



Comments Before The Money Marketeers Club: Musings on Inflation Targeting

*New York City
February 27, 2006*

It's a pleasure to be before this group a second time, having been with you in April 2004. Thank you for inviting me. It is wonderful to see so many friends of such long standing, some going back 25 years. Where has the time gone?!?

Given that Ben Bernanke just took over the Fed Chair, your timing in staging this dinner is impeccable. What I want to do this evening is think out loud with you about inflation targeting, a topic very dear to both Ben's mind and his heart.

For the record, I support the Fed adopting an explicit numerical range for its long-term objective for inflation. I have not always felt this way. Indeed, until three years ago, I was resolutely, if not religiously against it. I changed my mind very publicly in April 2003, when Bill Dudley and I co-wrote an Op-ed for the *Financial Times*, advocating that the Fed:

"...commit to keeping the federal funds rate at or below the current 1¼ percent until core inflation climbs back to, say, 2 percent or higher on a year-on-year basis."

As all of you in this room will recall, concern about deflation risk was running high, hysterically so, in the spring of 2003.

Indeed, we the markets were even talking about the possibility of the Fed going "unconventional," moving to an anti-deflation regime of explicitly targeting lower long-term rates, backed by the full power of its printing press.

While most of us thought it highly unlikely, we could not resolutely "rule it out" (economists love to use that phrase!). We also knew that if it did happen, it would be a very, very big deal. Consequently, betting against it was a classic Pascal's Wager: low odds, but high consequences. And as Pascal taught us long ago, those are the type of bets that wise men and women eschew.

Consequently, we as a market could not price the yield curve solely on the basis of "conventional" macroeconomic indicators, but had to guesstimate some risk premium for "unconventional" Fed maneuvers. Our biggest problem was that we had no credible way to figure out just what this risk premium should be at various points on the curve.

You could logically argue that it should be negative in some parts, where the Fed might be buying, and positive in others, where the Fed wasn't buying. And the Fed was not providing any guidance at all, with Mr. Greenspan simply offering reassuring words to the world that the Fed would not

be impotent, even if the Fed funds rate were to hit zero.

To Bill Dudley and me, this was all very unnecessary. Yes, deflation was a fat-tailed risk and yes, the Fed should cut it off with dispatch. But there was no need whatsoever for the Fed to lead with the tool of buying long-dated bonds with the express purpose of driving down their yield! Yes, in *extremis*, the Fed could and should do that.

But the spring of 2003 was not an *extremis* moment of actual deflation, but rather one of remote, but not trivial deflation risk: a low probability, high consequence outcome. The net-net of it all was that we in the markets faced a Pascal Wager about the Fed's possible response to a Pascal Wager.

Analytically, it was a fascinating time for remembering all we learned about game theory back in graduate school. But as a practicing investment manager, it was maddening. What was needed was a way for the Fed to truncate deflation risk by getting long rates to fall, stimulating aggregate demand growth (deflation risk is always and everywhere a matter of the risk of a deficiency of aggregate demand!), while also allowing we the markets to still price the yield curve in the context of "conventional" macroeconomic sign posts.

A Policy In Search of an Exit Strategy

What was needed was an explicit commitment to hold down short-term interest rates, which would reduce both market expectations of future short-term rates as well as the risk premium associated with those expectations. What was also needed was an explicit, up-front credible exit plan from

such a commitment, when the deflation risk had been scotched. Bill and I thought that the obvious exit plan should simply be, you guessed it, an inflation target – one higher than the prevailing inflation rate, which was too close to the deflationary fat tail.

As things turned out, that's more or less what the Fed eventually did, though with a twist. After we the markets had covered our Pascal Wager by taking the 10-year yield to almost 3%, the Fed cut the Fed funds rate to 1% on June 25, 2003, with no hint of anything "unconventional." Then two weeks later, before Congress, Mr. Greenspan explicitly declared that "unconventional" maneuvers were totally off the table. If additional anti-deflation steps proved to be necessary, he said, the Fed would take the Fed funds rate all the way to 0% (despite the negative consequences for money market mutual funds).

