

**The Indian Fiscal-Monetary Framework: Dominance or
Coordination?**

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Abstract

The worldwide move to constrain monetary and fiscal policy using rules is creating a switch from fiscal towards monetary dominance. India also implemented flexible inflation targeting and fiscal responsibility legislation. The theoretical arguments, openness to capital flows, and historical experience with the adverse effects of fiscal dominance that led to these changes are discussed. When output is demand determined, with a relatively greater impact of monetary policy on demand, while fiscal policy affects supply-side costs and therefore inflation, as in India, monetary dominance also has adverse effects. Since each policy acts more effectively on the other's objective, co-ordination is essential to achieve optimal outcomes. Under adverse movements in revenues and high interest rates public investment is the first to be cut. Growth can fall below potential while supply-side inflation persists. The paper examines one way of achieving better outcomes. Rules alone could be interpreted too strictly. Delegation to a more conservative fiscal and less conservative monetary authority, by removing the fears of non-cooperation, makes coordination with higher payoffs for both self-enforcing. Such constrained discretion gives the required long-term perspective, yet retains flexibility.

Keywords: Monetary and fiscal rules; Monetary versus fiscal dominance; delegation; coordination

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1. Introduction

For India to become a USD ten trillion dollar economy in 2030, and possibly the third largest in the world, the real growth rate, from its 2016 level of 2.26 trillion, must be at least 7 per cent per annum. If real growth rate is 9 per cent, however, GDP will be 14 trillion. The faster rate of growth will therefore give it 4 trillion more of GDP. Poverty will also largely disappear. But can Indian real growth rate accelerate and sustain to 8 per cent and above? What is the monetary fiscal framework that can support high catch-up growth?

Earlier monetary accommodation used to facilitate large deficits. Worldwide there is a move to constrain monetary and fiscal policy using rules that is reversing the relationship between them. Volatile cross border flows demand fiscal conservatism. In more and more countries fiscal rules now restrain deficits. More independence of central banks insulates them from having to accommodate governments, while rules such as inflation targeting (IT) force them to restrain inflation. This is a valuable strengthening of institutions that brings in the consideration of long-run consequences of short-run actions. It can prevent the earlier fiscal dominance.

We examine the theoretical arguments and historical changes that motivated the switch and show how Indian reforms have also implemented it. But just as fiscal dominance created problems, monetary dominance can also lead to sub-optimal outcomes such as suppressing growth below potential and persistent supply-side inflation. One reason for this is a populous emerging economy has an economic structure where output is demand determined, with monetary policy affecting demand relatively more, while fiscal policy affects supply-side costs and therefore inflation. Rules restrain the fiscal authority's (FA) contribution to demand and to growth through deficit financed expenditure, but it is the composition of expenditure and other structural reforms that act on the supply-side that have a major impact on inflation.

The FA gives more weight to growth and the monetary authority (MA) to inflation. Thus each can act more effectively on the other's objective. Without coordination, outcomes can easily result in higher inflation and lower growth thus reducing welfare of both in a Prisoners' Dilemma type outcome.

Will an active MA, who has autonomy and the support of foreign investors, have sufficient power to force the FA to implement inflation and deficit reducing policies? But adverse movements in growth, and revenues and high interest rates may make it difficult to implement optimal changes in the composition of expenditure. Under a resource squeeze public investment is the first to be cut.

Moreover, an MA is after all an agent of the voter, and must satisfy the aspirations of society. If growth is suppressed below potential for extended periods—just when the poor have an opportunity for a better life on a higher catch-up growth path, a social reaction may force moderation in the autonomy of the MA. This may create more accountability and a better balance of power enabling co-ordination between the FA and the MA, without the dominance of either.

The structure of the paper is as follows: Section 2 explains the concepts of active or passive policies; Section 3 gives an introduction to the Indian inflation targeting and fiscal responsibility legislations; Section 4 draws out the economic structure—while its implications for optimal coordination are in Section 5; Section 6 analyzes the historical relation between monetary-fiscal policy and Section 7 discusses the type of rules required given the structure; Section 8 shows why inflation targeting and fiscal responsibility legislation are compatible with constrained discretion while Section 9 uses insights from behavioural economics to explain over-reaction leading to departures from optimality and draws out possible solutions before Section 10 concludes.

