

Reflections on Analytical Issues in Monetary Policy

The Indian Economic Realities

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Analytical issues have arisen in the conduct of flexible inflation targeting as the framework of monetary policy, adopted formally by India in 2016, despite the noticeable downward drift in the inflation rate and concerns of many economists about its relevance in the light of the global financial crisis. Issues such as the framework's rationale, the medium-term inflation target, the meaning of real interest rate in the Indian context, the realism in respect of inflation expectations and of the inferred logic of the yield curve, and the implications for economic inequalities have been pointed out.

This paper attempts to point out some of the analytical issues that arise in the conduct of monetary policy in the context of the adoption of inflation targeting as the framework of the policy. Our effort is essentially to inform policy-thinkers that the analytical issues need to be tested empirically. Such investigations, it is hoped, would ultimately result in revising, or at least reorienting, the theoretical edifice surrounding the framework of monetary policy.

First, in order to understand Indian economic realities, it is important to know the contextual backdrop to the theory and operation of monetary policy. Reserve Bank of India (RBI) as India's central bank is essentially "a full service central bank," unlike central banks in advanced economies (AEs), as was eloquently argued by former Governor Duvvuri Subbarao in 2010 at an international conference. He clarified his remark by stating that RBI plays many roles: as the monetary authority, as a regulator of the banking and non-banking systems as also of many other segments of the financial markets, including the payment and settlement systems. The RBI also acts as the debt manager for the central and state governments.¹ The RBI, thus, has enormous presence in the public policy space and is, therefore, required to not only be transparent of its actions, but also communicate the rationale of its policy measures in a credible manner. This would imply that the RBI would have to be committed to and accountable for its actions.

Against this background, one has to closely inquire about the RBI's recently adopted monetary policy framework. The RBI has formally and legally adopted flexible inflation targeting (FIT) as its policy framework since early 2016, almost a year after an overall agreement on the need to have FIT between the central government and the RBI. The development of institutional infrastructure required to set in place inflation targeting took considerable time, as is evident from the fact that the establishment of the Monetary Policy Committee (MPC) was announced only towards the end of September 2016.²

Inflation targeting is adopted as the monetary policy framework in a number of countries since 1989. Over time, most of the initial inflation targeters have moved away from the pure form to the flexible form. A good many famous names in the economics profession and international bodies such as the International Monetary Fund (IMF) have extended strong support to it.³ Almost all AEs have adopted it. A few emerging and developing economies (EDEs) have also announced that their monetary policy framework would follow the inflation targeting approach. In India, inflation targeting as a monetary policy

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framework was not discussed in official reports and peer-reviewed journals till almost 2013. This indifference could have been due to the general impression that there was no serious shortcoming with its predecessor, an eclectic framework famously known as “multiple indicator approach” (MIA).

The fact that the MIA lasted for a long time, from 1998 till the adoption of FIT, and was not experimented with by any other country made it an interesting novelty. Under the MIA, the RBI took into account all the economic and financial indicators that influence the major objectives as specified in the preamble of the RBI Act, 1934. The preamble stated:

Whereas it is expedient to constitute a Reserve Bank of India to regulate the issue of Bank notes and the keeping of reserve with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage.

Monetary stability may be interpreted as denoting price and exchange rate stability. Operating the currency and credit system in an advantageous manner is to utilise credit and currency systems to promote economic growth. Besides, the issue of currency and the keeping of reserves may be seen as pointing to (i) creation of money supply that would not jeopardise price stability, and (ii) keeping foreign exchange at a level that would help ensure that India’s exchange rate would not exhibit gyrations and affect the country’s economic prospects.

Prior to the MIA, India had “monetary targeting” (MT) with “feedback” loop, as former governor C Rangarajan remarked.⁴ The replacement of MT was explained in terms of the weakening of and volatile streak in the demand for money.⁵ In other words, targeting money supply growth was given up in favour of a discretionary MIA.

The MIA’s replacement by FIT was not based on any authentic study of the irrelevance or uselessness of the MIA in the evolving economic and financial situation of the country. All that is advanced as an argument against the MIA is that it provides too much discretion to the monetary authorities and may lead to situations where monetary policy–fiscal policy coordination would be under a cloud. Advocates and supporters of FIT prefer rule-based policy, partly because it reduces the scope for administering policy shocks.

