Ecowrap

COORDINATED MONETARY AND FISCAL INEQUILIBRIUM- THE MOST EFFECTIVE APPROACH TO THE CURRENT PANDEMIC

Issue No. 44, FY21
Date: 07 September 2020

A history of monetary and fiscal policy coordination in the Indian context for the 30 year period ended FY2020 reveals statistically insignificant negative correlation between the two, implying least coordinated policies, even as RBI had successfully staved off automatic monetization and even the private placement of fresh issues with RBI, with the enactment of FRBM in 2003. Against this background, with the economy ravaged by pandemic, and the Government still very much wary of a fiscal splurge, we use the absence of such monetary and fiscal policy coordination in India by adopting Alan Blinder, 1982 paper to argue why a coordination is now absolutely important between RBI and Ministry of Finance. Through the use of Game Theory in Economics we assume that both the Government and RBI have 2 options between them, either a contraction or an expansion. Subsequently, we construct the payoff matrix , where the payoffs are hypothesized as benefits accruing to the Government and RBI separately when they are deciding on either of the policy options: contraction and expansion. Specifically, the fiscal authority is assumed to favor expansionary policy and gets maximum payoff from such and the monetary authority wants to contract the economy to fight inflation, and hence the maximum payoff comes from such.

However, as between the outcomes which combine expansion and contraction, (4 in all) in the current Indian context, it is reasonable to assume that Government prefers a tight fiscal policy at least on paper for obvious reasons and expects RBI to always provide the necessary liquidity support through an expansionary monetary policy. This implies that the payoff matrix of fiscal contraction and monetary expansion should be the preferred strategy even in the absence of any coordination. In reality, we however find that the Nash equilibrium outcome whereby neither the Government nor the RBI could benefit by deviating unilaterally, is a policy of fiscal expansion and monetary contraction and not that of fiscal contraction and monetary expansion as the Government may have ideally wanted. This clearly shows that the current Government position of not using an activist fiscal policy needs a clear revisit, as prima facie it is not compatible with economic thinking.

However, there is a twist in the tale as the choice of this fiscal expansion and monetary contraction payoff outcome in the current pandemic is not based on rationality. The current pandemic reminds us of the "*Knigtian Uncertainty*", when the economic outlook is so uncertain that it is incalculable. The only way we could thus solve this problem is by invoking Herbert Simon's explanation of "*Procedural Rationality*". In simple terms this implies behavioural changes of individuals in terms of risk taking changes significantly in times of uncertainty. For example, in the Indian context currently, there is a now massive jump in health insurance in current fiscal, indicating behavioural changes in terms of risk taking. Even, people are now preferring small medium size compact cars to avoid public transport!

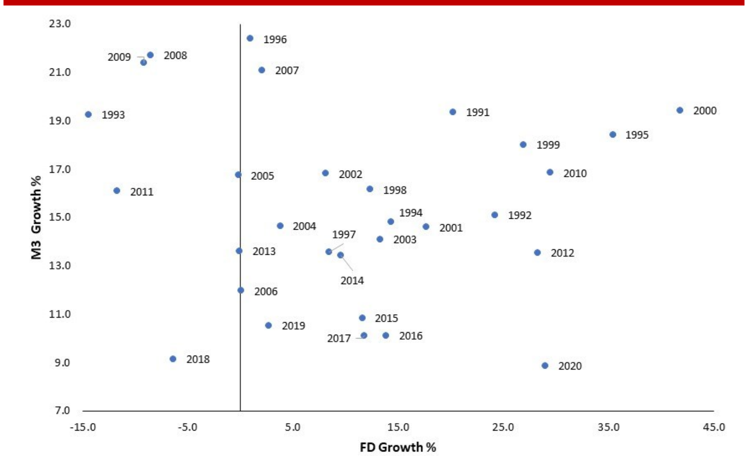
We extend this behavioural change of individuals to companies (many companies were born during crisis) and logically to Government by underlying that **the Government must complement RBI in terms of a coordinated inequilibrium strategy by adopting simultaneously an expansionary monetary and fiscal policy. For such coordinated inequiibrium, an essential prerequisite in the current circumstances is effective communication by both the RBI and Government and both must be speaking in unison and not in isolation, which can create cacophony.**

The RBI has been largely successful in communicating to the market about its intentions and seems to have managed the art of managing expectations much better. In fact, RBI Governor has politely conveyed the message of steadfast resolve of monetary policy support through crisp one liners, the effectiveness of what was discussed in Jackson Hole meeting in Aug'20! The underlying message was central banks should be constructively imprecise, rather than being detailed! **We now expect Government to manage expectations with a coordinated communication and leave matters of financing the fiscal deficit through specific measures like monetisation to RBI**.

