Global
Central Bank Focus

PIMCO

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The Slip Between the Cup and the Lip

I've had it with endless discussion, in both policy circles and amongst financial market pundits, about the importance of well-anchored inflationary expectations. Not that I think securely tethered inflationary expectations are not important. They are, and much to be desired. But well-anchored inflationary expectations are not – repeat not – the end all and be all of life. Accordingly, they should not be the end all and be all of monetary policy, despite the huge volume of written and oral rhetoric offered by a chorus of policy makers to that effect.

No, I'm not winding up for Bernanke bashing, something I've promised myself I will never do (regretting with age that I bashed his predecessor to excess). Rather, I want to dissect his and others' normative advocacy of the primacy of inflationary expectations in the context of the real world. Mr. Bernanke's speech two weeks ago, ***Inflation Expectations and Inflation Forecasting***[1], is a great place to start, because it was in fact a great speech, drawing heavily on a great speech in late March by his colleague, Governor Ric Mishkin, ***Inflation Dynamics***.[2]

Both men start with a simple thesis: from a starting point of price stability, or more technically correct, at-target inflation, shocks to actual inflation, driving it above or below target, are unlikely to generate persistent inflation above or below target if the public's long-term inflationary expectations are well-anchored at target. Put most simply, well-tethered long-term inflationary expectations act as a centre of gravity, as economic agents "look through" deviations of actual inflation from target, making pricing decisions – in both product markets and labour markets – not on the basis of actual inflation but targeted inflation. If so, the shock to actual inflation does not generate what is called "persistence."

This is a good thing, of course, meaning that both deflationary and inflationary scares borne of shocks will ultimately prove to be just that: scares, neither deflationary nor inflationary spirals. And if this is the case, it implies that the central bank's reaction function to such shocks can be tempered, neither easing

I promised last month that this month's edition of GCBF would be a review of Chairman Bernanke's semiannual monetary policy report to Congress.

As it turned out, Mr. Bernanke delivered an excellent paper a week before his testimony on the role of inflation expectations in the inflation process, which inspired me to immediately craft an essay on that subject, ***The Slip Between the Cup and the Lip.*** Fortunately my colleague **Andrew Balls**, global strategist in PIMCO's portfolio management team, and my co-author on these pages last August, was at the ready to review Mr. Bernanke's congressional testimony, as he had committed to writing an essay on that subject for *The Times* of London, which ran yesterday. That essay, ***US Needs Bernanke's Luck To Hold,*** is re-printed here as a special "central section" article, starting on page 4.

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aggressively when inflation is below target nor tightening aggressively when inflation is above target. In turn, such a damped central bank reaction function implies reduced volatility in both financial conditions and real economic activity. Thus, it is unambiguously the case that well-anchored inflationary expectations serve both of the Fed's mandates: low and stable inflation and maximum employment.

So What's My Problem?

In the first instance, it's the same as both Bernanke and Mishkin acknowledge: we really don't have a firm handle on how the public forms its long-term inflationary expectations. We know the process is part inertia – the future will be like the past – and also is part forward looking, based upon the credibility of the central bank's commitment to nudging inflation back toward target when shocks kick it off target.

But we really don't know how to weigh these two forces. We also don't know just how much the weights are time-varying, based upon the degree of cyclical slack in the economy. All we can say with confidence is that an upside inflation shock in the context of a cyclically overheated economy is more likely to untether long-term inflationary expectations than an upside inflation shock in an under heated economy. But empirically, it is hard to know just how much weight to put on the "cyclical slack" variable in the formulation of long-term inflationary expectations.

Not that the economics research community is not torturing the data – in a good way! – to try to find answers to these questions. Indeed, Governor Mishkin's paper is a tour de force of ongoing empirical work in these areas. It's just hard to get the data to confess, as I'm sure both Bernanke and Mishkin would agree. But my real problem with the intense focus on inflationary expectations in the inflation process is that there is virtually no discussion and no empirical research regarding precisely how inflationary expectations – however formed – **get translated into the wage formation process**.

To me, this is a grievous sin, because we in the economics community preach – and central bankers act on! – the proposition that inflation is, cyclically, about the degree of slack in the economy, notably in the labour market, as revealed by the unemployment rate. We tell the public that the central bank needs to keep the unemployment rate from going too low, so as to avoid wage-based upward pressure on price inflation. In fact, the Fed has been telling us precisely this for the last year.

But while Fed officials regale to the public about the importance of long-term inflationary expectations, they do so without explaining **precisely** how inflationary expectations enter into wage inflation. To me, this is a huge missing link in the Fed's communication strategy, if not policy.

Price-Price or Wage-Price Phillips Curves?

