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Which Measure of Inflation: Headline, Core or Trimmed?

Global Economy is back to debating one of the most fervent debated topic in 2007 – which inflation should central banks focus on? Just like we saw in 2007-08, the prices of food and fuel products has started rising leading to much higher headline inflation compared to core inflation. Moreover, unlike 2007-08 economic conditions are weak and uncertain especially in major advanced economies.

This has once again put the central banks on the frontline – Should they be focusing on headline inflation or core inflation? If they start raising rates looking at headline, it could impede the recovery. If they maintain status quo looking at core inflation, they might keep missing their inflation targets leading to people questioning their roles.

This paper explores these measures of inflation and the role of central banks given the divergences between the measures. It analyses the case studies of three key economies to help understand the issues – US, Euroarea and UK.

I. Measures of Inflation

One can classify measures of inflation as two types:

1. Based on population coverage: Here the inflation indices are developed to understand the inflation levels for certain population sets like producers, consumers etc. Hence we have Producer Price Index and Consumer Price Indices (CPI) to measure inflation levels at both producers and consumers. Within CPI, countries further divide the indices as CPI-Urban and CPI-Rural to capture the differences across two different kinds of consumer populations.

   Federal Reserve officials look at another measure of inflation called Personal Consumption Expenditure (PCE) deflator. It measures inflation levels for all domestic personal consumption. Likwise, GDP deflator is seen as the most broad-based measure of inflation as it includes all the goods and services.

2. Based on items coverage: Prices of some items are more volatile than others like food and fuel. This could provide conflicting signals to policymakers as the overall inflation could change because of a selected few goods. Hence, separate indices can be developed separating the volatile items from the main index.

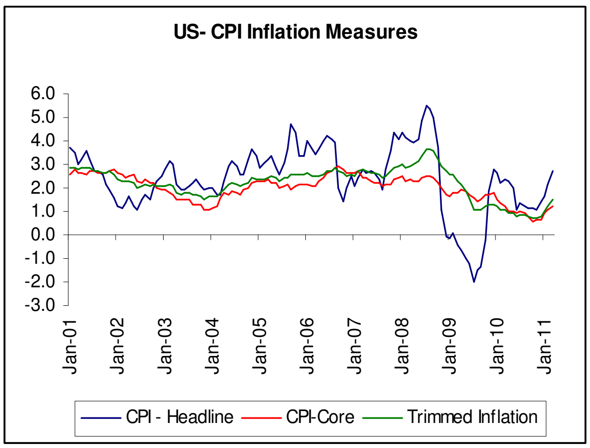
   This is where the difference of headline vs. core arises. Headline inflation includes all the items and core inflation usually excludes food and fuel items. There is another variant of core inflation called trimmed mean inflation. In this instead of just excluding fuel and food items, we exclude components that show the most extreme monthly price changes. Cleveland Fed excludes 8 percent of the CPI components with the highest and lowest one-month price changes.

II. Divergence between Headline and Core Inflation

1. United States

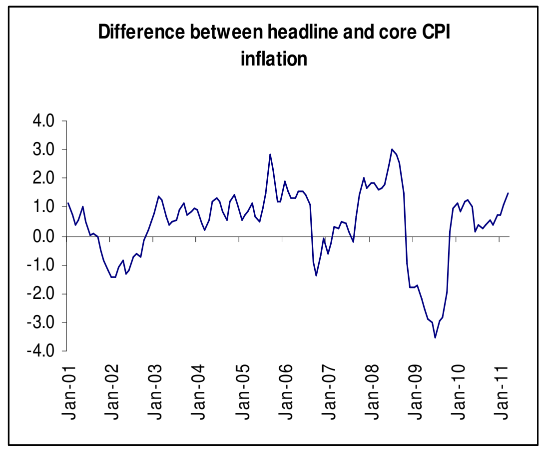
We can see that headline and core have been diverging in most of the period (2001- Mar 2011). The divergence widened sharply in 2007-08 with headline higher than core, tracking rise in global food and fuel prices. The headline inflation then declined sharply following Lehman crisis when prices of commodities and fuel declined sharply. The difference then narrowed from Jan-10 onwards as price of food and fuel started rising. From Oct-10 onwards, the difference widened tracking rapid rise in demand from emerging economies for both food and fuel commodities.

