

IFC – Is It A Good Framework for Monetary Policy of India?

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Summary

Given that the RBI has effectively adopted Flexible Inflation Targeting (FIT), which is also recommended by the IFC, it has become important to ensure that sound institutional arrangements are established to safeguard the process. In this regard it is critical to optimise the composition of the monetary policy committee (MPC) in the RBI and achieve maximum clarity in the rules (Taylor Rule or otherwise) or procedures it will follow to achieve the desired rate of inflation in the economy. However, in doing so, the MPC and the RBI will have to be cognisant of the finding that inflation is correlated with food prices, which in turn are directly linked to the administered prices announced by the government. Therefore, it would be hugely costly for the economy in terms of potential loss of output and employment, if the RBI was exclusively responsible for keeping inflation within the targeted range. The government of India and RBI must work in tandem to ensure macro stability in the coming period.

This paper is divided in the following sections: Section I gives a brief summary of Flexible Inflation Targeting policy recommendations in India. Section II includes the literature review of Inflation Targeting. Section III looks at the trend of Policy Interest rate, Taylor rule rate and Inflation in India. Section IV analyses the relation between food and core inflation. Section V examines the trade-off between the real interest rate and investment growth. Section VI concludes the paper.

I. Introduction: Monetary Policy Framework of Flexible Inflation Targeting (FIT)

The government released a revised draft of the Indian Financial Code (IFC) in July 2015 that is expected to overhaul India's financial sector regulatory architecture. This has opened up a debate on the appropriateness of the FIT for India and of the composition of the monetary policy committee (MPC) as that might affect RBI's autonomy and dilute its principal responsibility for controlling inflation.

The IFC traces its origin to the Financial Sector Legislative Reforms Commission (FSLRC) headed by Justice BN Sri Krishna that submitted its report in March 2013. Subsequently, RBI partially accepted the Ujit Patel Committee report in January 2014 and proceeded to adopt the new Consumer Price Index (CPI) as the measure of the nominal anchor for monetary policy. RBI adopted staggered quantitative targets for CPI inflation of 8% by January 2015 and 6% by January 2016 and 4% (+/-2%) for all subsequent years and moved monetary policy reviews to a two-monthly cycle versus the six-week cycle followed earlier.

With the revised IFC, the government has formally mandated the RBI to move towards FIT. Under this agreement, the objective of monetary policy is "primarily to maintain price stability, while keeping in mind the objective of growth." According to the IFC, RBI will publish a report every six months to highlight (a) sources of inflation, and (b) its inflation forecast for the next 6-18 months. The RBI shall be seen as having failed if inflation is more than 6% or less than 2% for three consecutive quarters. In that case, RBI will send in writing to the government (a) reasons for failure; (b) remedial actions to be taken; (c) estimate of the time-period within which the target would be achieved.

The major differences between the recommendations are tabled below.

Name of Committee	Date of Report	Composition of MPC	Veto by Governor
FSLRC Report / First Draft of IFC	March 2013	<ul style="list-style-type: none"> • 7 members • Chaired by RBI Governor • Other members: One RBI Executive Director, 2 members appointed by centre in consultation with RBI. 3 members appointed by centre. 	<ul style="list-style-type: none"> • Yes, but only in exceptional and unusual circumstances. • Majority vote to work.
Urjit Patel Committee Report	January 2014	<ul style="list-style-type: none"> • 5 members • Chaired by RBI Governor • Other members: Dy Governor in charge of Monetary Policy as Vice Chairman, Non-executive Director of RBI in charge of Monetary Policy, Two external members selected by RBI. 	<ul style="list-style-type: none"> • Yes, RBI Governor can veto but should work on majority vote. • Each member has one vote.
Revised Draft of IFC	July 2015	<ul style="list-style-type: none"> • 7 members • Chaired by RBI governor • Other members: One Executive Director of RBI board, One RBI official, Four members appointed by central government. 	<ul style="list-style-type: none"> • No • But Governor can have second and casting vote in case of tie.

Independence of the RBI

The revised IFC proposes a majority of members in MPC to be appointed by the central government raising the issue of RBI's autonomy.