2. Active or passive policies

In the long-term government borrowings raise debt, while monetary policy affects borrowing costs. Leeper (1991) classified a policy as active or passive, based on effects on debt. A passive authority attempts to keep government debt stable by responding to debt shocks. Active monetary policy targets inflation whereas passive monetary policy adjusts interest rates in a way to bring debt within sustainable limits. Active fiscal policy spends ignoring debt levels, whereas passive fiscal policy adjusts taxes and expenditure to keep debt within sustainable limits. Unique equilibrium requires one policy to be active and the other to be passive. Determinate prices require one of the policies to be active and budget solvency condition requires one of the policies to be passive.

Since both monetary and fiscal policies were government policies, historically one used to support the other. Fiscal policy being synonymous with government tended to be dominant, and to overuse the support provided by monetary policy. The government could force the central bank (CB) to expand money supply to help finance a deficit, with inflation reducing the real value of debt. Under passive monetary policy and active fiscal policy, enough inflation taxes are generated to balance the budget, leading to a unique equilibrium.

A dramatic change occurred as monetary policy was accorded greater autonomy. Under a switch to active monetary and passive fiscal policy, monetary policy anchors inflation and fiscal policy ensures budget solvency. Monetary policy rules became quite prevalent in the 1970s, as economies became more open, and higher oil-shocks induced persistent inflation. While both policies increase demand, in a more open economy some fiscal stimulus leaks abroad, and appreciates the real exchange rate, thus reducing export demand. A monetary demand stimulus becomes more effective, as lower interest rates reduce debt inflows and depreciate the exchange rate. Moreover, the interest elasticity of demand rises in liberalized markets.

The dominant monetary rule currently is inflation targeting—interest rates are used to control inflation and guide inflationary expectations. Moreover, freer cross border flows, which favour low FDs and stable macros, began to impose some restraint on governments. As a result the 1990s saw a growing adoption of fiscal rules.

Woodford (2003) also shows if fiscal policy is locally Ricardian, or taxes are responsive to debt, equilibrium is determinate if and only if the response of monetary policy to inflation exceeds unity, (pp. 314). If fiscal policy is locally non-Ricardian, monetary policy will have to violate the Taylor Principle and moderate its response to inflation in order to prevent government debt from exploding. So unsustainable borrowing requires monetary accommodation. As Sargent and Wallace (1981) showed if monetary accommodation is not there under fiscal dominance it can result in higher inflation, which is required to induce the public to hold a larger debt.

Therefore, if either fiscal or monetary policy is active the other must passively accommodate it in order to prevent instability. If large deficits are not monetized, rising interest payments

and debt may force monetary accommodation down the road. If both are active there can be instability with rising debt, deficits and inflation.

Under passive monetary and fiscal policy, since both act to satisfy the budget solvency condition equilibria are indeterminate being feasible at various levels of money supply and price levels. There is the possibility of coordinating to a better path.

A flexible inflation forecast targeting (FIT) agreement and a Fiscal Responsibility and Budget Management (FRBM) Act are implementing a switch to passive fiscal and active monetary policy in India.

3. Flexible Inflation Targeting and Fiscal Responsibility and Budget Management Act

FIT is a natural progression that converts the omnibus variable list used in the multiple indicator approach, to action based on the determinants of inflation, even while retaining vital flexibilities coming from considering a range of information. The correctly chosen operating target was headline consumer price index (CPI) inflation, since that was the one most relevant for household inflation expectations. The aim was to bring inflation down gradually to 6 per cent by January 2016 and within a range of 4-6 per cent by January 2018. FIT was implicitly adopted in 2014, although the formal agreement was signed with the government in 2015, and the Monetary Policy Committee (MPC) set up in 2016. The Reserve Bank of India (RBI) will be said to have failed to meet its target after a deviation of more than 3 quarters in either direction. It is required to publish an inflation report every six months giving its inflation forecast for a period of 6 to 18 months ahead, on the basis of which it will calibrate its policies (See <http://www.finmin.nic.in/reports/MPFAGreement28022015.pdf>).

There are arguments for using headline inflation as the target in EMs since commodity especially food price inflation, affects household expectations and therefore wages, leading to second round effects. But if headline inflation is used, it is all the more important to target this flexibly over the medium not the short-run, and tighten only if there are second round effects.