Like most other central banks, the RBI began to announce, under both the MIA and FIT regimes, the short-term rate of interest as a possible way of ensuring that output growth goes along with price stability. The replacement of the MIA with inflation targeting was conceived from within the RBI from around the beginning of September 2013 under the leadership of former Governor Raghuram Rajan.⁶ Rajan strongly supported and justified it on the grounds that the target of inflation should correspond with the threshold rate of inflation needed to optimise growth.⁷ The threshold rate, however, was not a unique or single number: it was expressed in the form of a tolerance band. The band ranged from 2% to 6%, with a mid-point of 4% to be obtained by the end of the medium-term period of three years. The tolerance band of 2 percentage points is high by international standards, which generally favoured one percent point on either side of the mid-point. It is, however, possible that the band could be brought down to

the international standards over time, after gaining some experience with the adoption of FIT.

It was recognised that FIT would not guarantee financial stability. In the Indian case, financial stability is sought to be secured by a number of institutions belonging to a number of segments of the overall financial system. Thus, one has a securities regulator to look after securities transactions, an insurance regulator relating to all insurance taking and insurance payments, and a pensions regulator with regard to pension payments and arrangements.⁸ The RBI will regulate banking and non-banking business of deposit-taking. Coordination of different financial regulators was entrusted to a committee that works under the central government and the RBI. However, it is the RBI that brings out financial stability reports and helps evolve macro and micro prudential policies with regard to the banking sector. These reports are in the genre of similar reports brought out by many other central banks, particularly those in AES.

Analytical Issues

It is useful to begin the examination of analytical issues in the architecture of monetary policymaking by knowing the reasons for establishing central banks. It is not merely for issue of currency that central banks are set up, at least since the 19th century. It is also for overseeing the financial institutions, particularly the deposit-taking ones, and for conducting credit policy for furthering economic activities. This is not the narrative that one would get at first glance while going through Vera Smith’s well-known work, *The Rationale of Central Banking and the Free Banking Alternative*, first published in 1936. She wrote that the establishment of central banks in opposition to a free banking system, was based on “political motives” as well as “historical accident,” rather than “any well-considered economic principle” (Smith 1990: 4–5). As one goes through the book, one realises that she recounted an important bit of the evolution of central banking in England.

When the Bank of England (BoE) was set up in 1694, it was to exchange favours between a needy government and an accommodating corporation. The BoE’s capital was all lent to the government and in return it was authorised to issue notes equivalent of its loans to the government. This sudden surge in notes produced currency inflation. It was this episode that seems to have given rise to a belief that central banks need to be prudent in the issue of currency, lest there be a rise in commodity prices. To revert to historical facts, the BoE was given more privileges. It became a banker to the government. It was entrusted with the job of managing national debt as well. It also became the only bank to issue notes by the Act of 1844. Soon thereafter, it became the sole bank to maintain cash reserves of commercial banks. The maintenance of bank reserves was the reason why Walter Bagehot (2006) argued forcefully for the BoE to be the lender of the last resort. He believed that the BoE, as the central bank of the country, was “bound” to keep a good amount of reserves of commercial banks to take care of financial panic. Bagehot stated that as trade in England was largely carried on with borrowed money, the amount of reserves should be used freely and vigorously so that there would be no

bank failures. As he put it, “the end is to stay the panic.” The central bank could charge a high rate of interest on the sum lent against all good banking securities (Bagehot 2006).

The point made by Bagehot assumes significance if one were to look at the evolution of the Federal System in the United States (us). The Federal Reserve System was created in the us “as a direct response to a series of banking crises” in 1901, 1907, 1913 as well as in the 19th century, as pointed out by Benjamin Friedman (2008). The crises led to the shutting down of much of the us financial system and impairment of the real economy. Friedman argued that the new central bank would be charged with the need to “provide an elastic currency.”

Central banks, thus, have to act to stem any financial crisis. Financial stability has to be the main reason why central banks are created. This point was not fully appreciated once the AEs began to experience stable economic conditions along with growth. It was taken for granted that stable economic conditions would be largely secured if central banks undertake policies to control inflation. Low or stable inflation was understood to promote growth. Cycles in economic activity would be taken care of by policy interventions of central banks and governments. If one were to stretch this logic, the Great Depression of the sort that took place in 1929–30 would have to be regarded as an exception. The global financial crisis that emerged in 2007–08 was not foreseen even a couple of years before the recognition of the crisis,⁹ even though the Asian economic crisis happened towards the end of the 20th century.