In response, the long end of the bond market fell totally out of bed, as we the markets reversed the buying that we had done to cover the Pascal Wager that the Fed would "go unconventional." It was not a fun July 2003. And the reversal didn't serve the Fed's anti-deflation objective either. Accordingly, on August 12, the FOMC did what it should have done many months earlier: it issued a commitment to remain accommodative for a "*considerable period*."

And lo and behold, we the markets did exactly as theory suggested we would do: we reduced forward short rates and the risk premiums (implied volatility) associated with them. To wit, we reduced long rates, after the nasty rise associated with July end of the "unconventional" dance.

In fact, the commitment strategy was actually unconventional, just in a different way than we the markets had feared in the Spring. Forward-looking language was indeed a brave new step for the FOMC, essentially providing a forecast of its policy intentions. It took a while for the Fed to get it right, with the initial wordsmithing putting the commitment and the conditions for exiting it in separate sentences, leaving the erroneous impression that the commitment was grounded in the passage of time, rather than conditional on evolving conventional macroeconomic signals. The FOMC fixed that mistake on December 9, 2003, putting the commitment and the conditions for it – *“inflation quite low and resource use slack”* – into the same sentence.

But regrettably, the Fed didn't, as Dudley and I had advocated, make the primary condition for exiting the “considerable period” epoch an explicit inflation objective, but rather an implicit employment objective: when the recovery shook off its “jobless” character, the Fed's “considerable period” would be over. That happened in the spring of 2004, when employment growth took off, triggering a shift in the FOMC's commitment to one of a promise to be “patient” in removing accommodation, followed shortly by a promise to remove accommodation in only a “measured” way.

This epoch lasted for eighteen months, ending on December 13, 2005, when the FOMC ceased characterizing policy as “accommodative.” The Committee didn't, to be sure, officially declare policy to be “neutral,” and it retained the word “measured” in speaking of likely further “policy firming.” But make no mistake, December 13,

2005 marked the end of a rhetorical FOMC epoch, a conclusion reinforced by the FOMC's statement after its January 31, 2006 meeting, dropping the word “measured” and downgrading the odds of further tightening, from “is likely to be needed” to “may be needed.”

Risk Premium Anorexia: Too Much Transparency or Too Much Hubris?

Some argue, of course, that it did not serve the FOMC's macroeconomic purposes to have had its rhetoric holding down long-term rates, reducing the term risk premium, during the grand journey from 1% to 4½% Fed funds, creating a conundrum in which the impact of tighter policy was diluted. In a narrow sense, it is hard to argue with this thesis: property markets would surely be less frothy now if long-term rates had at least gone in the same direction as the Fed funds rate, even if proportionately less. In turn, there would be presently less risk of a hard landing for the property markets.

In a broader sense, however, it is hard for me to bemoan more transparent FOMC rhetoric, as it enhances accountability – always a good thing in a democracy! – and also enhances economic efficiency, by reducing the dead weight costs of risk premiums for risk takers, who are the mother's milk of capitalist progress.

To be sure, risk premiums can be too thin, if they induce speculative excesses, generating Austrian-style resource misallocation. But for me, the right way to temper such a pathology is not to generate uncertainty about Fed policy for the sake of generating wider risk premiums, but rather to enrich the nature of the Fed's transparency.

Which brings us back to the proposition that the Fed should establish an explicit numerical range for its inflation objective, as new Fed Chairman Bernanke has long advocated. As noted at the outset, I was against the proposition until three years ago. As I explained on these pages:

“During the Fed’s (1980s and 1990s) anti-inflation campaign, I never favored an explicit inflation target, because I knew that if one were to be established, it would be set below the prevailing inflation rate. I thought that configuration would have been inconsistent with the Fed’s strategy of ‘opportunistic disinflation,’ in which it didn’t induce recessions to lower inflation, but welcomed them for their disinflationary dividends...kinda like losing 10 pounds opportunistically when hit with food poisoning. To my way of thinking, setting an explicit inflation target below prevailing inflation would have implied a commitment to hit the target on some definable horizon, not just ‘opportunistically.’”¹

But when it became clear that secular price stability had been achieved and that the dominant cyclical risk was of unwelcome further disinflation (with the low odds/high consequences risk of outright deflation), the beauty of a definition of secular price stability became obvious: it would provide a means for the FOMC to communicate two-way inflation risk – it can not only be too high, but also too low!