A FRBM Act was enacted by Parliament in 2003. The Rules accompanying the FRBM Act required the Centre to reduce the fiscal deficit (FD) to 3 per cent of GDP and, eliminate the revenue deficit by March 31, 2008. The budget was to each year place before Parliament the

Medium Term Fiscal Policy, Fiscal Policy Strategy and Macroeconomic Framework statements. Monetization of the deficit was forbidden, but there were no restrictions on open market operations (OMOs), that is, open market purchases and sales for government securities (G-secs) by the RBI. OMOs affect the money supply and the holding of government debt.

Any deviation from the FRBM Act required the permission of Parliament. If the targets were not met, a pro-rata cut on all expenditures was to be imposed without any protection of capital expenditure. There was also a ceiling on guarantees. But limits were allowed to be exceeded during "national security or national calamity or such other exceptional grounds as the Central Government may specify". This implied the Government could legislate itself out of its commitments—as it did after the Global Financial Crisis (GFC) when as part of the global coordinated demand push, it deviated from the mandated consolidation path. There was a four per cent rise in the FD ratio. It then requested the 13th Finance Commission to set out a new fiscal consolidation path. The new Government that took office in 2014 committed to reducing deficits. A Committee set up to reframe the FRBM towards a debt reduction path submitted its report in 2016.

A country's economic structure also influences policy effectiveness.

4. Economic structure

An economy in transition, on a catch-up path, can have higher growth for a large number of years. Only in a mature economy can steady-state growth be regarded as separately given by population and productivity growth. During effective labour transition, structural unemployment becomes cyclical, implying wages need not go up as employment rises. The slope of the aggregate supply curve (AS) would then be low. But inefficiencies and hidden transaction costs continue to push it up. Apart from commodity and nominal exchange rate shocks, and wage-price expectations, these factors include the complex of poor governance, infrastructure and public services that raise indirect costs. This is the sense in which the Indian economy is supply constrained, and differs from the standard vertical supply curve used to indicate supply bottlenecks. Such a structure implies output is demand-determined while cost-shocks and the supply-side accounts for a major part of inflation.

There is much evidence in support of such a structure. During episodes of tightening such as 2008, 2011 and 2013 inflation remained high and sticky despite sharply higher policy rates, while growth fell in the quarter immediately following peak rates (Goyal, 2017). Since rates remained high after 2011 a slowdown was sustained. Core inflation was below headline inflation over 2007-2015, implying excess demand was not the major inflation driver.

The RBI's own studies find a greater impact of monetary policy on output compared to inflation. For example, Khundrakpam and Jain (2012) show monetary policy impacts output with a lag of 2-3 quarters and inflation with a lag of 3-4 quarters, but effect of the interest rate on GDP is 2-3 times greater than its effect on inflation. Structural Vector Autoregression based time series causality tests, generalized method of moments (GMM) regressions of aggregate demand (AD) and AS, and calibrations in a dynamic stochastic general equilibrium (DSGE) model for such an economy, surveyed in Goyal (2017), all support an elastic supply but dominance of supply shocks¹.

Reducing AD to control inflation, then results in a large output sacrifice with little impact on inflation. Goyal and Arora (2016) estimate the post-reform value of the interest elasticity of demand to be -0.21. Monetary policy transmission would be more effective through the expectation or cost push channels rather than through the AD transmission channel.

For an EM on a high catch-up growth path, growth is likely to exceed real interest rates and this is a very effective way to reduce debt ratios. The new FRBM committee, however, assumes the real interest rate (r) to be greater than the growth rate (g) and so has asked for sharp demand reducing reductions in deficits to achieve East Asian levels of debt ratios. But such a relationship between the real interest rate and the growth rate is likely to hold only in mature economies². The focus on the steady-state overlooks India's past and the next 15 years of high growth potential. Catch-up high growth is required to create more productive employment and reduce poverty.

¹ Goyal and Arora (2016) estimate the slope as 0.13. Goyal and Kumar (2017) get a value of 0.1 for the elasticity of inflation to changes in marginal cost. Goyal and Tripathi (2015) show on estimating supply shocks correctly the AS slope falls from 0.2 to 0.03.

² For example, even over 2013-14 Q1 to 2017-18Q1, which was a period when growth rates were falling and real interest rates rising, $g-r$ still averaged a high 4.7 per cent (calculated with data available at www.rbi.org.in).