The global financial crisis has thrown up an important clue, that central banks would have to reorient their thinking about monetary policy and allied operations in a manner that takes care of concerns that go beyond issues of currency and inflation control. Even if there is no legal obligation on banks to hold cash reserves with the central banks, as is the case in some AEs, central banks will have to help banks in financial stress that may have been caused by the banks’ own “adverse selection.”¹⁰ This is necessary essentially to ensure that people’s confidence in banks is not eroded. If the said stressed bank is a large one or one that has large exposures to other banks at home and abroad as well as other segments of the financial system, the bank’s customers would rush to withdraw money from the stressed bank. This would force customers of other banks to closely observe the financial strength of their own banks. They might also begin withdrawing money more frequently and in larger quantities than they would otherwise have done, irrespective of the assurances about safety of deposits by banks’ managements.

Erosion of confidence in the banking system cannot be easily erased even if managements say that the bank suspected to be under financial stress is “too big to fail.”¹¹ Commercial banks’ own communications, however sophisticated and reasonable they may appear, would not assure the people of the safety of deposits. Deposit insurance too does not seem to be the answer to people’s concerns about the safety of their money.¹² It is only when central banks provide assurance to people, that they will take necessary steps to restore the financial health of all the financially stressed banks, will the people’s concerns be

largely taken care of. Central banks cannot and should not take recourse to the argument that their communication about support to stressed commercial banks would amount to moral hazard.¹³ Such a posture could lead to considerable uncertainties about the final outcomes with regard to the functioning of the financial system, since there is no one way of knowing the behaviour of economic participants to such a standpoint. In fact, such a posture could further encourage the opportunistic behaviour of banks.

It would be particularly important that the institutions under the supervisory and regulatory jurisdiction of central banks are safeguarded along with efforts to actively help other regulators like insurance, securities, and pension funds supervise and regulate the institutions under their respective jurisdictions. A cooperative and coordinated institutional mechanism to do research studies and to bring about periodical financial stability reports is widely recognised as helpful, but may not necessarily be sufficient to provide comfort in the large, complex nature of relationships that get interwoven among the financial institutions operating under the universal banking model.

It is now better appreciated that once the financial position of financial institutions is under stress for prolonged periods of time, say for a medium-term period of three years, monetary policy cannot be pursued effectively under any framework. Central banks cannot afford to consider financial stability as secondary to their objectives and have to recognise that it is critical for efficient functioning of macroeconomic policies.

Tinbergen Rule

Once it is agreed that financial stability has to be a part of the policy frame of central banks, how will it fit into FIT? The FIT, it is said, could have two objectives, but with a specified or assumedly specified hierarchy between the objectives. The two objectives in question relate to inflation control and stability, and output stability or employment stability. Central banks seem to believe, in line with the Tinbergen rule, that if there are n number of objectives, they should have n instruments of policy so that there would be appropriate identification of the system (Tinbergen 1952). Inflation control is the prime objective and effectively the only one in almost all cases. This argument follows from the implicit assumption that output stability and output growth would follow from it. In addition, optimisation of growth would take place not at zero or negative inflation rate, but at a rate that is empirically proved to be an optimal one, and thus, the threshold rate. A number of studies showed that while the threshold rate had been at about 2%–3%, it had been 6%–7% in the case of the EDEs.¹⁴ Studies in India also seem to suggest that the threshold rate would be around 6% (Vasudevan et al 1999).¹⁵

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No economic policy planner in India, however, swore by the applicability of the Tinbergen rule to Indian economic realities. Almost all policy planners and central bankers of India till recently felt that while inflation should be under control, output growth as well as financial development and stability should also be regarded as equally important.¹⁶ In addition, there is recognition that price stability does not need to be viewed in terms of only overall consumer inflation: it could also be viewed as stability of food prices. Whatever objective is considered as a primary objective, given only one policy instrument, it becomes necessary to empirically show that the policy instrument would transmit its influence effectively on the specified primary objective.

In reality, however, policy goals, policy designs, and policy tools or instruments cannot be viewed as distinct. They are often in the form of mixed compounds. They interact. Again, there is a problem of assigning a target to any one institution or sector because the same policy target also appears in the matrix of policymaking processes of other sectors and governments or institutions (del Rio and Howlet 2013).