However, we would like to point out that one, RBI does not enjoy independence even under the existing law. The government has the power to direct RBI without offering any rationale and without transparency. Second, even now the Governor, Deputy Governors and board members of RBI are appointed by the government, which also has the complete authority to remove them from their positions.

The new law will improve transparency and lay down clear conditions and criteria for the RBI's operations in pursuit of FIT. The law will give MPC the authority to set the interest rate and does not give a veto to the Governor. This is expected to strengthen the institution going forward.

Even the present RBI Governor Rajan, supporting the new MPC structure, said "A committee can represent different viewpoints and study shows that its decisions are typically better than an individual. Second, spreading the responsibility of the decision can reduce internal and external pressure that falls on an individual. Third, a committee will ensure broad monetary policy continuity when any single member, including Governor, changes."

II. Literature Review

The revised IFC recommended that Inflation targeting should be the sole objective of RBI and it will be accountable if it fails to meet inflation target. In the light of above recommendation, there have been debates whether inflation targeting as independent monetary policy is feasible or suitable for India.

A Study by Anwar and Islam (2011), shows that inflation-targeting emerging economies have higher inflation rates and lower growth rates than non-inflation marketers. Brito and Bystedt (2010) looked at a panel sample of 46 developing countries found that there is no evidence that the inflation targeting regime improves economic performance as measured by the behaviour of inflation and output growth in developing countries. Ball and Sheridan (2003), Borio and Filardo (2007) shows that there is no proof that inflation targeting results in lower and less variable rates of inflation.

In contrast there has been studies which shows that inflation targeting countries benefits in terms of reduced inflation volatility (Svensson, 1997), reduced impact of shocks (Mishkin, 2004) and anchoring of inflation expectations (Kohn 2007, Swanson, 2006, Levin et al., 2004). Mishkin and Hebbel (2007), shows that inflation targeting helps countries achieve lower inflation in long run and reduces shocks as exchange rate and oil price shocks. Salles and Goncalves (2006) extended the study of Ball and Sheridan for 36 emerging economies and conclude that inflation targeting economies resulted in greater drop in inflation and growth volatility.

In India's context, 22nd Governor of RBI, Subbarao says that: "In an emerging economy like India, it is not practical for the central bank to focus exclusively on inflation oblivious of the larger development context. The Reserve Bank cannot escape from the difficult challenge of weighing the growth-inflation trade off in determining its monetary policy stance." He also says that in India inflations is driven by supply side factors as food prices and monetary policy is ineffective in controlling inflation emanating from supply side factors. Gupta and Sengupta (2014) also shows that many factors affecting inflation are outside the control of monetary policy and Inflation targeting as a monetary policy is contingent upon fiscal policy as well. Dholakia (2014) empirically shows that disinflation would result short run output loss, however long run growth may increase. Jha (2005), says that short term interest rate, a tool used by RBI to control inflation does not have significant effect on rate of inflation.

Moody, a credit rating agency said that the new mechanism would increase the predictability and effectiveness of RBI's monetary policy, while the effectiveness of its monetary tools would increase because 'inflation targeting' would take into account future — rather than past— price trends. "Quantitative inflation targeting will foster transparency and predictability in monetary policy, as capital market participants, businesses and the public understand the drivers of central bank actions," Tim Watson in Forbes magazine says that since inflation is self-fulfilling therefore pre announced inflating targeting monetary policy will lower inflation expectation and hence expectation. Mishra and Vinod (2011) found that demand effect of interest rates are stronger than exchange rate effect so inflation targeting using short term interest rate will be effective monetary policy.

III. Policy interest rates, Taylor rule and Inflation in India

The Urjit Patel committee report highlighted that in absence of any operating framework rule, inflation in India has been persistent - well above the threshold of 5% (WPI) articulated by the RBI – and real policy interest rates have been persistently negative. This problem was exacerbated through de facto monetization of government borrowing (28% of total government market borrowing) through OMO purchases that injected liquidity into the system. It is important to examine whether the RBI has so far been successful in containing inflation within acceptable range in India. To do this we take the help of the simple Taylor rule¹.

