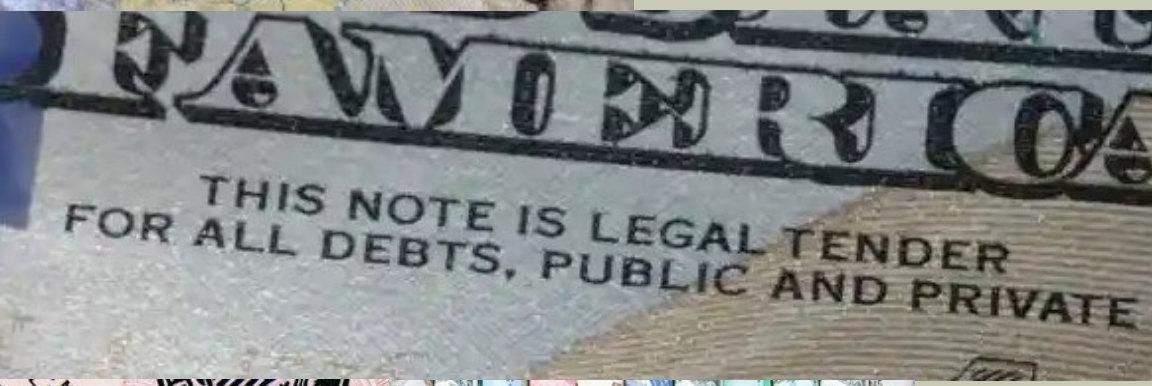
EXPLORING MODERN MONEY

A COLLECTION OF MACROECONOMIC ESSAYS



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Introduction

This book is a curated collection of articles and essays that I've authored over the years, originally published in various newspapers and magazines. These writings delve into contemporary macroeconomic issues from around the globe, offering insights and perspectives on the complexities of our ever-evolving world.

Modern Monetary Theory (MMT), often dismissed as unconventional or even labeled "voodoo economics," has been instrumental in helping me navigate and unravel the intricacies of numerous modern macroeconomic challenges. As I sat down to write this introduction, two intriguing headlines captured my attention. One featured the state of Utah in the US making payments to vendors in gold. Did this mean a step towards implementing a gold standard as mentioned in the Project 2025 document released by the Heritage Foundation? The second, was the imminent possibility of the US inducing countries to accept the Mar-a-Lago Accord, which aimed at a concerted effort towards depreciating the dollar.

What could the repercussions of such policies be? How can we move beyond media narratives to develop a nuanced understanding of these significant economic decisions shaping nations worldwide? My formal training in mainstream macroeconomics—ranging from DSGE models to extensive empirical research built on advanced econometric methods—often fell short when it came to addressing real-time issues that dominate the headlines day after day.

This book opens with a succinct introduction to the core principles of Modern Money Theory (MMT), which have consistently provided me with a framework to navigate macroeconomic debates with clarity and analytical rigor. These principles, while intuitive and straightforward, fundamentally challenge the foundations of traditional macroeconomic paradigms. Although many articles do not explicitly reference MMT, attentive readers will discern subtle arguments shaped by its perspective.

It is difficult to relate and comment on day-to-day macroeconomic issues using the mathematically dense models that are often taught in mainstream macroeconomics courses. An economist may often feel inadequate when asked on their analysis and opinion on current issues. MMT, by demystifying and deconstructing the notion of money, was not just an eye opener but also a way of articulating and exploring many different issues from across the world.

The collection studies a diverse range of contemporary topics, including fiscal deficits, monetary policy, central bank digital currencies (CBDCs), banking crises, public debt, and more. It is likely to appeal to students, educators, bankers, think-tank and finance professionals, while also offering general readers a fresh, non-mainstream lens on key macroeconomic issues.

The reader is invited to engage with these topics with an open mind, free from the preconceived notions often perpetuated by media narratives. By embracing diverse perspectives, we can foster richer discussions and more meaningful debates on issues that profoundly impact our lives—whether in subtle or overt ways.

I express my appreciation to Moneycontrol.com and other online magazines for publishing my articles over the years. I would like to particularly thank Manas Chakravarthy, Consulting Editor at Moneycontrol.com, for his continuing support. This book is primarily a collection of those articles, with occasional light edits.
Sreedhar S. and Jijeesh T. at FAIR, provided invaluable assistance in gathering content from diverse sources and accurately compiling all references.

