



EVALUATION OF INFLATION TARGETING IN INDIA

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ABSTRACT

Based on the analysis of the peculiarities of the implementation of monetary policy within the framework of inflation targeting, it is shown that objective reasons lie at the basis of its application and evolution: a decrease in the growth rate of consumer prices, an increase in the integration of the world economy, the ineffectiveness of the implementation of other monetary management regimes in open economy. This is also true for India, which has gone from financial mechanisms of a centrally planned economic system to inflation targeting, the approaches and implementation tools of which have been adjusted taking into account Indian realities. It was revealed that the inflation targeting regime in India, along with other measures of macroeconomic management, became one of the elements of the system for maintaining financial stability after the 2014.

KEYWORDS: *inflation targeting, monetary politics, Reserve Bank of India, world economy, key rate, inflation, exchange rate policy.*

INTRODUCTION

The inflation targeting regime has been successfully used for almost 30 years by the monetary authorities of many countries. The objective prerequisite for its spread was the processes of globalization, which led to a significant increase in cross-border commodity and financial flows. An important role was played by the flexibility and adaptability of approaches and tools for inflation targeting. India switched to this regime later than most countries - only at the end of 2014, which is due to the radical transformation of the socio-economic and institutional conditions for the development of the national economy in the previous decades.

New Zealand became the first country to adopt inflation targeting (IT) regime in 1990. Today it is used in 36 countries, 25 of which are developing countries. All of them differ significantly from each other in terms of the level of general economic and financial development. According to the World Bank, at the time of the transition to IT, for example, in the Philippines, GDP per capita was only \$ 1,013, and in Japan - \$ 40,490. Several stages can be distinguished in the transition of various countries to IT: - in the first half of the 1990s, the transition was carried out by developed countries (New Zealand, Australia, Canada, Great Britain), and among developing countries, Chile became a pioneer; after the crises of 1997-2001, which most strongly affected Asian countries, a large group of developing countries - Thailand, Mexico, South Korea, Brazil, Colombia - have switched to this regime. In 2001, this monetary policy (MP) regime was introduced by Norway after the deterioration of the terms of trade due to the decrease in the average annual world oil prices to \$ 45.6 per barrel; - in 2005-2007, during a period of rapid economic growth and ac-Turkey, Indonesia, Ghana and Guatemala have started to target inflation by actively internationalizing financial markets;- after the global crisis of 2008-2009. against the background of a sharp Not only Kazakhstan, India, Georgia, but also Japan have switched to IT as the price of energy resources, the acceleration of capital outflow from developing countries and the increase in volatility in the global financial markets. As a result, if until the mid-2000s, IT principles were mainly adhered to by developed countries, but now they are applied by the monetary authorities of many developing countries. The transition to IT was predetermined by the processes of globalization and liberalization of economic activity. Expansion of trade and financial integration between countries, a steady slowdown in dynamics and a decrease in consumer price volatility, and an increase in the depth of financial markets have significantly transformed both the structure of world production and the instruments of economic policy. In the changed conditions, the flexibility of the principles and instruments of