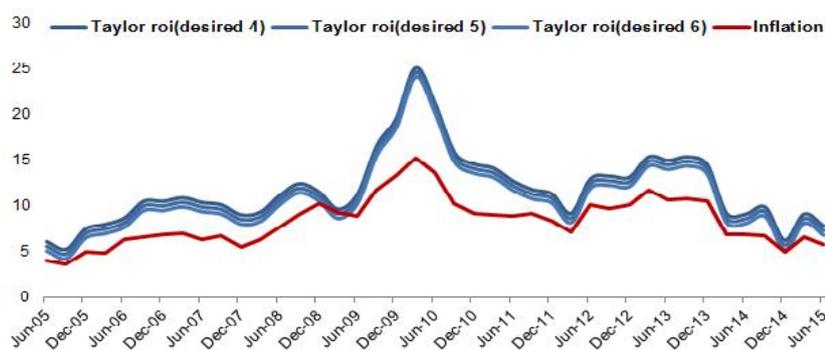
The original Taylor rule says:

$$i = f + r^* + 0.5(f - f^*) + 0.5(y - y^*)$$

where i = nominal interest rate, π = rate of inflation, π^* = inflation target, r^* = neutral real rate, and $(y - y^*)$ = deviation of output growth from potential output Growth.

The Taylor rate of interest is calculated using the past data for inflation gap and output gap for a range of inflation targets

Chart 1: Taylor rule implied Repo rate path vs CPI-IW



Source: CMIE: CPR research

Chart 1 Shows Taylor rule policy rates for RBI's Inflation target. It is observed that the Repo path should have been much higher in last few years than what has been. Similar result was also arrived at in Urjit Patel report. This resulted in negative real rates for almost four years.

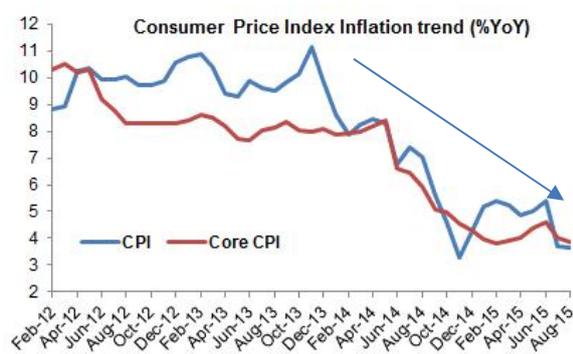
According to RBI, the reasons for prolonged negative rates include: First, inadequate weight placed on inflation management in the past, Second, use of WPI as the metric to measure inflation resulting in negative policy rate vis-à-vis the CPI.

So, the revised IFC suggests a gradual move to the Taylor rule after securing price stability and anchoring inflation expectations by specifying benchmarks for the MPC. Moreover, under (FIT) framework, greater weight to inflation management will be assigned vis-à-vis other objectives resulting in positive policy interest rates. The repo rate at present is almost in line with the Taylor roi (rate of interest). However, it is easier against the background of decelerating inflation. The rule will be tested once the inflation starts picking up as commodity prices rise and domestic output gap closes.

¹Taylor rule is a monetary-policy rule that stipulates that nominal interest rate should respond to divergences of actual inflation rates from target inflation rates and of actual Gross Domestic Product (GDP) from potential GDP.

Both Consumer (CPI) and Wholesale (WPI) price inflation have been moderating. August annual CPI inflation came in at 3.66%, marginally lower than 3.69% recorded in July (revised down from 3.78% earlier). Core CPI-inflation (excl. food and fuel), representing the demand pressure in the economy, moved lower to 3.9% yoy in August from 4% in July. WPI inflation, which is highly correlated to global commodity prices moved deeper into deflation at -4.95% yoy in August, well below consensus expectations of -4.3% - tenth consecutive month of deflation. Core WPI inflation too remained in negative territory. The difference between WPI and CPI now stands at about 8.6% - a record high since the start of the new CPI series.