If the above argument is true, how can the Tinbergen rule be regarded as relevant to our times? To be fair to Jan Tinbergen, it must be pointed out that he did note that policy mixes in terms of targets, designs, and instruments often exist and interact with one another. He stated that there cannot, a priori, be an $n \times n$ objectives–instruments compatibility always. He, in fact, went to the extent of saying that “complicated systems of economic policy ... will almost invariably be a mixture of instruments” (Tinbergen 1952: 71). The Tinbergen rule should, therefore, be taken as a scholarly caution to policymakers that having too many objectives or goals would mean that there should be a sufficient number of policy instruments to achieve them over a given time horizon.

Rationale for FIT

Advocates of FIT place a number of arguments, implicitly or explicitly, against discretion in policy on the grounds that it is inefficient and would lead to dynamic inconsistency problems.¹⁷ A rule-based approach is superior and can be successful with incentive-oriented contracts and with exercising of powers to regulate banks.¹⁸ Lars Svensson justified FIT on the grounds that because of time lags between monetary policy actions and their effects on prices and the real economy, FIT will work well if central banks forecast for both inflation and real activity, thus making it “forecast targeting” (Svensson 2010). A yet more powerful argument in favour of inflation targeting is that central banks as well as governments can decipher and aim at the threshold rate of inflation where growth can be optimised.¹⁹

In the case of India, the threshold rate of inflation, according to some studies, was placed at about 6%–7%, a number that is consistent with the studies by scholars for a panel of countries that represent the EDES. For the panel of countries that fall under the category of AES, these studies show that the threshold rate would be between 2% and 3%. It is no surprise, therefore, that the AES accepted the 2% threshold as normal.

The Indian FIT felt that the inflation target could oscillate between 2% and 6% during a medium-term period of three years, and should be at the mid-point of 4% at the end of the medium-term period.²⁰ In other words, the tolerance band on either side of the midpoint would be two percentage points instead of the one percentage point that most AES and some EDES seem to favour.

The evolution of the midpoint, and forecasting it as an inflation target at the end of the medium-term period, raises an interesting question. Should one treat 4% at the end of the said period as the threshold rate of inflation where output growth would be optimised? Or, should 4% be treated as the “normal” desirable rate of inflation? Neither of these questions has received enough attention in the debate on inflation targeting in India.²¹

Taylor Rule

Most central banks consider the short-term interest rate as a best operational target of monetary policy. The framework of policy should permit the central bank to control the operational target. Inflation targeting is one such framework. Instruments of policy are used to achieve the operational target. In modern days, the tools that most central banks use are a variety of instruments—standing facilities, open market operations (OMO), cash reserve ratio (CRR), and quantitative easing (QE). Central banks control the operational target, such as the short-term interest rate, through the use of monetary policy instruments. The MPC decides upon the official rate and thereby gives the stance of policy to the wider public. The official rate decided upon by the MPC signals to the policy implementation wing of the central bank what it should do on a daily basis to ensure that the actual market call money rate does not deviate from the official rate. The intermediate target nowadays is often the long-term interest rate, which is theoretically speaking amenable to influence via the use of the operational target. The final target is the economic variable that the central bank aims to achieve within a medium-term period. It is often the price stability under the inflation targeting framework.

How the level of the short-term interest rate as the operational target is set is provided by the Taylor rule, which was first formulated in 1993 (Taylor 1993). The rule in its original form was stated thus:

$$R = r^* + p + a(y - y^*) - 1 + b(p - p^*),$$

where R is the target nominal interest rate that is policy-centric, r^* is the equilibrium real level of the policy interest rate, y is output, y^* is the potential output level, p is inflation and p^* is the target for inflation, and a and b are parameters that describe the response of the policy rate to deviations of output and inflation, respectively, from their potential level and target rate.

The Taylor rule has not been officially proclaimed as necessary for arriving at the official nominal interest rate by any central bank. But central banks typically refer to it as useful under certain circumstances. It would be invalid if the demand for money function is stable. Again, it would not work in countries where exchange rate movements leave significant effects on the economy. It is also very narrow in its scope. It hardly

takes into account issues pertaining to financial stability and employment–output linkages. It would not work if the transmission mechanism of monetary policy is weak and uncertain (Vasudevan 2014). Besides, r^* , as Woodford (2003) suggested, has to be adjusted in response to fluctuations in the “natural” rate of interest in the Wicksellian sense. The natural rate would vary in response to real disturbances in the economy.