An active-passive policy combination may not be optimal for an economy undergoing a growth transition. The $r-g$ gap is most favourable under optimal coordination, which can bring about higher growth, lower inflation and interest rates. Policies have many types of interacting effects. Growth and inflation can take different values on an EM transitional catch-up path. Better outcomes are possible if policy is consistent with economic structure. Even in AEs multiple outcomes are possible. Davig and Leeper (2011) show, with more forward-looking behavior, Government spending triggers both inter- and intra-temporal substitution effects and a wealth effect, since expected future policies affect outcomes. Under active monetary policy and passive fiscal policy higher future taxes reduce wealth and crowd out private consumption, as does the rise in the real interest rate.

5. Optimal coordination

In such an economic structure, while the FA's objective is to raise short-run growth, it is more effective in reducing inflation. The MA's objective is low inflation, but its policies have a greater effect on demand-led growth.

Optimal monetary-fiscal coordination therefore requires both to work together to shift the AS downwards. It is necessary to identify and act on factors that can achieve this. Continual supply-side reforms are required in governance, land and labour markets. Increasing agricultural productivity is especially important. Fiscal policy should pay particular attention to the composition of government expenditure, shifting away from distorting subsidies towards improving infrastructure and other public services. Spending on non-tradables such as infrastructure is especially useful since there is less leakage of demand abroad. Such spending is also required when world export demand growth is slow. Moreover, public expenditure that creates public assets has a higher and more persistent growth multiplier compared to the public consumption expenditure multiplier (Goyal and Sharma, 2018); it also tends to reduce the current account deficit over time (Goyal and Kumar, 2018). This happens because, apart from maintaining demand, it shifts down the AS curve. Technological improvements also raise potential output and lower inflation.

While monetary tightening does reduce inflationary expectations, reducing food price inflation through a combination of agricultural reform, and a favourable nominal exchange rate, can more effectively anchor expectations at less cost in terms of output and employment foregone, even as inflation targeting anchors the wage-price expectations that shift up the

AS. If there is evidence of productivity rise and fiscal supply-side action, monetary policy should be accommodative. Whatever little space there is during overall macroeconomic stabilization must be used. Without that, we have consequences such as a 2 per cent lower growth over the years 2011-2017 compared to the earlier years 2003-2011 that cost the economy Rs. 20 trillion in output.

India's historical experience with monetary fiscal policy shows both the switch and an inability to arrive at optimal coordination.

6. Indian policy history

Pre independence discussion preceding the setting up of the RBI emphasized the importance of keeping it free of political influence. There was a debate, but even those on opposite sides agreed on the necessity of at least instrument independence. The pre-independence RBI Act obligated the RBI to carry out the responsibilities laid on it by Statute. It was nationalized at independence, but under the constitution and the division of responsibilities, if the RBI said no to the finance minister, the government would have to go to Parliament, which could assert some discipline on the government.

But the early view of planning as a national goal established precedents and procedures that vitiated the autonomy of the RBI. The initial jockeying between the RBI and the Ministry of Finance made it clear the RBI was to be regarded as a department of the government. Monetary policy was another instrument to achieve national goals. The RBI lost even instrument independence.

Managing short-term monetary policy to support a given Plan effort created precedents that reduced the overall effectiveness of the Bank's monetary policy. An example was the RBI's agreement to the Government's January 1955 proposal to create ad hoc treasury bills to maintain the Government's cash balances at INR 50 crores or above, thus making soft credit available to the government in unlimited quantities. With the aid of this facility, the issue of ad hocs rose during the second plan. The Government also reduced safeguards restricting currency expansion.

That the government wanted lower interest rates given its large borrowings made it difficult for the RBI to raise rates. As manager of the government debt it generally sought to support

the government borrowing program. As early as 1951, banks were exempted from showing capital losses from their holdings of G-secs on their balance sheets.

Inflation, however, is politically unpopular in a low per capita economy without full wage indexation. Indian policy makers have also normally been conservative in the sense of being anti-inflation. Since the RBI had to support the Government it acquired tools to reduce credit to the private sector. Worried about the effect of steady monetization of deficits on the money supply, the Bank fought for and got additional powers in 1956, by expanding section 42 of the RBI Act, to give it control over banks' cash reserves. A 1962 modification gave it the power to vary the Cash Reserve Ratio (CRR) between 3 and 15 percent of scheduled banks' demand and time liabilities. The liquidity provisions of the Banking Companies Act were also changed and termed the Statutory Liquidity Ratio (SLR). It was now possible to use these to divert bank resources for government financing, while restraining growth of money supply.

