks less willing to reduce interest rates.

In CGW (2000), after having analysed previous historical experiences, we concluded that

*“....at very high frequencies, liquidity needs to be provided to ensure orderly markets..... it is very important to ensure that, when it (bubble) bursts, the damage does not wipe out the financial intermediation system.”*

These lessons seem to have been well absorbed by authorities in the US and Europe.

Unfortunately for a while last year, it was not immediately obvious that these lessons had been taken on board by the UK authorities. For example, after the August 9, 2007 shock, the Bank of England allowed the overnight rate to stay well above the interest rate set by the MPC for a significant time period. This can be dangerous, and it may well have contributed to the well-publicised difficulties of the time. Once a bubble bursts it is imperative that one does not spend all one’s time worrying about “moral hazard” – it is much more important to deal with the crisis at hand, and turn one’s attention to improving institutional design at a later stage. Of course, inappropriate liquidity and LOLR policies in a crisis can carry significant downside risks for the economy and can then place an inappropriate burden on monetary policy. Fortunately, subsequent events might suggest that better sense has now prevailed, and we sincerely hope that this remains true as this crisis unfolds.

## **IX. CONCLUSIONS**

I hope that I have persuaded you today of the theoretical and empirical case for considering a LATW tilt to the way we run monetary policy. I expect this to enhance macroeconomic stability and reduce microeconomic distortions. Carrying out such a policy is entirely feasible. Of course, it would be highly desirable if such improvements in monetary policy-making were also accompanied by other changes in the regulatory framework that made our financial system less pro-cyclical.

## **Bibliography**

- Allen, F. and D. Gale. (2000), "Bubbles and Crises", *The Economic Journal*, 110, January, pp. 236-55
- Bean, Charles (2003). "Asset prices, financial imbalances and monetary policy: are inflation targets enough?" BIS Working Paper no. 140
- Bernanke, Ben and Mark Gertler (1999). "Monetary Policy and Asset Price Volatility". In *New Challenges for Monetary Policy: A symposium Sponsored by the Federal Reserve Bank of Kansas City*. Federal Reserve Bank of Kansas City, pp. 77-128
- Bernanke, B. and M. Gertler (2001). "Should Central Banks Respond to Movements in Asset Prices?" *American Economic Review*, May
- Borio, C and P Lowe (2002): "Asset prices, financial and monetary stability: exploring the nexus", *BIS Working Papers*, no 114.
- Cecchetti, Stephen, Hans Genberg, John Lipsky and Sushil Wadhvani (2000). *Asset Prices and Central Bank Policy*. Geneva Report on the World Economy 2. CEPR and ICMB
- Cecchetti, S G H Genberg and S Wadhvani (2002): "Asset prices in a flexible inflation targeting framework" in *Asset price bubbles: the implications for monetary, regulatory and international policies*, (eds W C Hunter, G G Kaufman and M Pomerleano), MIT Press, pp. 427-44
- Cecchetti, S.G. (2006). "The Brave New World of Central Banking: Policy Challenges Posed by Asset Price Booms and Busts", *National Institute Economic Review* no. 196, April.
- Gertler, M., M. Goodfriend, O. Issing and L. Spaventa (1998) *Asset Prices and Monetary Policy: Four Views*, Centre for Economic Policy Research (CEPR) and Bank for International Settlements (BIS) booklet (CEPR: London).
- Goodhart, C. and A. Persaud (2008). "A party pooper's guide to financial stability." (*The Financial Times*, June).
- Greenspan, A. (1999). *Testimony to the Committee on Banking and Financial Services, US House of Representative*, July 22.
- Greenspan, A. (2007) "The Age of Turbulence: Adventures in a New World", Allen Lane.
- Gruen, D., Plumb, M. and Stone, A. (2003) "How should monetary policy respond to asset price bubbles", in Richards, A. and Robinson, T. (eds), *Asset Prices and Monetary Policy, Proceedings of the Research Conference of the Reserve Bank of Australia*, November, pp. 260-80.

Haugh, D. (2008). “Monetary Policy under uncertainty about the nature of asset price shocks”, OECD, mimeo.

Heikensten, L (2008) “More to it than just “leaning against the wind”, The Financial Times, June 5.

Kent, C and P Lowe (1997): “Asset-price bubbles and monetary policy”, Research discussion paper, Reserve Bank of Australia, RDP 9709.

Kohn, Donald R. (2006). “Monetary Policy and Asset Prices”, speech delivered at “Monetary Policy: A Journey from theory to Practice”, an ECB Colloquium held in honour of Otmar Issing, Frankfurt, Germany, March 16.

Orphanides, A. (1998)., “Monetary Policy Evaluation with Noisy information” Finance and Economics Discussion Paper 1998-50, Board of Governors of the Federal Reserve System.

Poole, W. (1970). “Optimal Choice of Monetary Policy Instruments in a Simple Stochastic Macro Model”, *Quarterly Journal of Economics*, 88, pp. 197-216

Stein, J.C. (2004), “Why are most funds open-end? Competition and the limits to arbitrage”, unpublished manuscript, Harvard University, January.

Wadhvani, S.B. (1999a) “Currency Puzzles”, Speech delivered at the LSE, 16 September, [www.bankofengland.co.uk](http://www.bankofengland.co.uk) .

Wadhvani, S.B. (1999b) “The US stock market and the global economic crisis.” *National Institute Economic Review*, January, pp. 86-105.

Wadhvani, S.B. (2007) “The MPC: Ten Years Old.” *The Times*, May 2007

White, William R. (2006). “Procyclicality in the financial system: do we need a new macro financial stabilisation framework?” *BIS Working Papers* no.193.