Chart 2: CPI inflation remains moderate



Source: CMIE database, CPR research

Chart 3: WPI Inflation is deep in deflation



CPI inflation is anticipated to pick up in coming months due to loss of favourable base and weak monsoon activity that raises concerns for prices of agro products. However, the current government has been better at managing supply constraints² – for example, hike in export prices for onions and measures to import onions to meet market shortage. (The government raised the minimum export price (MEP) for onions from \$425 a tonne to \$700 to prevent outbound shipments from becoming lucrative). Recently Modi-government has approved diesel and seed subsidy schemes for farmers, input support for horticulture crops, SMS advisories of extreme weather event, crisis management plan for drought etc to mitigate the impact of poor monsoon.

Inflation, measured in CPI, is likely to undershoot RBI's target of 6% by March 2016. While deficient monsoon increases the risk of hike in food prices, these are being restrained by effective steps like liberalising onion imports and raising their minimum export prices. Moreover, the Government has also kept the increase in support prices to minimum, reduced revenue expenditure and lowered the cost of agro-inputs. Thus, food prices may remain muted. On the other hand, global commodity prices continue to decline and the risk of deflation looms ominously over the global economy³. Considering all these led the RBI to lower policy rate by 50 bps on 29th Sept – more than expected.

²Governor Raghuram Rajan cited a recent RBI study ("What is responsible for India's sharp disinflation", Sajjid Chinoy, Pankaj Kumar and Prachi Mishra, working paper, August 2015) that states that the good inflation news follows from a combination of good food management by the government, good luck because of external factors such as lower crude prices, and monetary policy, including the new framework.

³"If these trends (lower oil, commodity and food prices) continue on the back of the Chinese slowdown, Iranian oil coming on-stream and any Fed hike being pushed back on the strength of the US dollar, further downside surprises to inflation are possible in the coming months." – Sajjid Chinoy, Mint, August 23, 2015.

IV. Food inflation and Core inflation

The new monetary policy framework that makes inflation targeting as the primary mandate of RBI, is being criticised by many experts as food has a higher weight in Indian consumption basket and food inflation is primarily driven by non-monetary factors like supply bottleneck, administrative prices and wages which are outside the control of RBI. There had been instances in the past, when RBI was criticised for hiking rates because inflation was driven by food prices and thereby delaying growth recovery. However, RBI had argued that persistent high food inflation does spill over to core inflation and policy action is needed even if it shaves off some output growth in order to keep inflation expectation anchored⁴.

Food accounts for about 45.9% of CPI inflation and a 5% change in food inflation results in about 230 bps change in headline inflation. Most of this food inflation is due to higher prices of cereals and vegetables. Food inflation had decelerated sharply to about 6.6% yoy average in FY 2015 after staying stubbornly at around 12% in FY 2013 and FY 2014. It has slowed down further to 4.5% average since April 2015 till date. There has been enough discussion about the reasons for such sharp deceleration of food inflation despite two consecutive years of deficient rainfall – from declining global food prices to good supply-management of the central government. So, what drives this food inflation?

We looked at the correlation of WPI-Food with various indicators like global food prices, MSP, rural wage growth, output gap, money supply, fiscal deficit etc. We did not find any significant correlation of food inflation with fiscal deficit, output gap or money supply. Even though global-food-price-trend is one of the determinants of MSP, there was a very small correlation of domestic food prices with global food prices on longer time series. Interestingly, the correlation was higher with MSP (with a lag) and rural wages. Dr Surjit S Bhalla has been highlighting the importance of government-administered MSPs for food as being almost the determinant of CPI inflation in India. In his recent article 'No proof required: Why inflation fell', Dr Bhalla argues that domestic inflation did not decline in 2008-09 when international oil and food prices both fell sharply. He states, 'One major explanation: (lagged) MSP increased by 15.9% in 2008 and 20.9% in 2009; in contrast, (lagged) MSP increased by 5% in 2013 and 1.8% in 2014.In 2008-09, international food prices fell by 23%, but domestic food price inflation increased from 10.5 to 12.2 per cent. In contrast, in 2014-15, international prices fell by 24%, and food inflation declined from 7.3 to 5.7%'. Anecdotal evidences also suggest that higher MSP puts a floor on minimum food-grain prices in the market and pushes up even vegetable pieces as farmers shift resources towards production of cereals and pulses⁵.