inflation targeting allowed the monetary authorities of various countries to successfully apply this regime to manage the monetary conditions of reproduction and their regulation, taking into account the country specifics. At the end of XX - beginning of XXI century, the dominant role of developing economies in world production has become a new reality. The liberalization of trade and financial legislation in these countries promoted their active integration into world economic processes and accelerated economic growth rates, which exceeded the indicators of developed countries. As a result, the contribution of developing countries to world production increased from 36.4% in 1990 to 58.7% in 2017. The global crisis of 2008-2009. slowed down the expansion of economic integration of developing countries with the rest of the world. In 2015, the relative value of their current account balance again became negative (-0.2% of GDP), and the financial account dropped significantly. Along with external prerequisites, internal opportunities arose for the transition to the IT regime in both developed and developing countries. Current account balance Net private capital inflows developing countries to developing countries (in% of GDP) (in% of GDP) Sources: IMF (World economic outlook, International financial statistics) countries. The key trend has become the global trend of a steady slowdown in consumer price dynamics. The inflationary peak in the world was passed in 1992, when the average annual growth in prices in the consumer markets of developing countries exceeded 120%. By the end of the 1990s, it had slowed down to 13.4%, and since the beginning of the 2000s, it has stably remained in the single-digit area. Even in the crisis year of 2008, the average annual growth rate of consumer prices accelerated only to 9.2%. In 2017, in developing countries, it slowed down to the lowest on record - 4.0%. As a result, the gap in the dynamics of consumer prices in developing and developed countries narrowed from 117 pp in 1992 to 6.3 pp in 2000, that is, before many countries switched to IT. In 2017, the gap narrowed to a historic low of 2.6 p.p. In the context of increasing economic and financial integration, targeting monetary or exchange rate indicators did not ensure sustainable achievement of monetary policy goals in an increasing number of countries. Practice has confirmed the monetary policy trilemma that attempts to maintain a fixed exchange rate in small open economies while simultaneously pursuing an independent monetary policy are futile. To this day, the presence of a quantitatively expressed inflation target is an essential invariable attribute of the practical implementation of this monetary management regime. The exchange rate and interest rate policies underwent the most significant changes. The monetary authorities gain the ability to influence the movement of transnational capital flows and, accordingly, the exchange rate of the national currency within the framework of inflation targeting by modifying traditional instruments. At the same time, it is important that the mechanisms used for this regulation of the conditions of course education do not contradict the approaches and principles of IT. At present, the monetary authorities of six developed (Australia, Canada, Japan, Norway, Sweden, Great Britain) and four developing (Chile, Mexico, Poland, Russia) countries adhere to IT in its traditional sense. This presupposes keeping inflation close to the target with a freely floating exchange rate, that is, the regulator does not participate in the exchange rate formation process. However, when risks to price or financial stability increase, monetary authorities, including those adhering to a free floating exchange rate regime, resort to foreign exchange interventions. But these interventions are specific. First, there are no goals to maintain the level or dynamics of the exchange rate, and transactions for the purchase / sale of foreign currency are carried out in volumes that do not prevent the influence of fundamental factors. Second, they are mostly carried out in accordance with a publicly announced intervention rule containing specific terms and conditions for conducting transactions in the domestic foreign exchange market (Kamil, 2008). This approach reduces the likelihood of speculative attacks on it. In order to limit exchange rate volatility, foreign exchange interventions were resumed in Poland, Mexico and Indonesia. Moreover, in 2008, their frequency in Mexico and in 2011 in Poland exceeded the permissible limits², and the existing exchange rate regime was temporarily reclassified by the IMF to floating. In addition to limiting exchange rate volatility, for example, in Turkey, Mexico and Chile, the goal of foreign exchange interventions was to replenish foreign exchange reserves (Kiyutsevskaya, Trunin, 2017). Adjustment of interest rate instrumentation The risks posed by changes in the intensity and direction of movement of transnational capital flows have led to the transformation of interest rate policy. During periods of crisis and post-crisis recovery, protecting the domestic financial market, the monetary authorities, using the interest rate corridor, actively regulated its width and the location of the key interest rate in it. By expanding the interest rate band and allowing an increase in the volatility of money market interest rates, the monetary authorities are trying to limit the inflow of transnational capital by increasing interest rate risks. Using an asymmetric interest rate band, monetary authorities influence the movement of transnational capital flows by adjusting the relative attractiveness of their deposit or lending operations, increasing or weakening the effect of changes in the key rate. As a rule, the monetary authorities of developed countries use a narrower percentage corridor than in developing countries. So, if in the first case, its width varies from 50 to 200 b. p., as, for example, in Sweden in 1994-1995, then in the second it



can even reach 800 bp. etc., as in Poland in 2001. By modifying the IT tools, the monetary authorities are successfully using it to manage and regulate the monetary conditions of reproduction, taking into account objective prerequisites and patterns. This is primarily about the processes of globalization and the liberalization of trade and financial transactions with the rest of the world, as well as the expansion of financial intermediation, mode implementation inflation targeting in India.