The economy had always been vulnerable to the monsoon. In the early seventies oil shocks were a new kind of supply shock. Since high inflation was politically sensitive the new instruments enabled a squeeze on money and credit in response, which intensified the demand recession that followed oil shocks. This discouraged growth and productivity increases that could have lowered inflation from the cost side.

Since post the seventies oil-shocks user charges were not raised for many public services, revenue deficits rose even as the quality of services fell, raising costs through the economy. There was large public borrowing for consumption. Government's ability to fund much-needed infrastructure was seriously compromised. Thus political business cycles in India largely took the form not of increased money creation, but of a cut in long-term development expenditures, and in interventions that distorted allocative efficiency. The future was sacrificed to satisfy populism in the present. Indirect and hidden costs rose. For example, under administered pricing for oil, prices did not rise as much as international, but did not fall either. So the average rise was actually higher.

Stagnation in the economy, rising government indebtedness, and scarcity of foreign exchange precipitated a balance of payment crisis in the early nineties. More openness was regarded as a solution. This was in line with current dominant global ideas. But more openness required

more credible institutions. Credibility is necessary in a more open economy subject to freer capital flows. India's inflation rate although low by developing country standards was higher than the world rate. This had to be reduced further to reassure mobile global capital.

Moreover, the fiscal-monetary combination followed in the past had raised public debt. Poor fiscal finances had precipitated many outflows and currency crises in EMs.

Therefore liberalizing reforms in the nineties strengthened the autonomy of the RBI compared to the Government. Ad hoc treasury bills and automatic monetization of the deficits was stopped in the 90s. The Ways and Means Advance (WMA) system was started in 1997. Primary issues of G-secs no longer devolved on the RBI. From April 1, 2006, it no longer participated in the primary auction of G-secs. The repressed financial regime was dismantled, more and more interest rates became market determined, and the government began to borrow at market rates.

The informal nominal money supply targeting the RBI had been following proved inadequate under these changes as money demand became unstable. It moved towards using the interest rate as an instrument, basing its actions on a number of monetary conditions indicators.

The reform of the early nineties disturbed the unstable balance between democratic accountability and credibility of the monetary regime. To use our earlier terminology, the initial combination in the 1990s post-reform India, as the RBI gained greater independence, was for both to be active, which harmed growth, as overall monetary tightening sought to compensate for fiscal giveaways, and also raised deficits, debt, and interest rates over time. Sharp rise in policy and other liberalized interest rates periodically lowered growth after the reforms, for example in 1996. When Indian interest rates did fall after 2000, despite high government deficits, and aggressive sterilization, because international interest rates fell, growth was stimulated. But after the GFC, fiscal stimulus expanded deficits and rising fuel prices contributed to widening current account deficits. In 2011, when policy rates peaked, industrial demand and output fell sharply, while populist transfers financed by the high FD maintained demand for food where there were supply and marketing bottlenecks. Thus government spending maintained inflation, while monetary-tightening reduced industrial growth.

As the RBI gained independence from the Government it began asking for a reduction in FDs. Pressures to reduce the FD also came from international rating agencies, since a downgrade can trigger outflows. This possibility forced a fiscal contraction from 2011. In 2014 the new government committed to reducing FDs, and FIT was adopted. The focus now was on structural reform. Macroeconomic vulnerabilities reduced. But perhaps there was an over-reaction to the excess macro stimulus and overheating after the GFC. If the focus is only on the long-run and structural reforms, there can be irreversible short-run cost.

7. The implications of structure for rules

The economic structure implies each policy authority is more effective in achieving the others objective. This can lead to the well-known Prisoners' Dilemma type non-cooperative strategic interaction in which both players follow their own interest, but it leads to an outcome in which each is worse off. Thus looking out only for oneself is worse not only for society as a whole, but also for oneself. This is the opposite of the standard economic market model where each agent in maximizing own interests maximizes social welfare.

The original game had two prisoners each of whom had to decide whether to confess or not—if anyone confessed he would go free while the other got a stiff prison sentence. But, in the play of the game, each would confess since he would expect the other to confess, and so both would get the stiff punishment compared to a short incarceration if no one confessed. The outcome thus has both confessing and both being worse off.