The RBI gives an indication, if not firm forecasts, of inflation and real economic growth, but these indications are not based on any full-fledged economic models. But, its indication of inflation is regarded as firmer and is considered the final target of policy. How the short-term interest rate is set is not officially given, but at least one top executive of the RBI, Deepak Mohanty, ventured to discuss the Taylor rule in policymaking before the academics. In a speech at the Delhi School of Economics in 2013, he presented an analysis of how the Taylor rule would apply to India without necessarily endorsing it as a means of arriving at the policy interest rate (Mohanty 2013). In his view, the Taylor-type rule would be useful as an “additional tool” in understanding the interrelationship among growth, inflation and policy interest rate, as the interest rate channel of monetary transmission seems to indicate that it could over time gain in relevance. He used the Hodrick–Prescott (HP) filter to estimate the potential output with an adjustment for the information then available on output at 7% per annum. The “desired” rate of inflation was placed at 5% per annum. In his view, the neutral real policy rate was 1%. On this basis, the neutral nominal policy rate was estimated by Mohanty at 6% per annum. This view has not been contested subsequently by any other executive of the RBI, or pursued by any other Indian researcher.

The Taylor rule has been treated with polite indifference in the literature when the recessionary conditions began to dominate since the outbreak of the global financial crisis. It has been found to be not sufficient to believe that the Taylor rule would work without incorporating an appropriate proxy to financial stability in the formulation of the rule. In fact, Charles Goodhart (2010: 9) has gone to the extent of suggesting that a liquidity managing central bank that considers financial stability as critical for efficient functioning of the central bank need not necessarily set an official interest rate. Central banks traditionally have been managing liquidity and setting official short-term interest rates. In addition, if they were to adopt a tested regulatory framework in pursuit of financial stability, they would wield enormous power in the economic sphere. This would inevitably raise questions of propriety and accountability of non-elected bodies, such as the central banks, in the modern-day discourse on democracies.

On an analytical plane, one could question the validity of a number of these benchmark concepts that are built into the Taylor rule. Often, benchmark concepts are not directly observed. The equilibrium real interest rate is one such benchmark concept, ignoring the word “equilibrium” for the present. Potential output is yet another concept on which the latest estimate of Bhoi and Behera (2016) is 6%. “Target inflation rate” throws up a severe challenge to the abilities of economists and

statisticians as to how to gauge it. It is here that inflation expectations play a role.

Real Interest Rate

Questions are raised as to what real interest rate constitutes, now that interest rates have remained so low as to be near zero or negative for a good many years since the outbreak of the global financial crisis. The definitional identity, that real interest rate is equal to actual or expected nominal interest rate minus expected inflation, is hardly helpful in understanding the impact that the real rate of interest is supposed to have on investment and on income. As Cameron K Murray (2016) has pointed out, the real interest rate, mysterious as it is, does not have a real life counterpart, posing a problem for economic theory. As he reasoned, changing the real interest rate through central bank operations would not change the real return on capital and stimulate investment through that channel because the price of capital is determined by the money interest rate. This is exactly how J M Keynes (1936) viewed the real interest rate in his classic work, *The General Theory of Employment, Interest and Money*, especially the chapters on marginal efficiency of capital and trade cycles.

This is very different from the concept of the real rate of interest that was propounded by Irving Fisher in 1930. The difference in the viewpoints of Keynes and Fisher is aptly captured by Eric Tymoigne (2006).²² The main thrust of Tymoigne’s argument against Fisher’s thesis is simply this: the idea that variations in the money rate of interest on monetary assets are the result of expected inflation is not tenable since it cannot be firmly established. It is mainly for this reason that Keynes provided the liquidity preference and marginal efficiency of capital (the money rate of return on non-monetary assets) as a credible alternate explanation.

Yet, the current notion that the real interest rate is essential for the inflation targeting framework has given rise to the idea that monetary policy should be concerned with managing inflation expectations in order to keep the real interest rate at a stable level, consistent with the point of equilibrium that helps equate saving and investment.