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Sashi Sivramkrishna
Bangalore

Part- I: Modern Money Theory

Before compiling the articles written over several years, I will begin with a very concise introduction to Modern Money Theory (MMT) and lay down some of its basic tenets. This will help readers to understand and appreciate the basis for my views and framework for my analysis on a range of contemporary macroeconomic issues.

What do you mean by 'modern money'? When does the 'modern' period begin?

The modern money era began in 1971, when US President Richard Nixon closed the gold window, i.e. ended the conversion of the US dollar ($) held by foreign governments arising from balance of payments or BOP surpluses (BOP deficits of the US) into gold at a fixed rate of $35 per ounce.

How would you define modern money?

Modern money has four essential elements:

First, ***fiat money***: it means money with no promise of its convertibility by state into gold or other precious metals, or into a foreign currency at a fixed rate; the latter implying the acceptance of a flexible or floating exchange rate system by the country issuing their currency.

Second, ***legal tender***: all obligations that are owed to the state can be settled in its fiat money and in this only. This includes taxes, fines and penalties, as well as the acceptance by the judiciary that any penalties settled in fiat money will be considered as final settlement.

Third, ***unit of account***: all books of accounts that are to be maintained by law must be in the unit of account specified by the state, i.e. the dollar in the US, the sterling pound in the UK, the yen in Japan, the rupee in India, and so on.

Fourth, ***modern money as a financial liability***: modern money is a promissory note, an

"I owe you" or IOU, a financial liability issued by the government of an (economically) sovereign nation or its primary monetary institution (the central bank).

Do all countries have 'modern money'?

No, not really. Countries that do have their own modern money include the USA, UK, Japan, Australia, India, China, Russia, and many others. We can call them, 'economically sovereign' – that is, countries that issue their own modern money (currencies) like the US dollar, sterling, yen, Australian dollar, rupee, yuan (renminbi), ruble, etc. Individual members of the European Monetary Union do not have their own modern money – the common currency is the euro issued by an externally-managed central bank. We will discuss more about the euro later. Saudi Arabia too doesn't have its own modern money; it has a fixed exchange rate regime, with a dollar peg.

What does the phrase, "I promise to pay the bearer the sum of Rupees 100" mentioned on a Rs.100-currency note mean?

Before the adoption of fiat currencies, there was an implicit promise by the state to convert notes into coins made from precious metal. The rupee, for instance, was a silver coin of approximately 11.4 grams and 97% purity. A hundred-rupee note would therefore have to be converted by the treasury or central bank into hundred silver rupee coins on demand by the bearer of the note. This promise no longer exists today. If you take a Rs.100 note to the Reserve Bank of India (RBI), they may either give you a new note or perhaps, ten, ten-rupee notes.

Can private citizens legally engage in barter transactions?

Yes. For instance, you can sell me a painting in exchange for my book or for a gram of gold or some amount of cryptocurrency like Bitcoins. By itself this is not illegal, although sales taxes and capital gains taxes on gold transactions could make the cost of transacting in gold prohibitive. Legal tender does not mean that we have to accept or deal only with the state's currency. However, you would have to keep your books of accounts in rupees only, declare profits on your sales of artwork and finally, pay your taxes to the government in rupees (and rupees) only. If this is your only source of income, it would make more sense for you to sell your paintings in rupees, settle your tax obligations and then convert your rupee savings into assets like gold, Bitcoin or whatever.

So, how would you define legal tender?

The term legal tender is often misunderstood. It is taken to mean that any debt (even those which arise in exchanges within the private sector) must be settled only in state-issued notes and coins. This is not true – barter is not illegal. Legal tender has more to do with receipts and payments of the state; how it makes and receives payments due to it from the private sector. When the government specifies that only its own financial liabilities or IOUs are acceptable in settlement of obligations owed to it, it automatically creates a demand for it.

What is the essential difference between barter and modern exchange?

Barter is essentially exchange of one physical asset for another. Example, rice for fish, or a painting for gold. Modern exchanges are usually the exchange of a physical asset for a financial liability, i.e. a promissory note or an IOU. In other words, we settle the obligations that arise in exchanges with the financial liabilities of the state (currency). For example, I buy a painting from you priced at Rs.500. I owe you something in return. I offer you a copy of my book but you are not interested. I offer you a Rs.500 currency note, a promissory note issued by the RBI. You, and the courts too, will accept it in final settlement of my obligation to you.