Fortunately, and music to my ears, Chairman Bernanke implicitly acknowledged this missing link in his speech two weeks ago, when he said (my emphasis):

> *"A potential drawback of the simple Phillips curve model for analyzing and forecasting inflation is that it does not explicitly incorporate the possible influence of labor costs on the inflation process. The Board's large macroeconomic simulation model, known as FRB/US, projects inflation through a system approach that captures the interaction of wage and price determination. Interestingly, however, the system approach does not seem to forecast price inflation as well as single-equation Phillips curve models do. This weaker performance appears to reflect, at least in part, the shortcomings of the available data on labor*

compensation. The two principal quarterly indicators of aggregate hourly compensation are the employment cost index (ECI) and nonfarm compensation per hour (CPH). Both are imperfect measures of the labor costs relevant to pricing decisions.

For example, the ECI's fixed employment and occupation weights may not reflect changes in the labor market, and the ECI excludes stock options and similar forms of payment. CPH is volatile, perhaps in part because it measures stock options at exercise rather than when granted, and it is subject to substantial revisions. Moreover, these two hourly compensation measures often give contradictory signals. Despite these problems, labor market developments certainly influence how the staff and policymakers view the inflation process and inflation risks, illustrating yet another point in the forecasting process at which judgment must play an important role. In particular, in evaluating labor-market conditions and trends in labor costs, the staff takes note of a wide range of data, anecdotes, and other qualitative information as well as the official data on compensation."

I had a lengthy exchange with former Fed Governor Laurence Meyer about Mr. Bernanke's speech and he reports that Macroeconomic Advisers – the firm he founded and which remains at the forefront of macroeconomic modelling, used widely in both the private and public sectors (yes, PIMCO is a client) – similarly leaves wages out of its Phillips Curve-driven inflation forecasting, using simply the unemployment rate in its equation for price inflation, without a sub-equation linking the unemployment rate to wage inflation and then to price inflation.

Not that Macroeconomic Advisers hasn't tried to model inflation that way, Larry stresses. Indeed, there is a module in his firm's large macro model that incorporates wages, but Larry reports that he and his colleagues simply "over-ride" that module and forecast inflation with a simple "price-price" Phillips Curve model that it runs off-line, which models price inflation as a function of lagged price inflation, the unemployment rate, inflationary expectations and a few other variables, but **not** wages. When I asked him why, he said that wage-price Phillips Curves simply have a poor inflation forecasting record relative to price-price Phillips Curves.

Having modelled these things myself when a young man, I can confirm what Larry says. As an empirical matter, price-price inflation models simply forecast better than wage-price inflation models. As a fundamental matter, however, it is disquieting to hear the economics profession and central bankers preach about the evils of an excessively tight labour market as a source of "cost push" inflation while over-riding wage inflation in their modelling work.

Fortunately, and again music to my ears, Chairman Bernanke didn't do that last week, notably in talking about headline versus core inflation (again, my emphasis):

"Certainly, increases in energy prices affect overall inflation in the short run because energy products such as gasoline are part of the consumer's basket and because energy costs loom large in the production of some goods and services. However, a one-off change in energy prices can translate into persistent inflation only if it leads to higher expected inflation and a consequent 'wage-price spiral.' With inflation expectations well anchored, a one-time increase in energy prices should not lead to a permanent increase in inflation but only to a change in relative prices. A related implication is that, if inflation expectations are well anchored, changes in energy (and food) prices should have

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Andrew
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US Needs Bernanke's Luck to Hold

Vernon "Lefty" Gomez, the Hall of Fame pitcher for the New York Yankees, famously said: "I would rather be lucky than good." Ben Bernanke, the Chairman of the Federal Reserve, and a baseball fan, would no doubt appreciate the sentiment. But since he took over from Alan Greenspan at the Fed at the start of last year, Mr Bernanke has been demonstrating the benefits of being both lucky and good.

The "luck" that Mr Bernanke has enjoyed included the decline in market interest rates and in energy prices in the second half of last year, which helped to stabilise the US economy and prevent the weakness of the housing market spreading to a generalise rout. The rise in longer-term rates and in energy prices in the past few months is not ideal, but the respite in the second half of last year was very helpful indeed.

A second key piece of luck has been the faster than expected, and very timely, decline in inflation this year — based on the core measures, excluding food and energy prices that the Fed focuses on most closely.

The "good" includes getting two related key calls right. Mr Bernanke and his colleagues at the Fed correctly anticipated last year that underlying inflation had peaked for this cycle and that core inflation would gradually drift lower. Therefore, there was no need to keep tightening monetary policy beyond the 5.25 per cent rate, reached in June of last year. Thus, Mr Bernanke managed to avoid the caveman approach to monetary policy: bashing the economy until it stops moving.