There are, in real life, serious problems in choosing the appropriate nominal interest rate and the appropriate measure of prospective inflation to derive the real interest rate that would have a positive impact on both saving and investment. Surprisingly, the RBI does not provide any clear and definitive guidance in the matter. Should one take the official money rate of interest as the appropriate nominal rate of interest, or the call money market rate of interest and the consumer price inflation for derivation of the real interest rate? Or, should one substitute the official rate with a one-year treasury bill rate or with an average of one-year deposit rates that major commercial banks offer? Should one take only the consumer price index (CPI) as the representative for proper basis for measurement of expected inflation, when it is well known that food prices have a very dominant weight in the CPI? Does more than 50% weight for food not make the CPI vulnerable to supply shocks? Neither has productivity in agriculture gone up in any discernibly

sharp manner, nor is the seasonality factor easily foreseen partly owing to the climate change factor. Should one not consider inflation in India as more structural in character? If inflation is structural in character, how does FIT work efficiently? Should we then wobble between two extremes of the midpoint of 4% every two or three years? What if the fuel prices, which are known to be volatile, add to the uncertainty that food prices present? These are formidable questions that have to be researched before one concludes with certainty that FIT based on the changes in the overall CPI is the right framework of monetary policy.

Inflation Expectations

There are also many doubts about the process by which expectations are formed. Here, one must make a distinction between what economic agents express as their expectation of inflation, and what economic agents expect to do based on their revealed expected rate. The latter is the effective functional form of behaviour, which may not be harmonious at the macro level.

Most surveys in India of expectations of inflation provide respondents' responses based on past experience and on some information on the current indications about the direction of movements in major macro indicators as reported for a quarter ahead. Much of the current information, it must be recognised, is not based on a firm information base and could well have some speculative guesses, information frictions, noise arising from failure of proper signal extraction, etc. A number of efforts were made under a class that is broadly known as rational expectations models. Mankiw et al (2003) referred to the sticky information model arising out of information frictions. The frictions arise because of infrequent updating of information sets partly owing to high fixed costs to acquire information sets. For the noisy information models, Woodford (2003), Sims (2003), Mackowiak and Wiederholt (2011) and others do consider the situation where agents update information continuously. But, because information is not easily observable, the updated information could carry beliefs about what may be considered as "underlying fundamentals" via a signal extraction problem. As a result, forecast errors across agents could arise. Both these approaches require that surveys be undertaken regularly and revisions in information made continuously.

Yet, these efforts have not resolved the problem of forecast errors in the empirics provided by these authors. Aggregating forecast revisions would still not remove the forecast errors. At the individual level, the errors could be much higher.²³ This is why one probably may have to take the help of psychologists and behaviour economists to see whether forecast errors could be minimised to tolerable levels for the time horizons that one considers for purposes of formulating expectations in a relatively credible manner.

Does determination of short-term interest rates help construct long-term interest rates? It is largely agreed that short-term interest rates help influence money market rates and the structure of interest rates, also known as the yield curve. There is also general agreement that long-term interest rates should generally be such that investors would be enthused to undertake new projects or for expansion of existing projects.

It is also taken for granted, at least in theories of yield curve, that long-term interest rates would be higher than the short-term interest rates because they carry risks—uncertainty about inflation and future interest rates. In addition, it is understood that even though both the short-term and long-term rates of interest have shown volatilities, the yield curve would generally be smooth and upward sloping. Many economists have concluded that upward-sloping yield curves represent relatively high and stable economic activity levels.²⁴

None of these beliefs seem to have worked well after the recent global financial crisis. There were a number of times when the yield curve appeared inverted both in AES and EDES in the last eight years, thereby highlighting that the yield curve may not always be a good leading indicator of the level of economic activity. The yield curve–economic activity correlation is not established in the case of the AES from the quarterly observations of data in the last 10 years. Insofar as emerging economies are concerned, it is much more difficult to prove that yield curves and economic activity levels are positively correlated, especially since the number of long-term bonds would be relatively small and less frequently transacted in the financial markets of emerging economies.

Has FIT in the AES also led to inequalities? In recent years, there has been enormous interest in the growing income and wealth inequalities in the AES, well-articulated in the work of Nobel Prize winner Thomas Piketty (2014). The high unemployment rates since the outbreak of the global financial crisis and absence of fiscal stimulus owing to the fear of reaching debt unsustainability levels have created the inequalities. Besides, rich asset holders are said to have benefited at the expense of the poorer ones, who are largely dependent on interest income. The question often asked is, what would happen to the "in-betweens," such as, for example, the pensioners?