I could have issued a personal IOU – my money – to you. Would you have accepted it?

Perhaps. But not as final settlement. This is something like credit. I will take a promise on paper signed by you but then after a certain period of time, I would expect you to settle your promise with that Rs.500 currency note, which is the promissory note or financial liability of the RBI. In many modern exchanges, credit or temporary acceptance of private promissory notes are common. Like the account you may have with your neighborhood grocery store or 90-day credit for a corporate customer. Nonetheless, final settlement will necessarily require settlement with the promissory note of the state. [1]

Going back to something you mentioned about barter and modern exchanges; what is the difference between a physical asset and a financial liability?

Physical assets like cars, gold, paintings or a digital asset like Bitcoin (cryptocurrencies) appear in only in books of accounts of the owner of these assets. They do not appear in

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[1] *For the present, we are not taking commercial banking into account*

any other entity's books of accounts. Physical assets are no one's liabilities. Financial assets and liabilities, however, appear in the books of accounts of some other entity/entities as corresponding financial liabilities and assets, respectively. For instance, currency held by me appear as financial liabilities in the RBI's balance sheet but as financial assets in my balance sheet. Equity shares or bonds issued similarly appear as a financial liability in the balance sheet of the issuer or the company but as financial assets in our balance sheets as the holders of these financial instruments.

This brings me to the most important question; why do we accept the state's promissory note in final settlement of obligations that arise in exchange but not those of private sector entities?

The first step to ensure the acceptance of the state's IOUs is for the state to be in a position to levy and enforce a tax obligation on its citizens. It then names – like the rupee in India – and denominates the things – the legal tender objects or the money thing like rupee notes – that can be used by the private sector (its citizens including businesses) to discharge their obligations to the state. Put in a slightly different way; the state accepts its own, and only its own financial liabilities in settlement of obligations owed to it. Usually, the state will not accept any other object other than its own currency, thereby creating a demand for these legal tender objects, making them valuable. If we do not settle our tax obligations to the state with these money things, we can face imprisonment. Therefore, taxes drive modern money. Without the imposition and enforcement of taxes, people would not accept modern money issued by the state, voluntarily and widely.

John Maynard Keynes put the evolution of modern money succinctly; the age of modern money was reached when the state claimed the right not just to enforce the dictionary but also to write the dictionary.

But what really is the purpose behind the state in creating such money?

There are three main reasons for the creation of money by the state. The first is because the state needs to claim resources from the private sector, particularly labor and output produced by the private sector that can be used for social purposes – building infrastructure, providing education and health services, defense and policing, setting up courts, etc. Instead of using force (slavery or looting) to claim a share of these resources, the state issues its tokens (money thing) and enforces a tax obligation on its citizens who are then willing to surrender some portion of their labor and/or produce to the state in exchange for the money thing.

Money is a pre-market phenomenon; it arose from the state's desire to control production and only later did it gain widespread acceptance as a medium of exchange or a means of settling obligations between parties in the private sector. When the state makes it mandatory that taxes and other obligations to it have to be settled in a particular money form/thing, which it has defined and of which it is a monopoly issuer of, there will automatically be widespread demand for its currency. This demand for its money in turn enables the state to capture a share of resources and output produced in the private sector. The latter "voluntarily" forego goods and services in exchange for state currency, the currency in which they must settle their dues to the state. The tax-driven money approach – also called the neo-chartalist or MMT approach – thus provides a (or the) logical raison d'être for a state to intervene in the monetary realm.

The second reason to introduce state money is that by creating demand for this valuable money thing (rupee notes), the private sector has an object (the rupee notes) that serves as a medium of exchange. In other words, as the state denominates tax obligations in a specific unit of account (rupees) and the money thing as legal tender, it becomes universally acceptable and circulates as the medium of exchange for settlement of obligations that arise in exchanges within the private sector. A medium of exchange promotes trade and exchange, a greater degree specialization and productivity growth that enhances our standards of living.

I will come to the third reason later but just to mention it here: financial liabilities and financial assets can be easily controlled – both created and destroyed/extinguished – unlike physical assets. This gives the state control over the consequences of excess or deficient money in the system to subsequently influence its macroeconomics goals of unemployment and inflation.

Is there a more down-to-earth explanation for this?