The economy has also been helped by strong global growth, buoyant equity markets and continued support for low market interest rates — in part because of the demand for American assets from China and other Asian governments, and the recycling of petrodollars from the Middle East. The result is that although the housing market and homebuilders are in a very bad state, so far, the rest of the economy has been performing very well.

The odds look good that the economy will enjoy a soft landing and that the improved inflation picture will, in time,

allow Mr Bernanke and his colleagues to cut interest rates modestly, returning policy from restrictive to neutral.

The main risk to this happy scenario remains the potential for spillover from the housing market to the rest of the economy, a risk that has increased because of the woes in the sub-prime market.

Mr Bernanke, in his twice-yearly testimony before Congress last week, was able to stick with forecasts similar to those in February's monetary report to Congress. The policy-making Federal Open Market Committee's central ranges were for growth of 2¼ per cent to 2½ per cent this year and 2½ per cent to 2¾ per cent in 2008, and core Personal Consumption Expenditures inflation of 2 per cent to 2¼ per cent this year and 1¾ per cent to 2 per cent in 2008.

Changes in the forecasts are often as interesting as the numbers themselves. The Fed shaved half a percentage point off its growth expectation for this year and a quarter-point off the forecast for next year, largely because of the deepening housing market problems.

On inflation, the Fed has made very clear that it is too early to declare victory, leaving its inflation forecast unchanged, even though its preferred inflation measure actually dipped below 2 per cent in May. Fed officials will continue to give warning about inflation risks first, because that is their job, and second, because some of the factors that have reduced inflation may be temporary. Still, a weaker housing market should feed into lower rents — the components that pushed core inflation higher last year.

That is the silver lining to a very dark cloud. The Fed may not have overdone the interest rate hikes, in terms of the overall economy, but there is going to be a significant impact on those Americans who face upcoming resets in their adjustable-rate mortgages. Tighter lending standards are a necessary correction after the late-cycle excesses on the part of underwriters, but also mean that many sub-prime borrowers will have difficulty refinancing. The mortgage equity withdrawal spigot has already been turned off. The personal savings rate has dropped to zero after a period of strong asset price gains. Flat or falling house prices reinforce the point that households at some point will have to return to the more traditional practice of saving out of income.

Credit resets will mean that the decline in sub-prime mortgage performance will drag on through next year. If, as seems

very likely, the correction does involve a continuing decline in house prices, the danger is that consumer spending might slow more than the Fed expects.

Moreover, people with little or no equity in their homes are more likely to walk away and default on their loan. More defaults mean losses for those who own the loans. The headline-grabbing collapse of two hedge funds managed by Bear Stearns — a sophisticated mortgage market participant, which made complicated, leveraged and what turned out to be very bad sub-prime bets — has led to a seizing-up of some parts of the market. The high credit ratings that agencies gave to complex collateralised debt obligation structures are not providing much comfort. The knock-on effect has been felt in America and globally in a widening of credit spreads, particularly high-yield credit spreads.

A repricing of risk in credit markets is not something that the Fed or other central banks will complain about. Indeed, the international brethren of central bankers have long been warning that risk spreads were unusually skimpy and needed to widen.

Financial market credit creation and leverage has offset the efforts of central banks to reduce the liquidity in the system. Overall global financial conditions are still very supportive of growth, and global growth, particularly in emerging-market countries, is strong.

The risk remains of the very unlucky outcomes whereby sub-prime losses lead to a broader credit crunch that affects better- qualified mortgage borrowers, deepening problems on Main Street. And that the problems in the sub-prime mortgage market develops into a wider round of risk reduction, in America and globally, that is less benign than the widening of credit spreads witnessed to date, deepening problems on Wall Street.

In the most likely event, that will not happen. If it turns out that the housing market spillover is greater than expected, then the improvement in the inflation picture and well-anchored inflation expectations provide the room for the Fed to respond aggressively.

Mr Bernanke is good, but wants, and needs, luck on his side as well.