ABSENCE OF MONETARY AND FISCAL POLICY COORDINATION

- In recent times, there has been a lot of debate regarding the coordination of monetary and fiscal policy, as evident in the recently released book by Dr. Viral Acharya, former DG of RBI. The friction in coordination between monetary and fiscal authorities has been a thorny issue globally in recent years particularly after the global financial crisis.
- The problem with central banking post 2008 crisis is that persistently low interest rates with easy monetary policy have pushed up asset prices, enriching the rich and pushed down return on savings, possibly hurting pensioners and households who are not rich but rely on interest income on bank savings. This has meant that political considerations have inadvertently played a role in central banking. Interestingly, detractors of central bank's autonomy often argue that an independent central bank lacks democratic legitimacy. Curiously, such detractors derive strength from Nobel laureate Milton Friedman's statement that money is too important an issue to be left to the whims of central bankers.
- Coming back to monetary and fiscal policy coordination, figure 1 offers a rough impression of the history of monetary-fiscal coordination in Indian context. It plots the change in the consolidated fiscal deficit (as a crude indicator of the thrust of fiscal policy) on the horizontal axis and the change in the growth rate of M3 (as a crude indicator of monetary policy) on the vertical axis for the 30 year period ended FY2020.
- The scatter of points does not leave a figment of imagination of a strong negative correlation between the two as might be expected from well-coordinated policies, even as RBI successfully staved of automatic monetization and even the private placement of fresh issues with RBI with the enactment of FRBM in 2003. In fact, the correlation matrix between the 2 by using Pearson, Spearman and Kendall shows that the negative correlation is statistically insignificant across all correlation measures. As former Governor Dr. Y.V. Reddy pointed out recently, "*once private placement was banned, managing the smooth completion of the borrowing programme had to be facilitated through liquidity operations consistent with monetary policy compulsions*".

Historical Growth in Money Supply and Fiscal Deficit (%)



Source: SBI Research

- Interestingly, it is years post inflation targeting , where money supply did not expand in double digits even as fiscal deficit expanded, and more so the off-balance sheet borrowing, that is not reported in the data in the accompanying graph.
- To be objective to regulators, the coordination between monetary and fiscal policy is largely hamstrung by the mismatch of policy targets and independent instruments. The likelihood that we might have surplus instruments at our disposal to achieve our policy targets is significantly diminished by several other considerations. One is that there may be many more targets than the traditional ones, output, price levels etc.

- One clear example of an additional target in the Indian context was the large NPA overhang prior to 2015 when the RBI initiated AQR exercise. In a similar vein, the use of tax instruments by the Government in India is constrained by important distributional and allocative objectives. It may be noted that Central Government has committed expenditure welfare programmes and hence it makes it difficult to forego revenue through tax concessions, though the Government had announced large corporate tax concessions in a bid to ramp up investment in FY20 and FY21. However, as a policy measure it is debatable how the tight monetary policy also coincided with the intent of cleaning up the banking system in 2015 with recognition only happening in 2016 and recapitalization only in late 2017 and when the economy was already moving into a deceleration mode.
- In fact, too many fundamental reforms were taken up within a short period of time with tough legal implications which rendered the economic environment uncertain for business and entrepreneurship. With more and more financial institutions coming under the scanner for financial misconduct and judgmental errors in extending credit, banks became extremely risk-averse in exploring lending opportunities, being caught in a pincer movement of intense regulatory monitoring and mounting non-performing assets. The resulting asphyxiation of credit choked off the growth potential of the economy snowballing into a major slowdown of economic activity much before the COVID-induced lockdown. **Nevertheless, a discussion of same is however not the intention of this paper.**