Figure 1



Source: St Louis Fed

Figure 2



Source: St Louis Fed, STCI PD

This widening of divergence has again bought to the fore questions asked in 2007-08:

- Will a rise in headline inflation lead to rise in core inflation as well?
- What measure of inflation should Fed target?

Both these questions are interconnected. If headline inflation leads to rise in core inflation, Fed should be looking at headline inflation. This would imply Fed raising policy rates earlier than expected. If the linkage of headline to core is weak, then Fed should be focusing on core inflation and ignore the developments in headline inflation. This would imply Fed can maintain lower rates for a longer period of time.

Economists and policymakers are divided on this.

- **For core inflation:** Paul Krugman argues in his blog that rise in headline inflation does not lead to rise in core inflation as food and fuel prices are volatile. They rise and fall quickly leading to little changes in core inflation. In US there have been no episodes of headline inflation leading to rise in core inflation. Moreover, economic situation in 2011 is different from 2007-08. The economy in depressed in former and hence there will be limited demand pressures leading to stagnant core inflation.
  Charles Evans, President of Chicago Fed in a paper (What are the implications of rising commodity prices for inflation and monetary policy? May 2011) shows there is little linkage of rising commodity prices on core inflation. Hence, there is little pressure on Fed to raise rates

because of rising commodity prices.

Many other economists express similar ideas. They point that core inflation suggests inflation because of demand conditions. Food and fuel prices are also affected because of supply and international markets and hence are beyond the control of monetary policy. Hence central banks should follow core inflation.

- **For Headline inflation:** The others say Fed should focus on headline inflation. Prices of food and fuel are expected to remain elevated as emerging economies are expected to grow in future. Majority of the global growth is expected to come from BRICS economies which have huge populations putting pressure on prices of food and fuel commodities. Hence, these prices are expected to remain high and would push core inflation higher. Higher food and fuel prices could also lead workers to increase wages leading to second round of inflationary pressures. This could push inflationary expectations higher as well.

  James Bullard, President of St Louis Fed has stressed that headline inflation is what matters. He said core inflation is often smoother than headline inflation, but "the core concept has little theoretical backing and is very arbitrary. He said the only reason to look at core is as an indicator for headline. James Walsh of IMF in a recent paper (Reconsidering the role of food prices in inflation) says focusing on core inflation and ignoring persistent food prices will give wrong signals to public.

  In another paper, economists Luis Catão, Roberto Chang (World Food Prices and Monetary Policy, 2011) say food prices tend to have stronger predictive power on global inflation cycles than oil. The problem is more severe in emerging markets where consumption basket weights for food are two or three times larger than in rich nations. Central banks should pay close attention to rising food prices

  Interestingly, Fed members are divided on which measure of inflation should be used (Table 1). Amidst 10 FOMC members, 4 prefer core, 2 headline and preferences of 4 are unknown. Within 5 alternate members, 1 prefers core, 1 prefers trimmed (as Cleveland Fed calculates trimmed CPI inflation), 2 headline and one's preference is unknown. These different views have left market participants confused on the stance of Fed policy going forward. So far there has been no dissent amidst members over their expected future inflation trajectory and how policy rates should change. It will be interesting to see whether members start dissenting based on their beliefs over inflation in upcoming FOMC meetings.