⁴“How should monetary policy respond to food inflation? From textbooks we learn that monetary policy should look through supply shocks such as a food price increase. But from experience we know that if the supply shock is persistent and becomes structural it will be a mistake for policy not to respond to it.”- Speech by Mr Deepak Mohanty, Executive Director of RBI, 'Why is recent food inflation in India so persistent?' - at the annual Lalit Doshi Memorial Lecture, delivered at the St. Xavier's College, Mumbai, January 2014.

⁵ “Lagged MSP inflation remains a star determinant and with a healthy magnitude — each 1 per cent increase in lagged MSP leads to 0.4 per cent increase in CPI.” - Surjit S. Bhalla, 'No proof required: Why inflation fell', Indian Express, August 26, 2015

Next, we try to analyse the impact of food inflation on core inflation. RBI does not publish any measure of core inflation but it considers non-food manufactured product WPI (or non-Food CPI) inflation as the core inflation as first, it is more stable or less volatile than headline inflation. Second, over a long period of time, average rate of core inflation matches the average rate of headline inflation. Third, it represents the underlying trend of inflation, and is able to predict total or headline inflation.

In order to estimate the transmission of food prices to core inflation, we use the following equation:

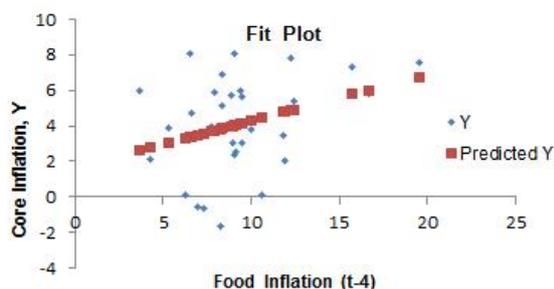
$$\text{Core Inflation}_t = f(\text{Food Inflation}_{(t-n)})$$

Where, t is the time period, n is a number.

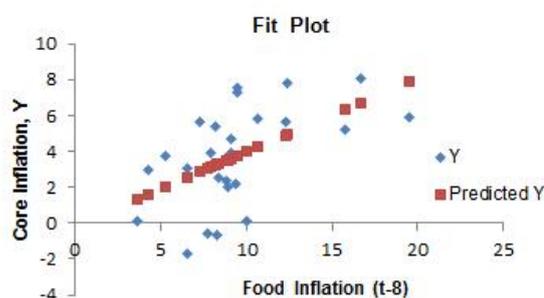
We have used quarterly data for WPI food and WPI core (non–food manufactured) inflation since 2007. We regressed one year (four quarters) lagged food inflation and two years (eight quarters) lagged food inflation on Core WPI Inflation. Results in Table 1 shows that over time food inflation spills over to core inflation (coefficient is positive and significant). Moreover this spill over effect of food inflation to core inflation increases with time lag.

Table 1		
VARIABLES	(1) Foodinflation (t-4)	(2) Foodinflation (t-8)
coreinflation	0.408* (0.224)	0.703*** (0.225)
Constant	7.712*** (1.109)	6.800*** (1.035)
Observations	30	26
R-squared	0.105	0.288
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

The graphical representation of the simple regression is shown in the charts below. We find that there is a positive relationship between food and core inflation and higher food prices in the past do feed into core inflation in future.

Chart 4: Core Inflation_t = f (Food Inflation_(t-4))

Source: CMIE; CPR research

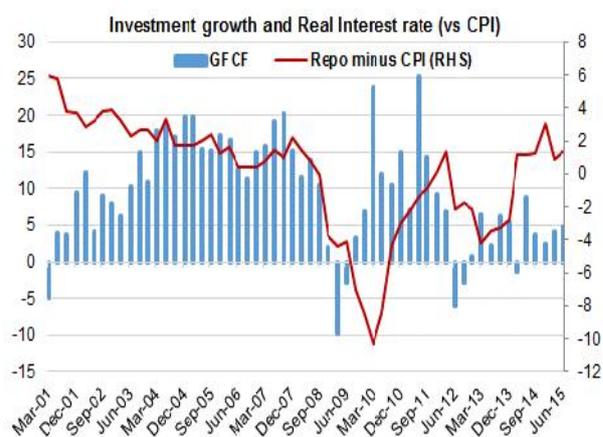
Chart 5: Core Inflation_t = f (Food Inflation_(t-8))