The MA may well believe the FA has many other things to do and therefore would not give priority to reducing inflation. Therefore the MA should keep interest higher. But as expected growth and revenues fall and costs of servicing debt rise, the FA in turn cuts back on the kind of expenditure that could reduce inflation.

To make the argument more formal: The interaction between the FA and MA is strategic since each optimizes its objective function taking account of the other's action. Strategies available to each are C (cooperate) and NC (do not cooperate). The FA gives more weight to growth and the MA to reducing inflation. C for the FA means improving the supply-side and reducing inflation, and for the MA it means maintaining demand to allow output to grow at potential while restraining the cost of government borrowing. Reducing demand by raising interest rates reduces inflation, but marginally. The passive-active strategies are each NC. An

active FA that can get any deficit financed may neglect improving the composition of expenditure.

Whoever plays NC when the other plays C gets a relatively higher immediate payoff. This is the crux of the Prisoner's Dilemma game and the reason why the equilibrium would be Nash (NC, NC) where both (and the economy) are worse off. Growth is lower and inflation higher than the optimal. The Nash equilibrium will shift up the AS, and shift AD to the left.

A major question the new political economy is focused on is the gap between ex-ante and ex-post incentives arising because complete contracts cannot be written to cover all eventualities. Promised actions are not credible. For example, the government will be tempted to go back on its words. Many social institutions and rules can be understood as closing the gap between ex-ante and ex-post incentives and thus restoring credibility. One reason such rules can be welfare enhancing is because they shift the outcome from the Nash equilibrium with lower welfare to the optimal equilibrium. In that sense they release a surplus that makes them achievable. As we have seen, rational self-interested behavior can lead to the Nash equilibrium.

Rules do, however, impose a cost. They reduce flexibility, which can be required in some circumstances. For example, it may be necessary to relax a budget balance rule in a time of war. Thus there is a trade-off between credibility and flexibility. We find debt-based rules that implemented the passive-active switch need not reach the optimal equilibrium in Indian conditions.

Modified rules can, however, be self-enforcing if they use a variety of mechanisms including democratic accountability to close incentive gaps, and yet retain flexibility even while shifting attention to the long-term.

For example, Goyal (2007) shows under delegation to a more pro-growth MA and less populist FA, the unique credible equilibrium becomes C, C with higher payoffs for both. The delegation credibly changes the Prisoner's Dilemma game to a co-ordination game. Since the pay-offs each get from NC are now relatively lower, both are better off at C, and C,C becomes self-enforcing. The equilibrium is shown to be subgame perfect in the extensive game.

In the literature, rules are a substitute commitment device to delegation. But the Indian experience suggests a simple rule would alone not be effective. It could be interpreted too strictly or it could be avoided as the FRBM was after the GFC. Rules should only constrain discretion, while the latter is correctly used.

8. Constrained discretion needed

The rhetoric of inflation targeting has disguised its reality; it is not really a rule, but allows considerable flexibility. It is actually constrained discretion, since it determines the behavior of the interest rate as a predictable function of a few economic variables and is rule-like only in enforcing forward-looking behavior. All the variables that affect inflation influence the decision. Since it is a transparent rule, private sector expectations help in its implementation. Since it is forward-looking, it prevents the MA from taking actions with undesirable long-term consequences. Transparent discussion educates the public about these long-term effects and, therefore, has political benefits. It forces both the MA and the public to understand the long-term consequences of choices made and, therefore, to forego short-term opportunism and populism. But there is discretion to deal with unforeseen circumstances. It is not necessary to impose politically unacceptable short-term costs. Especially as the inflation target refers to a medium to long-term range, it gives considerable opportunity for short-run output stimulus. If the floor is taken as seriously as the upper target, it implies stimulus must be given in order to raise inflation, if demand falls. Since a positive inflation rate is targeted for, rather than a price level, real wages can adjust even if nominal wages are rigid.

The GFC exposed the inadequate attention paid to incentives and escape clauses in formulating the FRBM Act, which brought down only reported deficits. Loopholes were found to maintain the letter of the law even while violating its spirit. Targets were mechanically achieved, compressing essential expenditure on infrastructure, health and education, while maintaining populist vote-catching subsidies. The Act requires to be reframed to improve incentives for compliance. Expenditure caps that bite especially on transfers, while protecting productive expenditure, will create better incentives. They will also moderate the temptation to raise expenditure when actual or potential revenues rise. These are an example of automatic non-discretionary stabilizers. With phased caps on spending rather than on the deficit, the latter could increase in case of economic slowdown when revenues fall, thus allowing automatic counter-cyclical macro-stabilization, and

increasing the political feasibility of the scheme. The deficit should vary over the cycle, that is, it should be cyclically adjusted.