And that remains the secular case today, even as FOMC hawks bellyache that inflation is presently near the top of its so-called “comfort zone” – 1½% to 2% for

the core PCE deflator. What is missing is a full discussion as to why that zone is better than other zones and how tolerant the Fed should be about cyclical movements within and outside that zone.

On this score, I think Chairman Bernanke would agree, as revealed in a speech on October 17, 2003, when he advocated that the FOMC calculate and announce what he dubbed the OLIR – the Optimal Long-term Inflation Rate. He stressed that he was not advocating either a time-frame for hitting the OLIR or a specific range for cyclical variance around it. In fact, he explicitly rejected that the FOMC take those latter two steps, declaring:

“My objective is to get the mean of inflation right while leaving the determination of the variance open for future discussion and debate.

Without any fixed time frames for reaching the optimal long-run inflation rate, would an announced value for the OLIR carry any credibility?

I think it would, for the important reason that the OLIR is not an arbitrarily selected value. In particular, because this inflation rate would have been judged by the Committee to be the one under which the economy operates best in the long run, the FOMC would have an incentive to try to reach it eventually, even if it were not an announced long-run objective of policy.

Thus, despite the lack of a time frame, the OLIR should have long-run credibility, that is, it should be the best (lowest-forecast-error) answer to the question:

‘What do you expect the average inflation rate in the United States to be over the ten-year period that begins (say) three years from now?’”

To me, Mr. Bernanke’s proposal that the FOMC figure out and announce the OLIR is compelling. Perhaps the most compelling reason for the Fed to do so would be to force itself to explicitly plot – and clearly communicate! – its cyclical policy path in the context of the OLIR. Having the OLIR explicitly on the table would not just be a step forward in transparency and accountability, but would force the FOMC to be more rigorous in calculating and testing its views as to the cyclical trade-off between inflation and employment growth, as the case with inflation-targeting central banks that issue rigorous Inflation Reports. Sunshine is not only a great disinfectant, but also a great prophylactic against sloppy thinking!

Most important, perhaps, is that this next step in transparency, as proposed over two years ago by Mr. Bernanke, would give the FOMC more flexibility – not less! – to acknowledge that inflation is inherently a more cyclical variable than it is presently willing to admit. It is stunning, at least to me, that many Fed officials preach with religious fervor that there is something intrinsically evil about a 2.2% inflation rate versus 1.8%. Who’s kidding whom?

Yet because the Fed doesn’t have an explicit OLIR, or an explicit and reasonable range of cyclical variance around it (a percentage point on either side is considered “best practice” at explicit inflation-targeting central banks), we the markets are teased into believing that the Fed must work to keep

inflation at all times in that narrow 1½% to 2% range, or else it will somehow lose long-term credibility as a bastion of secular price stability. This is silliness, but if that is what the Fed rhetorically teaches us to believe, we the markets will price assets accordingly.

Which paradoxically, actually helps contribute to the Fed’s conundrum of too-skinny risk premiums, which are the raw material of asset price bubbles. How so? If we the markets believe that the Fed has both the ability and desire to cyclically fine-tune inflation into a virtual flat line, we the markets will bid away risk premiums directly and indirectly related to cyclical inflation variability. Yes, there can be a paradox of too much credibility (deserved or undeserved!).

Indeed, former Fed Chairman Greenspan has admitted as much, beginning with the following comment at Jackson Hole in August 2004:

“The lower risk premiums – the apparent consequence of a long period of economic stability – coupled with greater productivity have propelled asset prices higher.”