Table 1: Fed Board members and inflation preferences

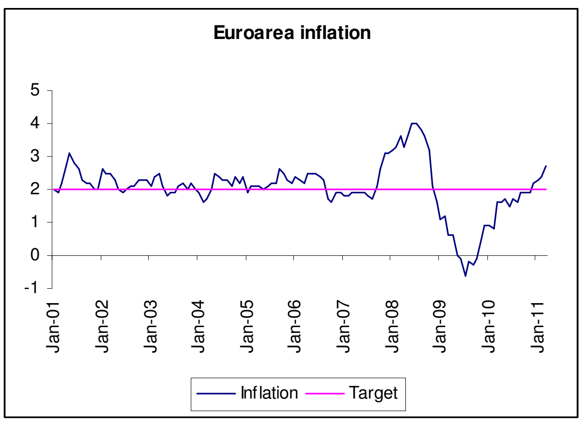
Board Members	Fed/Regional Fed	Preferred Inflation measure
FOMC Voting Members		
Ben Bernanke	Board of Governors	Core
William Dudley	New York	Core
Elizabeth Duke	Board of Governors	--
Charles Evans	Chicago	Core
Richard Fisher	Dallas	Headline
Narayana Kocherlakota	Minneapolis	--
Charles I. Plosser	Philadelphia	Headline
Sarah Bloom Raskin	Board of Governors	--
Daniel K. Tarullo	Board of Governors	--
Janet L. Yellen	Board of Governors	Core

Alternate Members		
Jeffrey Lacker	Richmond Fed	Headline
Dennis Lockhart	Atlanta Fed	Headline
Sandra Pianalto	Cleveland Fed	Trimmed CPI
John Williams	San Francisco	--
Christine M. Cumming	First Vice President, New York	Core
Others		
James Bullard	St Louis Fed	Headline
Eric Rosengren	Boston Fed	Core
Thomas Hoenig	Kansas City Fed	Headline
Source: Speeches of the members		

2. Euroarea

Unlike US, there is little confusion in Euroarea. ECB targets headline inflation of around 2% in EMU economies. As the inflation became higher than the target between Dec-10 to Mar-11, it prompted ECB to hike policy rates in Apr-11 meeting. This rate hike has been criticized as people say inflation mainly because of imported goods (food and oil). The peripheral economies like Greece, Ireland etc have been struggling and higher policy rates will lead to higher financing of deficits.

Figure 3



Source: ECB

Lorenzo Bini Smaghi of ECB in a speech (The challenges facing monetary policy, 2011) explains why central banks should focus on headline inflation. He says advanced economies' central banks can no more ignore the global/imported food inflation as this would imply missing inflation targets persistently and higher inflationary expectations. He says that inflation caused by imported products, especially commodities, can be ignored under three conditions.

- Increases are temporary.
- Imported price increases do not cause dragging effects on the price dynamics of domestic products.
- Increases do not have any effects on the inflation expectations of market participants.

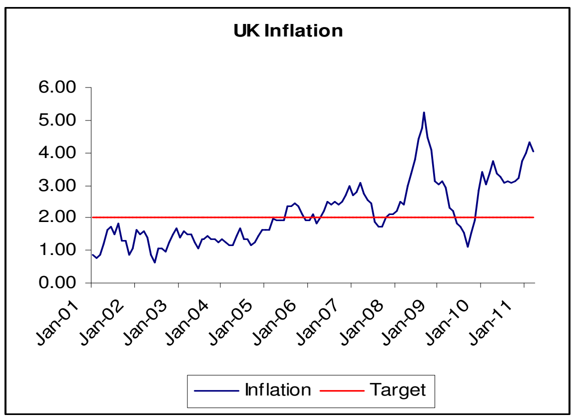
Smaghi adds that till now only third condition has been maintained. The commodity prices have steadily increased and are expected to remain persistent as emerging economies grow. This would put pressure on inflation in Euroarea whose inflation basket constitutes 30% of such imported commodities. In such a scenario, inflation of domestic goods has to be lower which can be done via either improving productivity. Else central banks will have to raise their inflation targets upwards leading to higher inflationary expectations and loss of credibility.

So, overall central banks of advanced economies need to focus on headline inflation so that it does not feed into core inflation.