In the case of the EDES, the inequalities issue has been paramount for a long number of years, as reflected in a number of studies on poverty and the poor. Some of the EDES that have not even attained the medium-income levels have taken to inflation targeting as the framework of their monetary policy. Aggravation of inequalities in the EDES would lead to politico-social conflicts and throw up uncertainties in macroeconomic policymaking and implementation of the frameworks in existence.

In Conclusion

The issues raised in this paper need to be closely researched. More recently, the RBI and the IMF seem to have collaborated on working on a quarterly monetary model (Benes et al 2016a, 2016b). This augurs well since it would bring into open some of the agreements and concerns about the issues raised here. If the collaboration is broadened in scope and if it helps improve the theoretical basis and working of FIT, it would be most helpful for those EDES who would be contemplating the adoption of FIT as their monetary policy framework. The effort of the collaboration might also help the AES revisit the working of their FIT framework and make necessary adjustments in the conduct and implementation of monetary policy.

NOTES

- 1 Duvvuri Subbarao's remarks at the panel I of the "Governors Speak" moderated by Martin Wolf (quoted in Gokarn 2011).
- 2 The outside experts of Monetary Policy Committee are: Pami Dua, Delhi School of Economics, Delhi; Chetan Ghate, Indian Statistical Institute, New Delhi Centre; and Ravindra Dholakia, Indian Institute of Management, Ahmedabad. The insider experts, apart from Governor Urjit Patel, are Deputy Governor R Gandhi and Executive Director in charge of Monetary Policy Department, Michael D Patra. The committee was constituted in September 2016 and the first monetary policy review of the committee took place on 4 October 2016. It is now expected that Gandhi would be replaced by Viral Acharya when he takes over as deputy governor in charge of monetary policy.
- 3 Ben Bernanke, Frederic Mishkin, Lars Svensson, Adam Posen, and Mervyn King were some of the well-known economists who advocated in a steadfast manner inflation targeting as a framework of monetary policy. To this list of independent economists must be added governors and chief economists at the central banks that have adopted inflation targeting as monetary policy framework.
- 4 C Rangarajan was a staunch supporter of monetary targeting on the grounds that the demand for money in India from the 1950s to the end of the 1990s had been stable. He, however, conceded that where money demand is not stable, one may consider alternate policy frameworks.
- 5 See the Monetary and Credit Policy Statement of April 1998 by Bimal Jalan, Governor, RBI for first signs of initiation of the move away from monetary targeting to the eclectic multiple indicators approach (RBI 1998a). The announcement made a special mention of the evidence of weakening of the stability in the demand for money. The rationale underlying the announcement may be found in the report of the Third Working Group on Money Supply under the chairmanship of Y V Reddy (RBI 1998b).
- 6 Raghuram Rajan took an unprecedented step of appointing on the day of his assumption as governor, RBI, a committee under the chairmanship of then Deputy Governor Urjit Patel, to examine the applicability of inflation targeting as monetary policy framework. In his earlier report on financial reforms, Rajan supported inflation targeting (RBI 2014; Planning Commission 2008).
- 7 Rajan's explanation can be gleaned from his many speeches as RBI governor.
- 8 This arrangement has been there in India since the outbreak of the Asian economic crisis in 1998.
- 9 In 2005 at the Jackson Hole, during the conference convened by the Federal Reserve Bank of Kansas, a number of economists spoke of the impending financial stresses and strains. Raghuram Rajan, then economic counsellor at the International Monetary Fund, expressed his fears of the breakout of the financial crisis. One of the first writings on the housing finance crisis was in 2002 (Baker 2002).
- 10 Adverse selection occurs in the credit market when lenders (banks) provide funds to projects that do not give assured viability, under the hope that projects will succeed over time with some assumed or promised actions on the part of borrowers. It could also occur when banks are not fully aware of the different risks that borrowers carry and provide funds at relatively high interest rates in order to improve banks' profits or insist on collaterals, such as real estate, as a screening device to assess risks for different loans. If values of collateral collapse or if interest rates are reduced by monetary authorities for some reason, lending banks would be under financial stress. Adverse selection by banks occurs essentially because of asymmetric information. Raising of interest rates to reduce losses from bad loans is not a solution in an atmosphere of asymmetric information. Only rationing of loans would be most effective to address the problem (Stiglitz and Weiss 1981; Akerloff 1970).