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> *relatively little influence on 'core' inflation, that is, inflation excluding the prices of food and energy."*

Thus, a secret of the temple is revealed! Well-anchored inflationary expectations are important to preventing "persistent" inflation if – and I would argue only if – they (1) inhibit labour from demanding to be "made whole" for upside shocks to inflation, or (2) provoke capital to reject those demands. If so, then upside inflation (headline) shocks do not set off a "price-wage-price" spiral. I agree with all of that. Indeed, in discussing this passage of Chairman Bernanke's paper with Mr. Meyer, Larry gave an amen, noting to me that *"from a perspective of how these price level shocks become more persistent, it is hard, or impossible, to tell that story without explicitly bringing in the link from inflation expectations to wage change."*

Core Versus Headline

So, in the end, it is not so much low inflationary expectations that beget low actual inflation, but rather the ability of low expectations to transform negative terms of trade shocks into negative hits to real wages! And this is, my friends, a distinction **with** a difference. And it is hugely important in the current discussion about the wisdom of the Fed targeting core inflation rather than headline inflation. In the face of upside shocks to energy and food inflation, perhaps enduring shocks, not mean reverting shocks, **the key to preventing a price-wage-price spiral is for labour to eat the difference between headline and core inflation in the form of a negative shock to real wages (adjusted for real productivity growth).**

That didn't happen, of course, during the Great Inflation of the 1970s, when COLA morphed from being a cooling refreshment to a putative entitlement with the American labour force. Part of the reason, no doubt, was that the American economy was much more of a closed economy back then, as well as a much more unionised economy. But part of the reason was also, no doubt, that inflationary expectations were not well anchored: the Fed didn't have anti-inflation credibility, so capital assumed it had pricing power and was, therefore, willing to accede to labour's demand to be "made whole" for upside inflation surprises. In the end, the Great Inflation of the 1970s was all about a game of hot potato between capital and labour as to who had to eat the negative **real** hit of negative real terms of trade shocks – i.e., higher energy and food prices.

In the current circumstance of a negative **real** terms of trade shock, the Fed clearly wants to avoid such a hot potato inflationary spiral, and sees well-anchored long-term inflationary expectations as the key lever in securing that outcome. But the Fed has been less than transparent about how much of the real hit should be absorbed in real wages relative to real returns to capital. This lack of transparency is understandable from a political viewpoint, as the Fed religiously (to a fault, in my view) avoids discussion about income equality or lack thereof, besides lamenting rising income inequality.

But as a fundamental macroeconomic matter, the Fed's revealed preference is for labour, not capital, to absorb the real hit of the negative real terms of trade shock of energy and food price inflation running above its comfort zone of core inflation. To be sure, the Fed mouths the possibility that the shock could be absorbed, at least in part, in contracting real profit margins. But the Fed's constant, if not insistent, warning about upside inflation risks originating from tight labour markets reveals that the Fed doesn't really put much weight on the possibility of contracting real profit margins as a means to sustaining low inflation in the face of the negative real terms of trade shock from energy and food. The proof of the pudding: The Fed is both seeking and forecasting an increase in the unemployment rate, which, presumably, would weaken the pricing power of labour.

Bottom Line

As noted at the outset, I'm not in a Bernanke bashing state of mind. Honest! I've been merely reverse engineering the Fed's revealed preference about who "eats" negative real terms of trade shocks: labour, capital, or both? As a macroeconomic matter, it is true, as Larry Meyer intoned, that you can't get a price-wage-price inflationary spiral when labour eats negative real terms of trade shocks. That's a fact. So I'm not arguing with the Fed's economic analysis.

My beef is simply that as long as the Fed targets inflation via a price-price Phillips Curve, rather than a wage-price Phillips Curve, there is a large slip between the Fed's analytical cup and its rhetorical mouth about the inflationary dangers of too many Americans working. And there's an even bigger slip to rhetoric mouthings about the Fed's putative inability to have any impact on the nation's income distribution.

The fact of the matter is that the only way to find out if real profit margins can or will absorb a portion of the negative real terms of trade shock from energy and food is to let the labour markets stay tight, rather than to seek to push up the unemployment rate. Not that I'm forecasting that the Fed is going to do that, I hasten to add. The Fed's revealed preference screams precisely the opposite.

My point is simply that well-anchored long-term inflation expectations are not a magical potion, operating away from the real world in holding down inflation in the face of negative **real** terms of trade shocks. Such well-anchored expectations, along with cyclical monetary restraint, seeking to nudge up the unemployment rate, do their "work" by transmuting the negative real terms of trade shock to a negative shock to **real** wage growth.

Accordingly, I predict with great certainty that the Fed is going to be drawn ever more into the national debate about increasing income inequality, as much as it wishes to avoid that outcome. Negative real terms of trade shocks are nasty things, and how their pain is shared is a legitimate debate in a democracy. And monetary policy plays a key role in slicing up the pain.

Good luck, Gentle Ben. You are going to need it!

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[1] http://www.federalreserve.gov/boarddocs/speeches/2007/20070710/default.htm

[2] http://www.federalreserve.gov/boarddocs/speeches/2007/20070323/default.htm

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Core inflation is a measure of inflation that excludes certain items such as food and energy prices, which tend to have volatile price movements. Headline inflation does not exclude these items.

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