3. United Kingdom

UK is another economy which is suffering from rising headline inflation and slacking economy. Bank of England targets headline inflation of 2% and inflation numbers have been higher than target since Dec-09. Hence, experience of UK is different from both EMU and US where headline inflation has started rising only lately.

Figure 4



Source: UK Statistics Office

This has put Bank of England in a dilemma on its future policy course. As per law, Bank of England Governor has to write open letters to UK's Chancellor if inflation deviates from the target by more than 1 percentage point in either direction. From 1997-07, no letters were written and since 2007 Governor has written ten such open letters. This explains the problems faced by Bank of England. The reasons cited for missing inflation targets are - depreciation of GBP, rise in VAT and prices of commodities and oil.

Unlike US and Euroarea, BoE officials have dissented over their outlook for inflation and monetary policy. Some say inflation is mainly because of food and fuel prices and slack in the economy will lead inflation to move to 2% over medium term. Hence, BoE should maintain low policy rates. Others argue that persistent rise in inflation and missing targets will lead to higher inflationary expectations. Moreover, rise in food and oil prices will lead to rise in prices of other goods and services, pushing overall inflation higher.

Hence, there may not be a formal distinction between headline and core inflation, the arguments are based on the same reasoning seen in US. As a result we see major dissents in the nine-member MPC (Table 2). The media has called the distribution of MPC member viewpoints as 6-3-1. The three fear inflation risks whereas Adam Posen still maintains that there is a substantial slack in the economy and BoE actually needs to expand its asset purchase program.

Table 2: Bank of England Members and Preferred Policy Action		
MPC members	Preferred Policy Action	
	Policy Rate	Asset Purchase Programme
Preferring Status Quo:		
Mervyn King	Maintain at 0.5%	Maintain at GBP 200 bn
Charles Bean	Maintain at 0.5%	Maintain at GBP 200 bn
Paul Tucker	Maintain at 0.5%	Maintain at GBP 200 bn
Paul Fisher	Maintain at 0.5%	Maintain at GBP 200 bn
David Miles	Maintain at 0.5%	Maintain at GBP 200 bn
Dissenters		
Adam Posen	Maintain at 0.5%	Increase to GBP 250 bn
Andrew Sentence	Increase by 50 bps	Maintain at GBP 200 bn
Martin Weale	Increase by 25 bps	Maintain at GBP 200 bn
Spencer Dale	Increase by 50 bps	Maintain at GBP 200 bn
Source: MPC Minutes and Member Speeches		

Summing Up

The above cases show different experiences with respect to choice of inflation measurement and policy responses.

- There is confusion in US as Fed officials differ over whether core or headline inflation is a better measure of inflation. Despite differences, members have not dissented. This is similar to the confusion which prevailed amidst officials on deflation risk in US economy in 2010.
- In Euroarea there is no such confusion as they have chosen to target headline inflation. The ECB members also do not differ much on their outlook towards headline and core and expect headline inflation to influence core inflation. But with ECB raising rates, there is criticism as some EMU nations continue to struggle. ECB is being criticized for favoring faster-growing economies like Germany and France over struggling economies like Greece, Portugal etc.
- In UK, the situation is even more interesting. Though it targets headline inflation but members have dissented over their views on core and headline inflation.

A similar confusion must be engaging central bankers in other economies. Based on above, one can distinguish between whether central banks have inflation targets or not. Those who have inflation targets also specify the target measure and help analyse the policies based on the same. Out of 27 inflation targeting central banks, only Thailand targets core inflation (State of the art of inflation targeting by Gill Hammond). Analysis of these central banks and their policy actions will help understand the situation better.

Overall, one can safely say that there is little clarity on which is the best measure for inflation. This is especially the case when prices of food and fuel items start to rise. The main objective of central banks is to preserve price stability. But without having a proper measure for price stability, how does one expect them to achieve their objectives? Central bankers and economists have taken great pains to explain the virtues of price stability. They should also focus on this perplexing issue of inflation measurement with the same vigor.

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