Sure. This is how Warren Mosler explains the idea of modern money. Imagine a classroom located in a small college housed in a single building. The professor has 30 students in her class. She asks all the students to stay back after the class and spend one hour cleaning up the classroom as a social service (the state claiming resources from the private sector). In return she offers her students her visiting card. None of the students are interested. She now tells the students that at the door of the classroom a security guard will collect the visiting card and these cards only (the money thing), and only then allow the students to leave (enforcing the tax obligation) the room. Are the students willing to work for an hour? All the students raise their hands.

Now, to extend Mosler's example, assume that the principal decides to enforce the same rule across the college. All students in the college (say 300) have to surrender such visiting cards issued by professors, and professors only, to leave the college. In such a situation, there may be students who are willing to work four hours cleaning rooms and exchange the extra visiting cards with other students for goods or services. For example, student A works extra hours in cleaning classrooms and exchanges some cards with student B who does an assignment for A. In this way, a demand for visiting cards (the money thing) is created as a token of 'tax credit' that then serves as a medium of exchange among students (the private sector).

There are many questions that arise from the notion of modern money. Before raising these, can you tell me the difference between modern money and the mainstream economics notion of money that we come across in textbooks?

Mainstream economists (and their textbooks) usually define money as an asset that serves as a medium of exchange, unit of account and store of value. They do not specify the nature of the asset, i.e. whether or not it is a physical or financial asset. They assume that it was "invented" in the private sector to overcome the problem of the double coincidence of wants that arises in barter. So, we decide that gold or silver is the unit of account and medium of exchange then everyone accepts this as money. You accept it because you believe that I will, and I do because I think that X will, and so on. Similarly, in the mainstream view, the rupee and the rupee note becomes the medium of exchange because of this belief – or what we call, infinite regress. The money thing like coins made from precious metals are also a good store of value because they don't deteriorate physically.

Based on this definition, money makes market exchanges easy, or what we say – lubricates the wheels of commerce – which ultimately raises our standards of living. But once this function of money is taken into account, we can ignore it and look below its veil at the real exchanges and the allocation of real resources in an economy and, in particular, whether it is efficient or not.

Most importantly, mainstream economists do not view money as a financial liability of the issuer, an IOU, and correspondingly a financial asset to the holder. To them, money could be any asset, and not necessarily modern state money driven by taxes. Assets issued by the private sector like Bitcoins could thereby even replace modern state money.

The MMT view gives primacy to the state for the creation of money – the state needs taxes to provision itself with labor. By exercising its authority over money, a state strives to control and direct economic activity "since the state is the 'monopoly' supplier of the currency, citizens must sell 'goods, services, and assets' to the state in order to receive the necessary state tokens in order to pay taxes."[2] Through taxation the state is able to move resources from the private to the public sector. Furthermore, as the state is the monopoly-issuer of state money, it can set price of its currency (in terms of what the private sector must give up to obtain a token); it is not a price-taker.

Going back to Mosler's example, of what use are the visiting cards to the professor?

Not much actually. They are simply pieces of paper – tokens – that must be submitted by the student to the guard at the exit door in order to leave the room. These tokens in the modern monetary system are IOUs or the financial liabilities of the state. The state actually takes back its own financial liabilities, and only these, for the private sector to settle their tax obligations owed to the state.

The question you must ask is: how does the private sector get these tokens or IOUs in the first place. The answer is simple but fundamental to understanding modern money. The state must first spend the IOUs into existence before collecting them as taxes. Spending comes before taxation. Without handing visiting cards to students by giving them some social work to do, the professor wouldn't have been able to collect these at the door, assuming that only she could have issued them.

Once taxes have been collected, the state could simply throw away the pieces of paper or use them again in future for the same purpose. The primary function of taxes is not to function as 'revenue' for the state; instead, taxes make the private sector willing to accept the state's modern money and voluntarily give up, in exchange, labor and some of the output it produces so that the state may use these for the country's common good.

How does the professor know how many visiting cards to issue?

We assumed there were thirty students in the classroom. Furthermore, the professor makes the rule that each student must surrender one card to guard at the door to

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[2] *https://www.tandfonline.com/doi/abs/10.1080/01603477.2003.11051383*

leave the room. Now, suppose the professor issues 30 cards and offers each student one card for one hour of work. Then all the cards spent are collected back. When the government does this, we usually call this a 'balanced budget'; 30 cards are spent and 30 are collected back as taxes.

Suppose the professor issues only 20 cards? All the 30 students want to work and get a card to leave the room but only 20 will be able to do so. In effect, this means that the state has generated unemployment. The number of students willing to work is 30 but 10 students are unable to find work at the going wage rate of one card for one hour of work. Insufficient spending by the professor generates unemployment.