The story of inflation targeting in India began in November 2005 when consumer price index (CPI)-based inflation rose to 5.3 per cent. The data suggests that the next decade of inflation planning was one of a prolonged inflationary crisis. This raised new questions about monetary policy strategy as well as the principal and agent relationship between Parliament and the Ministry of Finance and the Reserve Bank of India (RBI). At that time the Indian economy was largely integrated with the world and the financial concentration had also increased. As a result, monetary policy insights in a closed economy had stopped working. It was that old insight that pushed us into this protracted inflationary crisis. We needed new knowledge in the macro-economics of a free economy. The prolonged inflationary crisis also raised questions about the character of the RBI as an agent. Every government body should have a clear objective. In return for the binding power, he will also have to give a certain amount of consequence. RBI got the right to print notes through a law passed in Parliament. In the 1934 Act that brought the RBI into existence, it was designed as a temporary measure. It was time to look for a better and more permanent system. When Parliament gives the power to print notes to RBI, what does RBI give to Parliament as an accountability? Inflation crisis has many disadvantages. In India, the worst hit by inflation is on the poor. At the same time, inflation is a major concern of the leaders. No leader wants his performance to be poor on the inflation front while going to the polls.

LITERATURE REVIEW

There have been evolved a lot of literature on the Inflation Targeting (IT), some of them focused on the modeling of economic policies for IT while some highlighted the pros and cons of IT and which parameters to be considered. Most of the economists highlighted some of the advantages of IT such as its transparency and accountability that help in policy making. It helps to achieve a quantitative target as well help in fixing the target horizons. The central banks regularly have to present the monetary policy report that consist of bank's forecast inflation along with other variables. The IT is very flexible that helps in monitoring various economic variables. Hammond (2012) demonstrated that the target variables such as the output gap helped the countries to reduce the levels of inflation where IT is adopted. Plessis & Riehveld (2014) highlighted that an explicit numerical target for inflation anchors and helps in stabilizing the expectations of the inflation. As a result, it would impact the economic activity. Some researchers highlighted the importance of IT in some countries during the financial crises. Ito (2004) described that IT provides the central banks the freedom to use any instrument for targeting inflation.

UK is one of the country where inflation targeting has reduced inflation as well as output volatility. Sterne (2004) explained that the Central Bank's credibility can be enhanced by the publishing of detailed report that consists of minutes of meetings that happened between the Governor and the Chancellor. This led to the formation of lower inflation expectation among the consumers. Sterne observed that the factors that UK (where IT was successful when banks were not independent) adopted should not be generalized to the emerging economies that are noisier.

Plessis & Riehveld (2014) raised the concern that following IT too much can lead to detrimental to the stability of the real economy and other objectives which can question the policy's credibility. Countries like Japan raised the inflation rate that ended up in high inflation rate and proved detrimental the economy. Also, IT is very costly that makes framework unsuitable for emerging market economies. Frankel (2012) opinioned that IT was dead. Mahajan et al. (2014) highlighted the need for making IT policies flexible to handle the shocks.

Various economists in the literature suggested various version of the inflation targeting model. IMF in 2001 developed two models: Global Economy Model (GEM) and Dynamic Stochastic General Equilibrium Model (DSGE). For emerging country like India consider both pros and cons of IT while modeling. This may result into the high intensity turmoil due to the failure of economic system. So, these models with many factors can serve as a good guide.



Shirakawa (2012) argued that economic profession cannot distinct between the different models of population with different qualities. Bullard et al. (2012) presented different inflation rates among different age groups of the population. Ikeda & Saito (2012) highlighted that by using DSGE model, the increase in age results in the decrease in economy interest rates which further results in low inflation rates. Blanchard (2010) suggested the countries to target the low impact employment and growth which raises inflation target.

OBJECTIVE

- 1. To study inflation patterns in a various regimes of monetary policy.
2. To study the movement in interest rate when inflation is high or low.
3. To study the impact of inflation targeting on the output gap that is a tradeoff between inflation and growth.

Measures of Inflation and Inflation Targeting

Since the 1980s, India's inflation has averaged 8% or more, with the exception of the early 2000s, when it averaged 4%, and more recently, when it reduced as a result of the move to inflation targeting (see Table 1). With the exception of 2009-2015, levels have generally outpaced global inflation (Figure 1), but swings have closely paralleled those in other low- and middle-income nations (LMI). Budget deficits and monetary policy accommodation in years that corresponded with national elections, according to Basu, Eichengreen, and Gupta (2014), are to blame for India's relatively high inflation during this era.

For details see amendment to the Reserve Bank of India Act, 1934, Inserted by Finance Act, 2016, Chapter III F, Monetary Policy. With the possibility of revisiting it after five years.