FINDING A NASH EQUILIBRIUM BETWEEN MONETARY AND FISCAL AUTHORITIES

- Even as the economy is ravaged by pandemic, and the Government is wary of a fiscal splurge, we use the absence of monetary and fiscal policy coordination in India by adopting Alan Blinder, 1982 paper to argue why a coordination is absolutely important and how an optimal monetary and fiscal policy response can be derived in the current context between RBI and Ministry of Finance through the use of Game Theory in Economics whereby we assume that both the Government and RBI have 2 options between them, either a contraction or an expansion. We thus effectively have 4 policy options, and each of the options will have a particular payoff. Our endeavor is to find out which policy options can result in a Nash Equilibrium. Interestingly, in technical terms it is a non cooperative repeated game
    - A fiscal policy expansion and monetary policy contraction
    - A fiscal policy expansion and monetary policy expansion
    - A fiscal policy contraction and a monetary policy contraction
    - A fiscal policy contraction and a monetary policy expansion
- The Nash equilibrium concept in game theory is defined as follows. Each player / agent (Government and RBI) does what he would if he knew what the other player was going to do. It is an equilibrium in the sense that the two resulting strategies are consistent with one another; once the game is played, neither player has any desire to change his decision. In other words, Nash equilibrium is when neither the Government nor the RBI can increase his payoff by unilaterally changing its action. Furthermore, this is a repeated and non-cooperative game; as each policymaker has been here endless times, without any possible coordination and will be again in future. It seems natural that each would assume that the other will make the optimal response to whatever strategy he plays. If so, each will probably play his Nash strategy.
- Against this background, we construct the payoff matrix (see accompanying table). The payoffs are hypothesized as benefits accruing to the Government and RBI separately when they are deciding on either of the policy option: contraction or expansion. Specifically, the fiscal authority is assumed to favor expansionary policy and gets maximum payoff of 4 and 3 / the first number from each box denotes the payoff to Government (see payoff matrix / lower 2 boxes). Separately, the monetary authority wants to contract the economy to fight inflation, and hence the maximum payoff / the second number from each box denotes the payoff to RBI second (and it comes from left lower box and the upper left box.) **However, as between the two outcomes which combine expansion and contraction, in the current Indian context, it is reasonable to assume that Government prefers a tight fiscal policy at least on paper for obvious reasons and expects RBI to provide the necessary liquidity support through an expansionary monetary policy. This implies that the pay-off matrix 2,2 would be the best optimal solution.**
- Now the question is this 2,2 payoff matrix is also the Nash Equilibrium, in the sense both the Government and RBI stick to it and don't gain by unilaterally deviating from such? The answer is a clear no as 3,3 will benefit both. This is because if the RBI plays a "expansion," the Government will also play "expansion," as payoff 4 is more than 2 and hence 2,2 will not be a stable equilibrium. So the RBI will then play "contraction." Knowing this, the Government best strategy is "expansion," so the outcome will be always the lower left hand box, having payoff 3,3, the payoffs of which are better than 2,2. **Clearly, this is the only Nash equilibrium for this game**. It also seems to be the most plausible outcome of uncoordinated but intelligent behavior.
- **Thus this outcome is a clear departure from the Government current position of playing its safe with a contractionary fiscal policy and repeatedly resisting overtures of an aggressive fiscal support in the current pandemic. It indicates, the society will be a loser and ultimately, the Government will have to end up adopting an expansionary fiscal policy, instead of a contractionary one with an uncoordinated policy response.**
- **However, there is a twist in the tale**. The choice of this 3,3 payoff outcome in the current pandemic (that defies all economic principles) must find a different solution that is neither Nash, nor Optimal, but purely a rational one.
- The current pandemic reminds us of the "*Knigtian Uncertainty*", based on economist Knight in his 1921 book. "True Uncertainty," as Knight called it, cannot be measured. To extend this into the current context, who knew that India's economic outlook in couple of months from March will involve so many unknown factors that it will become incalculable?
- All hope is not lost yet, even as we face Knightian Uncertainty. The only way we could solve this problem is by invoking Herbert Simon's explanation of "*procedural rationality*" in 1957. According to this hypothesis, decision makers / policy makers instead of trying to maximize values in a given uncertain environment, aim at ***satisficing***: they search for alternatives that are good enough according to some pre established criteria.
- A brilliant exposition of such " *Procedural Rationality*" is given in a recent paper in Economic and Political Weekly, June 2020 (*Sarangi etc. all*). The authors provides exposition to show that how the current pandemic is resulting in behavioural changes of individuals in terms of risk taking. For instance, as the authors show, adults who were exposed to World War II as children show greater risk aversion, are less likely to invest in stocks and more likely to have life insurance (Bellucci et al 2019).
- In the Indian context too, there is a now massive jump in health insurance in current fiscal, indicating behavioural changes in terms of risk taking. Even, people are now preferring small or medium size compact cars to avoid public transport!
- Interestingly, many of the current companies were also born during the last financial crisis, as Economist magazine had pointed out a couple of months back. This included Airbnb that received funding barely a day after the global financial crisis. Like Airbnb, some of the best-known names in business started during steep slumps, including Uber (2009), Microsoft (1975), Disney (1923), General Motors (1908) and General Electric (1890). Disruptive products have emerged in times of crisis, notably Apple's iPod as the dotcom bubble burst in 2000 and Alibaba's Taobao, an online-shopping mall, during China's SARS epidemic of 2003.