How would the remaining 10 students pay their taxes or leave the classroom? The only possibility is if they had any surplus cards they had accumulated previously – their savings. This would certainly not be something they desire. However, the professor runs a 'surplus budget' of 10 cards by spending 20 cards but collecting 30 cards. Remember who is worse off – it's the students or the private sector! How do we solve the problem? Let the professor issue more of her cards by spending.

Now it hardly costs the professor a few rupees to print cards. Suppose she gives out 10 cards to each student for one hour of work but collects only one at the exit. Each student will have 9 surplus cards which they could use outside the classroom. They could exchange them with other students within the college who are willing to do their homework. The professor runs a 'budget deficit' with 300 cards issued but only 30 collected. With the extra cards in circulation in the college, let's assume that the price of assignments settles at one card per assignment. This may be an acceptable price level for the college students. However, suppose the professor issues 100 cards to each student, all other terms constant. There may be so many cards floating around that the price of assignments is bid up to 100 cards per assignment. The students may consider this inflationary. How could the professor control this? One solution is to issue less cards like, for example, 10 cards for one hour of work and/or raise taxes, i.e. issue 100 cards for one hour of work but collect 90 cards at the exit. Taxes effectively destroy/extinguish the cards in circulation.

Can you summarize the lessons for macroeconomics from this understanding of modern money?

First, the essential purpose of modern money is to move resources from the private sector to the public sector (the government).

Second, the state creates modern money through spending.

Third, taxes drive money. The state accepts its own IOUs or financial liabilities in settlement of obligations owed to it. Spending must precede tax collections – the professor couldn't have collected her visiting cards from the students unless she had first put them into circulation. This is fundamental purpose of taxation.

Fourth, in addition to taxes driving money they also serve the purpose of draining modern money from circulation, which may be inflationary. Spending puts state money – its financial liabilities – into existence. Taxes destroy/extinguish state money. This is the secondary purpose of taxation, i.e. to destroy the purchasing power of the private sector which comes with government spending and the consequent circulation of state money.

Fifth, the net money remaining with the private sector in a financial year is the fiscal surplus or deficit. The accumulated money remaining with the private sector over the period in which the money was in circulation is the public debt – the accumulated financial liabilities [assets] of the government [private sector].

Sixth, when the government runs a fiscal surplus, it spends less money into existence than it collects back as taxes from the private sector, forcing the latter to draw down their savings (accumulated financial assets) in order to pay their taxes. This reduces the net purchasing power in the private sector.

Finally, let me add that the framework that is used to understand the working of the modern monetary system is called 'modern money theory' or MMT. More than a theory based on abstraction, it is an exposition of the real-world institutions and mechanisms that exist presently. Once we are able to comprehend this, MMT delves into the policy options that are available to governments to meet their economic and social objectives.

This means that fiscal deficits and public debt are not as dangerous as they are made out to be. How does modern money address such fears over deficits and debt?

Let me reiterate that so far, we are assuming an economy where only state (paper) currency is in circulation. Banking has still not been introduced into the system, neither have bonds. But this assumption helps us grasp the essence of modern money.

Fiscal deficits are nothing but government expenditure less tax collections or FD = G – T. It is the excess money spent into existence less what is drained out by the government through taxation and therefore is the amount of currency left in the hands of the private sector. The currency is a financial liability of the state and a financial asset of the private sector. Cash-in-hand appears on the asset side of the private sector's balance sheets. This currency enables us to effectuate our purchasing power through market exchanges.

Debt is a bad word and so we feel anxious by the notion of public debt. Instead, if we think about public debt as private sector assets it doesn't sound alarming at all. The US$ 36 trillion public debt of the US is really the (global) private sector's savings in dollar-denominated financial assets. In the context of our assumptions, think of this amount held by the private sector in the form of dollar notes.

We may think that fiscal surpluses (FS) are good for the people of the country. But are they really? We saw that FD = G – T so that an FS implies that T > G. As we argued this means that the government drains out more currency from the private sector than it injects into it. In other words, a FS in the public sector implies a deficit in the private sector. [3] This is possible only if the private sector pays for the FS by drawing down their savings of currency. This would mean lower private sector consumption and possibly a recession in the economy as people try to save more, or more precisely increase their savings rate, to compensate for their loss of savings.