The first meeting of the MPC was held on October 3 and 4, 2016

Figure 1: Long term inflation rate (consumer prices) in India and its co-movement

Figure 1A: ... with Global Inflation

Figure 1B: with Low- and Middle-Income (LMI) countries

Percent

Percent

Source: WDI, Author's Calculations

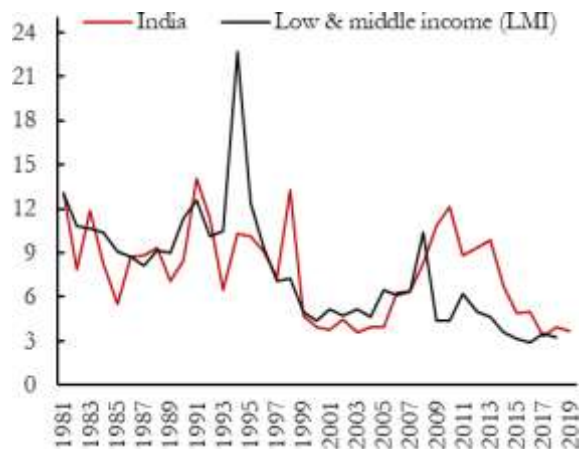
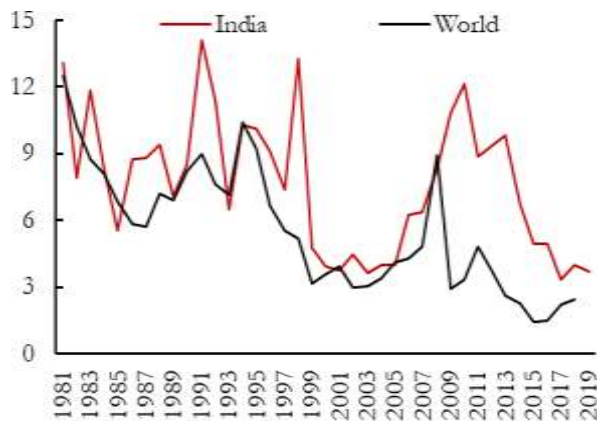




Table 1: Average inflation rates in India, the World, and Low-and middle-income countries (LMI)

	1981-85	1986-90	1991-95	1996-00	2001-05	2006-10	2011-15	2016-19
India	9.3	8.5	10.5	7.7	4.0	8.8	7.9	4.0
LMI	10.8	9.3	13.7	6.6	5.3	6.3	4.5	3.2
World	9.3	6.8	8.7	4.8	3.5	4.9	3.0	2.0

Source: WDI for LMI and world, and MOSPI, CEIC for India, Author’s Calculations

Alternative measures

The measuring of inflation is a problem for monetary policy in general. This is especially true in India, where no comprehensive cost of living index existed before to 2011.

These findings are not unexpected: food prices in India have been much more stable than international prices because they are administered, whereas energy prices were similarly more stable than world price until around 2015, and then moved more strongly with global prices after becoming more market based, for industrial workers, agricultural workers, and non-agricultural rural workers. As a surrogate for the composite CPI, the CPI among industrial employees was often utilized.

Since January 2011, a single CPI series has been offered. Starting in January 2012, it may be used to compute monthly year-over-year inflation. The WPI was used by the RBI for fiscal policy analysis until about March 2014, when it was replaced by the headline CPI. The WPI is made up of the pricing of large-scale goods transactions in the home economy. Manufacturing and commodities are included, but not activities (see Table 2).

On average, CPI inflation has indeed been greater than WPI inflation. Between 1997 and 2009, the average gap among CPI and WPI inflation was 0.4 percent, but it grew to 3.2 percent from 2009 to 2019. Food inflation (which has a heavier weight in the CPI) and industrial inflation are both responsible for the differences between the two measures (which have a larger weight in the WPI).

Table 2: Composition of the Wholesale Price Index and Headline Consumer Price Index

	WPI		CPI
Primary products/food	22.6	Food, Beverages and Tobacco	48.2
Fuel	13.2	Fuel & Light	6.8
Manufactured	64.2	Housing	10.1
		Miscellaneous	28.3
		Clothing & Footwear	6.5

The question is, which series should the RBI focus on? For two reasons, the WPI might not have been the ideal option.