Payoff Matrix

		Monetary Policy: Contraction	Monetary Policy: Expansion
Fiscal Policy	Contraction	1 4	2 2
	Expansion	3 3	4 1

Source: Alan Blinder (1982), SBI Research

- **Echoing such "Procedural Rationality" in the current unprecedented circumstances, we thus believe the bottom right hand box, with payoff 4,1 is thus the most desirable outcome under full monetary-fiscal coordination that in the normal circumstances could not have been possible. We are thus in an expansion strategy of both RBI and Government that in normal circumstances was the least preferred outcome. We call it a policy of "coordinated inequilibrium".**

COMMUNICATION SHOULD BE THE FORTE TO JUSTIFY "PROCEDURAL RATIONALITY"

- For such coordinated inequilibrium, an essential prerequisite in the current circumstances is effective communication by both the RBI and Government and both must be speaking in unison and not in isolation, which can create cacophony.
- The RBI has been largely successful in communicating to the market about its intentions and seems to have managed the art of managing expectations as recent auction outcomes are turning out to be in line with market expectations. **We expect Government to manage expectations with a coordinated communication and leave matters of financing the fiscal deficit through specific measures like monetisation to RBI**.
- In the recent Jackson Hole conference, this communication aspect was again highlighted in one of papers (George-Marios Angeletos, MIT) that showed that any communication say from central bank should be simple, and constructively imprecise like "whatever it takes". This should be opposed to detailed, cautious, and… holistic "*The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored."*

Correlation Matrix

Pearson Correlation	M3 (Correlation Values)	M3 (P- Value)
COMBINED.DEFICITS.OF.CENTRAL.AND.STATE.GOVERNMENTS.1	0.185	0.260
CENTRE.S.GROSS.FISCAL.DEFICIT.1	0.174	0.289
Gross.Fiscal.Deficit.of.State.Governments.1	0.111	0.501
Spearman's Rank correlation		
COMBINED.DEFICITS.OF.CENTRAL.AND.STATE.GOVERNMENTS.1	0.107	0.516
CENTRE.S.GROSS.FISCAL.DEFICIT.1	0.167	0.310
Gross.Fiscal.Deficit.of.State.Governments.1	0.070	0.672
Kendalls Correlation		
COMBINED.DEFICITS.OF.CENTRAL.AND.STATE.GOVERNMENTS.1	0.103	0.533
CENTRE.S.GROSS.FISCAL.DEFICIT.1	0.138	0.401
Gross.Fiscal.Deficit.of.State.Governments.1	0.053	0.749

Source: SBI Research

*****

Contact Details:
Dr. Soumya Kanti Ghosh
Group Chief Economic Adviser
State Bank of India, Corporate Centre
Nariman Point, Mumbai - 400021
Email: soumya.ghosh@sbi.co.in
gcea.erd@sbi.co.in
Phone:022-22742440
:@kantisoumya