- 11 The "too big to fail" argument did not work during the global financial crisis. When the sub-prime mortgage market failed, banks and investment banking firms exposed to the market faced financial losses that could not have been redressed without official intervention. On 15 September 2007, when a major investment banking firm—Lehman Brothers Holdings Incorporated, which not supported by the federal system then under the Chairmanship of Ben Bernanke—had filed for bankruptcy, the financial crisis had reached a peak level without any national borders. The federal reserve's defence was that supporting Lehman Brothers would have meant a forbearance that would be close to moral hazard. Many European economies including the United Kingdom, however, gave official support to financial institutions, small as well as big, in order to assure depositors and others that the financial system is assured to be stable. However, bailing out big banks would require large amounts of funding, and hence fostering and promoting large-sized banks would have to proceed cautiously from the point of view of financial stability (Barth et al 2012).
- 12 Deposit insurance hardly provides an assurance of the safety of deposits. For example, in India, the maximum amount of individual deposits that are insured amounts to only ₹1,00,000. This amounts hardly to \$1,540 at, say, \$1=₹65.
- 13 Ben Bernanke, when he was Federal Reserve chairman took the view that financial institutions in acute stress should not be given official bail outs because that would present a moral hazard. He allowed the failure of Lehman Brothers in 2007. He, however, enabled the banks in stress to help themselves with actions that ensure that the institutions would ultimately overcome the problems of liquidity shortage. This has led, though, to some kind of capital rationing in the sense that the documents for taking loans have become cumbersome, thereby nullifying the advantage that borrowers would have got due to low interest rates. This explains the reason why low interest rates have not given a kick-start to investment.
- 14 See studies relating to threshold rate of inflation such as Barro (1995), Khan and Senhadji (2000) and Espinoza et al (2010).
- 15 Deepak Mohanty and others, however, felt that the threshold rate for India could well have been 4.0%–5.5%, using data from Q1 1996–97 to QIII 2010–11 (Mohanty et al 2011).
- 16 Every governor of RBI till Raghuram Rajan held in this view. Financial stability has become a very vital and critical element in governors' thinking particularly from the time of the Asian economic crisis in 1997 partly also because financial development cannot proceed without having an appropriate regulatory framework in place.
- 17 Dynamic inconsistency or time inconsistency may be explained thus: a policy would be time consistent if an action proposed to be taken at time t for time $t+1$ remains optimal for implementation when $t+1$ arrives. The new information that central banks gets between period t and $t+1$ would still not make a difference to the optimal policy action that was planned to be taken at time $t+1$. In other words, the central bank's commitment to control prices has to be consistent.
- 18 One way of providing incentives is to adopt a contracting approach wherein an optimal contract would have to be set in place between the government as the principal and the central bank as the agent. The contract would be for attaining a given objective. The central bank would be faced with a penalty on an ex post basis if say the outcome is sharply different from the original planned target, unless there were factors that were beyond the control of the central bank (Walsh 1995).
- 19 The threshold rate of inflation for optimal growth would not be a static number for years on. It should be worked once every three to five years and set up for the medium-term period ahead. The threshold rate could be conveyed in terms of a tolerable and credible band.
- 20 The Urjit Patel Committee report recommendation, reached at the end of 2013, of realising 4% at the end of the medium-term period is surprisingly the same as the recommended inflation rate by the Chakravarty Committee of 1985. Sukhamoy Chakravarty chaired a committee at the request of the then Governor of RBI Manmohan Singh, and its member, who was the then Deputy Governor in charge of economic research, C Rangarajan (RBI 1985).
- 21 A few articles did appear in financial dailies and financial weeklies of India on inflation targeting in India. The contents of these articles and the questions raised here need to be more closely researched.
- 22 He argues that "the notion of real rate is not theoretically relevant for the study of micro- or macro-economic problems. It does not protect against potential losses of purchasing power and the underlying arbitrage is impossible to do at the macroeconomic level" (Tyomigne 2006: 2). He concludes by saying that "economic agents are far more concerned" with nominal matters (financial power, or liquidity and solvency) than with the real problem (purchasing power).
- 23 Forecast errors, if large, would erode the credibility of central banks. If the forecasts are made purely on expectations surveys, the credibility issue would assume a large proportion.
- 24 The yield curve could be a leading indicator of future prospects of the economy. The leading indicator should not, however, be taken as providing predictability. The fact that the yield curve had been inverted in the last eight years shows that yield curve would be more of an information variable than a leading indicator.

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