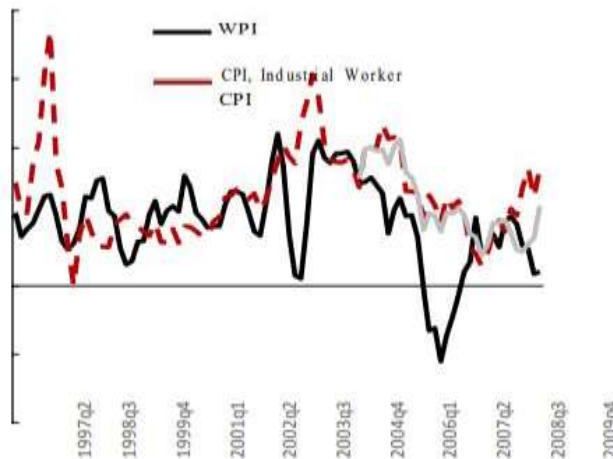
First, it gives unpredictable oil prices and stock prices a lot of weight; second, it gives services no weight at all. Volatile commodity prices impact headline CPI inflation as well, but to a lower amount than the WPI. More significantly, food costs account for roughly 50% of the CPI, and they are frequently influenced by non-monetary

sector-specific factors like weather and harvests. Insofar as food price shocks are temporary, there is a case to be made that RBI should keep an eye on them. These reasons support a core CPI (non-food, non-fuel). The following are some of the counter-arguments in favour of headline inflation:

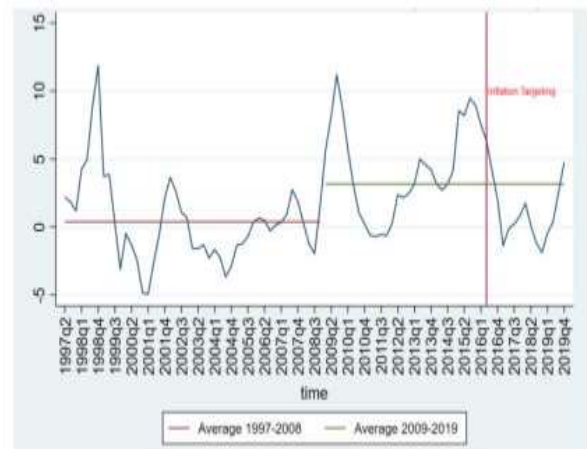
- (i) That food inflation feeds directly into core inflation and so has to be tamed lest it become structural and deeply entrenched; and
- (ii) That food inflation feeds back into core inflation and thus needs to be tamed lest it become structural and deeply entrenched.

Figure 2A: Different inflation series: WPI,CPI,Industrial workers, Headline CPI **Figure 2B: Difference between CPI andWPI**

Percent



Percent



Source: MOSPI, CEIC. Note: CPI inflation series consists of CPI, Industrial worker until 2011, and CPI Combined from 2012.

Although the correlation among WPI headline and CPI core inflation has risen in the recent decade, it is still substantially more than zero at the 95 % confidence level (see Table 3). Given the respective makeup of their baskets, it's no surprise that WPI headline inflation is more highly connected with WPI core inflation, whereas CPI headline inflation is more strongly correlated with food inflation. Their relative food and core inflation data are more tightly associated than their headline inflation series.

CONCLUSION

It is the job of monetary policy to keep inflation at a low and sustainable level.. Practical people think that inflation is only related to crops and rains. It is a highly intellectual concept to think that the method of generating legitimate money has a decisive effect on inflation in the long run. In fact, crops and rainfall have always fluctuated according to the high intellectual concept, while inflation came under control after the Monetary Policy Framework Agreement was concluded. There is a flaw in the figures. Seasonally adjusted inflation in December 2019 was pegged at 21.3 per cent. This will have an impact on annual inflation for 12 months. But this is not a very serious inflationary problem: seasonally adjusted inflation again fell to 3.04 per cent in January 2020. Crops and rainfall distribution fluctuate but this is not systemic inflation. Chiefly it was a historic reform, the first step towards an institutional arrangement for legalized money in India. Now there are three weak points that need to be addressed. The first problem is with the composition of the Monetary Policy Committee as it is controlled by the RBI governor alone. The second problem is the tension between the objective of monetary policy and the objective of debt



management. Public debt management needs to be separated from the RBI. The third problem is the weak transmission of monetary policy: reforms on the bond market, banking and capital controls are needed to make decisions of the Monetary Policy Committee sharper. There is also a discussion about a provision of the law which states the need to review the inflation determination model after five years, i.e. in February 2021. A look at the law shows that the inflation assessment model will be reviewed in five years.

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