He went on to say:

“Any onset of increased investor caution elevates risk premiums and, as a consequence, lowers asset values and promotes the liquidation of the debt that supported higher asset prices. This is the reason that history has not dealt kindly with the aftermath of protracted periods of low risk premiums.”

And then a few weeks later, on September 27, Mr. Greenspan upped his Jackson Hole ante on himself and declared:

“In perhaps what must be the greatest irony of economic policymaking, success at stabilization carries its own risks. Monetary policy – in fact, all economic policy – to the extent that it is successful over a prolonged period, will reduce economic variability and, hence, perceived credit risk and interest rate term premiums.

A decline in perceived risk is often self-reinforcing in that it encourages presumptions of prolonged stability and thus a willingness to reach over an ever-more-extended time period. But, because people are inherently risk averse, risk premiums cannot decline indefinitely.

Whatever the reason for narrowing credit spreads, and they differ from episode to episode, history cautions that extended periods of low concern about credit risk have invariably been followed by reversal, with an attendant fall in the prices of risky assets. Such developments apparently reflect not only market dynamics but also the all-too-evident alternating and infectious bouts of human euphoria and distress and the instability they engender.”

Irony indeed: the Fed can be too successful in cyclically fine-tuning inflation, if such success breeds irrationally thin risk premiums, the aftermath of which history has not dealt kindly! Thus, it seems to me, the problem with the Fed’s current implicit inflation target of 1½% to 2% is that it is both implicit and too narrow, generating

market expectations that the Fed has both the ability and the duty to keep it within that range in virtual real time.

I believe the target – actually, I prefer the noun “objective” – should be both explicit and explicitly long-term, with no presumption that the Fed should or will thwart all cyclical movements in inflation, in either direction. Put differently, a little less belief in the real time power of the Fed to fine-tune inflation would be a good thing, not a bad thing.

Melting Is Asymmetric

Thus, while I strongly support Mr. Bernanke’s proposal that the Fed estimate and then publicly announce the OLIR, I would vigorously argue against defining it as 1½% to 2% for the core PCE deflator. Gun to head, I’d suggest 1½% to 3%, a range wide enough to warrant increased risk premiums for cyclical variability in inflation. Indeed, I believe more cyclical variability in inflation around a low secular mean would actually enhance the Fed’s ability to secularly maintain that low mean, as the Fed’s asymmetric reaction function to asset price bubbles ironically increases the long-term risk on the deflationary side of the OLIR.

To be sure, bubbles, while they are inflating, carry the potential, via the wealth effect and associated borrowing against it, to cyclically overheat the economy, generating upside cyclical inflation risk. The Fed can conventionally address that risk with tightening. Indeed, Mr. Bernanke rose to fame with a paper (co-written with Mark Gertler) delivered at Jackson Hole in August 1999, in which he argued that the Fed should factor asset prices into its reaction function **only** to the extent that they

affect the cyclical outlook for aggregate demand relative to aggregate supply (otherwise known as the output gap) and, thus, the cyclical outlook for inflation.

By following such a course, Ben and Mark argued, the Fed would be leaning against the pro-cyclical wind of asset prices, which would tend to temper the risk of bubbles and busts in asset prices. To wit, by targeting inflation, using an expectations-augmented Phillips Curve in a Taylor Rule, the Fed would naturally do some of what bubble-popper advocates want, without making asset prices *per se* an impulse variable in its reaction function.

On the upside, Bernanke and Gertler are right, I think: to the extent that bubbles overheat the economy, generating inflation risk, an inflation-targeting reaction function would “automatically” lead to tightening. Maybe not as much as bubble poppers would advocate, but tightening nonetheless.

The problem with the Bernanke/Gertler approach, in my view, is the inherent asymmetry of the impact of bubbles and their bursting on the fat-tail risks of runaway inflation and noxious deflation. Their approach certainly truncates the runaway inflation risk, but since it allows for bubbles to form (reacting to them only if they have a negative impact on the cyclical inflation outlook), the approach also implies increased fat-tail risk of deflation. Why?