Thus there is empirical evidence that food inflation does spill over into core inflation and therefore RBI should react to food inflation if it is persistent as it can potentially spill over to core inflation un-anchoring the inflation expectation.⁶

IV. Trade-off: Real interest rate and Investment

Lower real interest rates are expected to boost investment and consumer sentiment in India. In its policy statement, RBI has stated, “Investment is likely to respond more strongly if there is more certainty about the extent of monetary stimulus in the pipeline, even if transmission is slow. Therefore, the Reserve Bank has front-loaded policy action by a reduction in the policy rate by 50 basis points.” NITI Aayog Vice-Chairman Arvind Panagariyahad earlier pitched for aggressive rate cuts stating that “time is ripe” for 0.5 per cent to 1 per cent reduction in benchmark lending rates. Even Chief Economic Advisor Arvind Subramanian and Reserve Bank of India (RBI)’s advisor Arvind Virmani had made a case for further easing of monetary stance for investment revival.

Hawks argue, there is no evidence that lower real interest rates are positively correlated with higher investment trends. They cite the evidence that investment grew at 15% or more per annum during 2005-08 when real interest rates ranged between 1% and 2.4% while investment growth remained almost flat during 2012-13 when real policy rate was in negative territory (refer chart 6).

Chart 6: Investment Growth and Real Policy Rate

Source: CMIE; CPR research

⁶ ‘The results of the nonparametric regression of past food inflation on current core inflation shows a positive relationship between food and core inflation.... With full credibility, an increase in food price inflation will have little impact on expectations. Market players believe that RBI, notwithstanding the pressure to lower the policy rate to support growth, will stick to a rigid monetary policy stance and inflation will revert back to the target. Thus, the lack of credibility causes a positive inflation expectations bias’ - ADB working paper ‘Reserve Bank of India’s Policy Dilemmas: Reconciling Policy Goals in Times of Turbulence’ - March 2014

It is important to analyse the levels of real interest rates and their correlation with investment trends and growth.

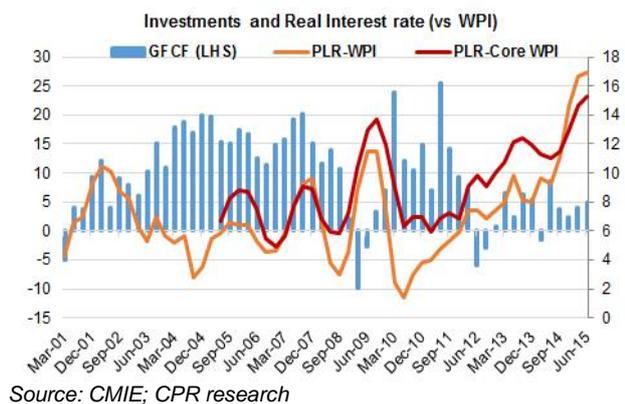
Computation of Real Interest using CPI (by deducting the rate of retail inflation (CPI) from the policy lending rate) is acceptable to estimate the impact of real interest rate on household savings or consumption demand. However, the CPI best reflects prices faced by consumers (householders) as the CPI inflation basket consist of 50% food and 26% services.

But the inflationary impact on investment decisions are best estimated by using WPI or non-food manufacturing WPI (the core WPI) because it has greater weight for commodities, intermediate and capital goods, whose prices are far more relevant for investment decisions. Moreover, the relevant rate of interest for investors is the prime lending rate of commercial bank rather than the policy interest rate. The former is most often higher by few hundred basis points than the latter but the two do move in parallel.

In Chart 7, we estimate the real interest rate for investors (RI) using both the WPI and Core WPI and deducting that from the Prime Lending Rate (PLR).

It is evident that RI using core WPI is now significantly high at 15%. Even with overall WPI, RI is at record high of 17% considering WPI is in negative territory.