Isn't it true that for the government to run a fiscal deficit it must borrow money from the private sector by issuing securities like bills and bonds?

No, not really. Just like currency, bonds are the financial liabilities of the state. First, think of what the government "borrows" by issuing bonds. It "borrows" its own financial liabilities when it "buys" the currency and "sells" the bond (another financial liability) to the private sector.

Does any other agent in the economy "borrow" its own financial liabilities? It's like you borrowing the loan you have taken from a bank! Bond sales are really swaps; the exchange for an asset (liability) for another asset (liability).

[3] *We are also assuming there is no foreign or external sector. We will relax this assumption later.*

Moreover, when issuing bonds, the government will insist that the bonds be purchased only with its own financial liabilities – currency, which may be rupees in India or dollars in the US. [4] Nothing else will be acceptable by the government in exchange for a bond. So, can the government sell bonds before spending rupees into existence? Or, just like taxation, can we pay our taxes in rupees before the government spends the rupees into existence? Obviously not.

Why then does the government issue bonds?

Taxes, as we have seen, destroys or extinguishes money and thereby purchasing power with the private sector. One reason to do drain out purchasing power is if the government is concerned about inflation or inflationary expectations. Bonds are also to suppress purchasing power but rather than destroying purchasing power of the private sector – which could have an adverse effect on the private sector's incentives to work or produce – bonds postpone immediate buying decisions of the private sector for goods and services by draining out liquid cash. In order to make it attractive for the private sector to postpone their buying decisions, the government may pay an interest on bonds, while cash or currency will not yield any return. Therefore, bond sales are really a way to control inflation.

Can you briefly summarize the linkages between fiscal deficits, bond issues and public debt?

FD = G – T in a given year

If FD must be covered by bond sales, then FD = bond sales in a given year.

Public debt = accumulated bond sales over a period of time.

Public debt = private sector savings in government debt or government bonds over a period of time.

There is a huge concern that the government can go bankrupt when it's time to repay debt. Is this possible?

The government can never go bankrupt over debt issued in its own sovereign currency. Just like we discussed what happens when you go to the RBI and ask them to settle their promissory note (I promise to pay the bearer the sum of rupees …), when it's time to redeem a bond, the government will either give you currency or a new bond, i.e. the redemption is made with another (and their own) financial liability. Remember,

[4] *Once again, we are assuming that there are no commercial banks in the economy.*

however, that when the private sector has to redeem a bond issued by them (say, a corporate bond), they have to do so with the financial liability of the government (currency). Therefore, a company can go bankrupt (if it does not have sufficient financial assets, i.e., financial liabilities of the government) but not the government.

Some mainstream economists argue that when it's time to repay national debt, the private sector has to bear the burden of this repayment by paying taxes. Is this the case?

This is called 'Ricardian Equivalence'. Public debt must be repaid by taxes levied on the private sector in future. This is utter nonsense in a modern money economy. Public debt is always rolled-over; it is settled by the issue of new debt or financial liabilities. In fact, future generations are actually twice blessed. They inherit the debt (a financial asset to them) and also the benefits that accrues from the spending by the government by running a fiscal deficit – perhaps on a bridge or an airport.

Many economists and policy-makers often argue that fiscal prudence is necessary for the state just like corporate businesses and/or households. This analogy is used to scare the common person on the street about the government's public debt.

The MMT view of money has important implications on the way we look at the state and its constraints; as monopoly issuer of state money the government does not face a budget constraint like households or firms as is often assumed. Many economic commentators wrongly make this assumption and then go out to draw prescriptions from their study. While MMT argues that there are no budgetary constraints on a government it does not mean that an unlimited issue of its money will not have adverse effects on an economy. Inflation and depreciation of the domestic currency vis-à-vis foreign currencies could indeed be the outcomes of issuing excessive amounts of state money. In other words, the government is not constrained in its spending by taxes and revenues; the only constraint to government expenditure is the real economy or the productive capacity of the country. When government expenditure fails to increase output due to supply side bottlenecks, the result will be accelerating inflation and a depreciating exchange rate.

Is there are hierarchy of money?