Ironically, Alan Greenspan himself gave the answer in the discussion session after Ben and Mark’s presentation at Jackson Hole in August 1999, when he said:

“I just wanted to make a very simple point that should be obvious but that I suspect is not – that there is a form of asymmetry in response to asset rises and asset declines but not if the rate of change is similar. In other words, central banks do not respond to gradually declining asset prices. We do respond to sharply reduced asset prices, which will create a seizing up of liquidity in the system. But you almost never have the type of 180-degree version of the seizing up on the up side. If indeed, such an event occurred, I think we would respond to it. The actuality is that it almost never occurs, so it appears as though we are asymmetric when, indeed, we are not. The markets are asymmetric; we are not.”

Arguably, what Mr. Greenspan was doing was denying the existence of the so-called “Greenspan Put,” the putative promise to ease quickly and aggressively if asset prices crash, while leaning against them on the way up only in the fashion that Bernanke and Gertler advocated. The Fed only **appears** to be asymmetric, Greenspan said, because the markets themselves are asymmetric: they melt down, but don’t melt up!

Bottom Line

That is very, very true. But it is also not a trivial matter, in my view. To the contrary, it is the crux of the matter. If, as Mr. Greenspan argues,

- (1) the ironic result of successful stabilization policies is a journey to excessively-thin risk premiums, and if

- (2) history has not dealt kindly with the aftermath of protracted periods of low risk premiums, and if
- (3) asset prices do not tend to melt up but **do** tend to melt down, then
- (4) logic implies that the fattest fat-tailed secular risk to price stability is deflation, not inflation.

How so? If bubbles are the ironic externality of successful stabilization policies, then those policies can be successful only so long as there are asset classes that the central bank can inflate into a bubble. When there are no more free and clear assets to lever up, the game ends in a debt-deflation. As the great Hyman Minsky intoned, stability is ultimately destabilizing!

I actually don't think that's going to happen. But that is the logical consequence of too-successful inflation stabilization. Don't call it a conundrum, but rather a dilemma, if the Fed were to set and achieve a too-narrow target zone for inflation. Thus, while I am four square behind Chairman Bernanke's proposal to define and announce the OLIR, I am strongly against defining a tolerable cyclical band around it that is too narrow.

Irony is as irony does: a little bit more cyclical variability in inflation would enhance the odds of secular stability in inflation!

Paul McCulley
Managing Director
mcculley@pimco.com

¹ "I Have Become An Inflation Targeter," *Fed Focus*, April 29, 2003.

Regulated by the Monetary Authority of Singapore as a holder of a capital markets services license in fund management. The services and products provided by PIMCO Asia Pte Ltd relate to advisory accounts, which are available only to accredited investors as defined in the Securities and Futures Act. The investment management services and products are not available to persons where provision of such services and products is unauthorized.

***Past performance is no guarantee of future results.** This article contains the current opinions of the author but not necessarily those of the PIMCO Group and does not represent a recommendation of any particular security strategy, or investment product. The author's opinions are subject to change without notice. Information contained herein has been obtained from sources believed to be reliable, but not guaranteed. This article is distributed for educational purposes and should not be considered as investment advice or an offer of any security for sale.*

Each sector of the bond market entails risk. Money Market funds are not insured or guaranteed by FDIC or any other government agency.

The Personal Consumption Expenditures (PCE) deflator is published by the Bureau of Economic Analysis as part of the GDP report. It measures inflation across the basket of goods purchased by households, and is computed by taking the difference between current dollar PCE and chained dollar PCE.

No part of this publication may be reproduced in any form, or referred to in any other publication, without express written permission. ©2006, PIMCO

P I M C O

PIMCO Asia Pte Ltd
30 Cecil Street #23-01
Prudential Tower
Singapore 049712
65-6491-8000

Registration No. 199804652K