In the Indian context, especially urgent are detailed expenditure targets for individual ministries, and levels of government, as part of improved accounting, including shifts from cash to accrual based accounts. These should change the composition of government expenditure towards productive expenditure that improves human, social, and physical capital, and therefore the supply response.

Rules should use the strengths of a democracy and mitigate its weakness. For example, FIT can be less strict and the CB less conservative because of inflation aversion with low income voters, while an FRBM must ensure infrastructure spending and the FA be more conservative to counter pressures for populist spending in a democracy. This differs from the West where under full inflation indexation, the macro authorities may have an inflation bias as they attempt to raise employment.

There are also other ways to increase democratic accountability of the MA, and create a better balance of power between the FA and the MA, so that inflation is kept low from the supply-side, while growth is allowed to reach potential (Goyal, 2018).

9. Behavioural economics: Over-reaction and backlash

The shift to ultra conservative macroeconomic policies may partly be an over-reaction to excess macro stimulus and the overheating it created after the global coordinated response to the GFC. But rules that contribute to enforce ultra-conservation are unlikely to be accepted. If the CB backed by foreign investors becomes too conservative, there is likely to be a backlash. The MA is ultimately an agent of the voter. More accountability may be imposed and autonomy reduced. Adverse movements in growth and revenues may hurt electoral prospects for an ultra- conservative FA.

People have a strong sense of fairness—they tend to play fair with those who play fair, but unequal power can reduce fairness. The experimental Ultimatum and Dictator games illustrate this. In the first, one player makes a fair offer to the other because the other can reject the offer and if the offer is rejected then both lose. In the Dictator game, when the other's power to reject the offer is withdrawn, the offer made is considerably less fair.

The Ultimatum game is played with two players. The first proposes to divide ten units of currency between the two. The second player can accept or reject the offer. If the second player accepts they both get what was proposed, otherwise both get zero. Economic rationality implies that the first player should keep nine units and offer one unit to the second player, reasoning that the second player would accept one since it is better than zero. But, in experiments, the first player normally offers about three units and the second player rejects the offer if it is two or less. In early experiments it was thought that this behavior is due to a sense of fairness or justice. But then a variation of the game, called the Dictator Game was tried, with no choice—now the second player could not reject the offer whatever it was. In the Dictator Game the first player offers less than three units, implying that it was the second player's exit option that caused the relative generosity of the first player in the Ultimatum Game, not a sense of fairness. This suggests a better power balance can improve outcomes.

A system perceived to be unfair can lead to extreme outcomes, such as the election of populist leaders like Trump. It is better to moderate it before that happens.

10. Conclusion

Inflation aversion in a low income economy means flexible inflation targeting can deliver low inflation. Implemented by a pro-growth central banker it would elicit the cooperation from a conservative finance ministry required to reduce inflation and raise growth. In a democratic policy, social preferences force the CB to keep inflation low, so a weak constraint – such as flexible inflation targeting supported by supply-side action – would be credible. This could stabilize inflation expectations, lowering the cost of dis-inflation.

Debt based active-passive fiscal-monetary policy may not be appropriate in an EM undergoing a non-steady-state growth transition. The structure of the economy can be such that fiscal actions have a greater effect on the supply-side, while monetary actions affect demand more. Therefore, co-ordination becomes essential to achieve optimal outcomes.

Representation of diverse interests is the strength of democracy but conflict of interests makes it slow moving. In a developing democracy the poor are the largest vote block, but they discount the future heavily, and future generations are not present to voice their interests. Strategic interaction between fiscal and monetary authorities and economic agents, can lead

to the creation of more populism that makes the economy high cost and reduces growth below socially optimal level. But imposition of too strict rules can also reduce growth below potential and delay the elimination of poverty.

Rules that could implement optimal macroeconomic policy coordination for such a democracy, must be of the nature of constrained discretion--force a long-term perspective, yet retain flexibility. They must use the strengths of a democracy, mitigate its weaknesses, be compatible with its structure and history, and close incentive gaps. Balance, flexibility, understanding of context and constrained discretion are all required

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