Before we delve into banking per se, I will briefly discuss one of the most important characteristics of a modern monetary system; the hierarchy of money. Now as we have seen money is an IOU and can be created by any two people to record a credit and its counterpart, a debt. Suppose I ask you for a kilo of sugar and give you ten kilos of salt in exchange, there is no debt (obligation) created and therefore no money comes into existence. Suppose, however, that instead of the salt I give you an IOU signed by me on a piece of paper stating that I will repay you Rs.50 at a future date in lieu of the kilo of sugar you gave me today; if you accept this IOU, money has been created. If you do not accept it, the IOU cannot be called money. This IOU records a social relation between us that would appear in our books of accounts or our balance sheets; as a financial asset for you and a financial liability for me.

The hierarchy of money arises because of the ***acceptability*** of the IOU. Suppose you wanted to buy half a kilo of tea worth Rs.50 from the shop next door. Would they accept the IOU I had given you as final settlement of the debt that arises when you express your intention to buy the tea? Most likely, not. Would they accept a cheque [5] (which is drawn a deposit account) of a commercial bank like the State Bank of India? A good chance, yes. Would they accept a cheque issued by a cooperative bank like PMC? Perhaps not. Would they accept a Rs.50 note (an IOU) issued by the Reserve Bank of India? Certainly yes. All IOUs are obviously not equally acceptable; some are more acceptable than others. This is in essence the hierarchy of money.

As Perry Mehrling put it, "always and everywhere monetary systems are hierarchical." [6]

Can you elaborate on the role of bank money in the hierarchy?

The hierarchy of money can be thought of as a four-tiered pyramid. At its base are the IOUs of individuals and households whose IOUs will generally not be acceptable in a system. However, they do serve as money – think of your credit line with a local store – although they will not be considered as final settlement of obligations that arise in exchange/trade. Next up in the hierarchy are the IOUs of firms. When a firm borrows money and promises to repay it at a later date, it's IOU (a bond or stock) becomes an asset for the holder and a liability of the firm. Corporate credit or IOUs are also more acceptable to suppliers than household IOUs. However, there is no guarantee that it will the nominal value will be repaid – there are default risks. The bond or stock may also be illiquid so that its holder may not be able to convert it into other IOUs as and

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[5] *A cheque is an instrument to transfer the deposit account (of a certain amount) of an entity to that of another. The transfer can also be done electronically as with UPI.*

[6] *https://sites.bu.edu/perry/files/2019/04/Mehrling_P_FESeminar_Sp12-02.pdf*

when it desires to do so. Nonetheless, the IOUs of firms are considered superior to those of households for there at least exist markets (bond markets and stock markets) which allow the trade of such securities.

Above this tier come banks; their IOUs are widely accepted in a modern economy. Banks are really agents that issue their own IOUs (deposit accounts held by the bank) which are used by households and firms to settle claims upon each other. Returning to our example of you giving me sugar against my IOU but the shop not accepting my IOU for the tea you want to buy. A bank could make this trade possible; I issue a cheque to transfer my deposit of Rs.50 in a bank (an IOU of the bank) in the shop's favor. The likelihood of them accepting a cheque (bank's IOU) from me is much greater than accepting my IOU or yours. But why do we "trust" a bank more than individuals?

At the top of the hierarchy is state money or currency issued by the central bank. As we have seen, if this is fiat currency there is no promise made on its convertibility to gold or a precious metal. In case convertibility of the currency into a foreign currency is permitted then this may pose a problem especially if the exchange rate is considered fixed. Where a floating exchange rate and/or only limited capital account convertibility is permitted there is really nothing above national currency in the hierarchy.

Is there a difference between money and credit?

Sometimes a difference is made between money and credit. In a modern monetary system, the IOUs issued by the central bank (currency) are considered as money while all other IOUs may be considered as credit. These IOUs include deposits accounts in banks as well as securities (both long and short-term) issued by other agents in the economy. In a modern economy, state currency is considered "outside" money whereas all other monetary instruments are considered "inside" money.

Why has bank money become so widely acceptable?

In a modern money system, state money is definitive money. This, as we have seen, is not just because it is legal tender but more so because it can be used for the settlement of obligations due to the state including taxes, fees and fines. The state also accepts – by design – bank IOUs (deposits held in banks) in settlement of its dues and this is what makes bank money "definitive money". The acceptance by the state of bank money to settle obligations to the state make bank money an acceptable means of payment in an economy and moreover, the reason why bank money (deposits) has found wide acceptance in a modern economy.

Can the quantum of money expand and contract in a modern economy?