Chart 7: Investment Growth and Real Interest Rate (Quarterly data)



High real rates represent very high cost of capital that could be a real deterrent for investors planning any capacity expansion. It can surely be argued that even at these high levels RI in the formal banking sector is far lower than real interest rates prevailing in informal credit markets. While that is of course true, the role of the monetary policy in influencing informal credit rates and economic activity in the parallel economy is a complex issue.

In its working paper titled 'Real Interest Rate impact on Investment and Growth' RBI states that for 100 bps increase in nominal lending rate, investment rate could decline by 11 bps in the short run and 61 bps in the long run. This is borne out by the regression exercise undertaken here. Chart above shows a strong inverse correlation between RI and rate of growth of investment over the years.

We used the equation,

$$Investment\ growth = f(RI, GDP\ Growth) \text{-----}(1)$$

$$Investment\ growth = f(RI, Demand\ growth) \text{-----}(2)$$

Where RI = real interest rate calculated by either subtracting WPI or WPI Core from Prime lending rate, Investment= Gross Fixed Capital Formation (GFCF), Demand = Private Final Consumption Expenditure (PFCE) in GDP by expenditure side.

We used quarterly data from June 2005 to June 2015 and ran regression. The results are shown below in Table 2 and Table 3.

Table 2		
	(1)	(2)
VARIABLES	GFCF	GFCF
realrate_Corewpi	-0.954*** (0.302)	
GDPtconstantprice	1.941*** (0.327)	2.049*** (0.336)
realrate		-0.596** (0.242)
Constant	2.867 (4.378)	-2.294 (3.616)
Observations	41	41
R-squared	0.631	0.598
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Table3		
	(1)	(2)
VARIABLES	GFCF	GFCF
PFCF (yoy)	0.960* (0.484)	0.607 (0.504)
realrate	-0.881*** (0.318)	
realrate_Corewpi		-1.347*** (0.425)
Constant	8.116 (4.931)	16.66** (6.587)
Observations	41	41
R-squared	0.280	0.316
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

We observed from Table 2 that Real Interest Rates (RI) calculated with WPI or Core WPI are both significant at 1% level of confidence and higher RI lowers Investment growth. Moreover, higher GDP growth leads to higher investment.

Results from Table 3 indicates that higher RI lowers Investment growth and higher private demand increases Investment Growth (both coefficients are significant)

From the above analysis, we can conclude that lower real interest rate is necessary for higher investment but it is not sufficient condition to revive private investments. Excess capacity in manufacturing sector and stress balance sheet in infrastructure sector will delay revival of private investment. Continued low capacity utilisation indicates that more domestic demand is needed to substitute for weakening export demand for the domestic investment cycle to pick up. Domestic demand is expected to move up slowly as retail lending picks up and consumption increases due to fiscal boost through 7th pay commission and OROP next fiscal. This will increase capacity utilisation and start revival of the private capex cycle.

VI. Conclusion

From the above discussion, we conclude that first, the repo rate at present is almost in line with the Taylor rule (rate of interest). However, it is easier to achieve Taylor rule against the background of decelerating inflation. The rule will be tested once the inflation starts picking up as commodity prices rise and domestic output gap closes. Secondly, there is empirical evidence that food inflation does spill over into core inflation and therefore RBI should react to food inflation if it is persistent as it can potentially spill over to core inflation unanchoring the inflation expectation. Thirdly, Lower real interest rate is necessary for higher investment but it is not sufficient condition to revive private investments.

Various case studies indicate that using FIT is more complicated in emerging economies. We agree with Mishkin (2004) that while FIT isn't a panacea, but if done right, it can be a powerful tool to help promote macroeconomic stability in India. However, developing strong financial and monetary institutions is critical to the success of inflation targeting. Without developing strong institutions like an effective MPC, India may not be able to benefit by transitioning to FIT. Inflation in India is most often driven by supply side constraints and other administrative decisions (like MSP, real wages etc). Moreover, persistent high food inflation does spill over to core inflation and RBI should take cognisance of this. FIT can succeed only if the RBI and the government work in tandem with the latter taking the necessary steps to ease supply constraints ensuring lower wage, good prices. Otherwise, applying FIT can result in unacceptable output and employment loss.

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