While the hierarchy of money emphasizes the qualitative difference in instruments, it is also important to note that it does provide a great deal of elasticity in the system. During "good" times, all instruments seem almost as good as each other. There is a thriving market for securities (shares and bonds), transfer of deposits is accepted in settlement of claims and there is no great demand for cash or state money. Credit expands quickly in the system. But then when a crisis arrives, things change rapidly. Everyone wants to hold the more definitive monetary instruments; deposits are preferred to bonds or stocks and cash might even be preferred to bank accounts, especially in a context of crisis where bank failures are not uncommon. The element of "discipline" enforced by the hierarchy of money sets in and the qualitative difference between monetary instruments is exposed. Perry Mehrling likens the elasticity element as a horizontal movement at the base of the pyramid while discipline is shown as a vertical movement up the hierarchy. These swings in credit expansion and contraction not only explain the business cycles that get transmitted through the system but may even explain the rise and fall of civilizations.

Is there a hierarchy of monetary institutions that correspond to the hierarchy of money?

Yes, there also exists a hierarchy of monetary institutions corresponding to the hierarchy of money. At the top is the state institution that issues state money – the central bank, below it is commercial banks which trade in deposits and state money, and finally financial firms (including non-banking financial companies) and households that trade in securities of all types including debt, equity and derivative securities.

These institutions also straddle the instrument-layers and in the process create markets for each monetary instrument. The NBFCs trade securities for deposit accounts in banks; if you want to buy (sell) a stock for a reduction (increase) in your deposit account with a bank, a security dealer (NBFC) will do it for you. If you want to trade a deposit account for state money (cash) or vice-versa, a commercial bank will do that. And if you want to exchange a national currency for foreign currency dollars, the central bank can do that.

What is the difference between a commercial bank and an NBFC?

It is important to note the difference between an NBFC and a bank. Usually, we simply assert that the former is not given a license to accept deposits from the public while banks are allowed to do so. When we consider the hierarchy of monetary instruments and institutions, we understand the implications of this restriction on NBFCs; they cannot exchange securities for state currency (money) but only for a deposit in a bank. The bank is, however, permitted to promise and to exchange deposits for money. The banking system today consists of a network of banks that freely accept each other's IOUs.

At what price do money and credit trade?

The rate between securities and deposits depends on the forces of market demand and supply. You can therefore get any price for your equity shares depending on the market conditions prevailing at that point of time. The NBFC does not assure you of a guaranteed price. Banks which occupy a higher position in the hierarchy are allowed to exchange deposits for money (currency issued by the central bank). The bank's IOUs are not only expected to be converted into state IOUs on demand but also at par. In other words, as a deposit holder I take it for granted that I will always be able to convert my Rs.100 deposit into Rs.100 cash (state money). Unlike, equity shares or property there I assume that there is no possibility of a capital gain or loss. This assumption, however, becomes evident during a crisis or a bank run. It is at this point we will be forced to realize that conversion of bank deposit to state money below par is also a real possibility. Finally, if a central bank has promised conversion of a currency into gold or a foreign currency at a fixed rate, they too might have to go back on it during a crisis. However, for modern fiat currency systems, as we have seen, the buck stops at the central bank with the national currency.

Why is commercial banking so important in the modern monetary system?

We have seen the position of banks in the hierarchy of monetary instruments and institutions. Although they may be placed below the central bank (institutionally) and deposits may be considered lower than currency (instrumentally), we must understand that more than 95% of money in circulation in most of the advanced countries of the world consists of bank IOUs (deposit), only a mere 5% consists of currency. It is, therefore, important for us to delve deeper into the process of money creation by banks and its implications on the economy. Unfortunately, conventional macroeconomics textbooks are not only woefully inadequate in this respect but as contested by many heterodox economists, they are also wrong in their construction of how bank money is created in an economy.

How would you distinguish mainstream views on banking with the modern money view?

Mainstream macroeconomic texts usually articulate the bank money creation process is as follows: a person deposits a cheque for Rs.100 in her account which she may have received from the government, the bank keeps 10% (Rs.10) of it as reserves which are parked with the central bank and lends out the remaining Rs.90. This amount of Rs.90 lent out when spent results in the addition to another deposit account of which once again 10% (Rs.9) is held as reserves and Rs.81 is again lent out. The process continues until the total lending by the banking sector reaches Rs.1000. This is derived as follows:

$$\Delta TD = \Delta D + (1 - r)\Delta D + (1 - r)2\Delta D + (1 - r)3\Delta D + \ldots.$$

Therefore,

$$\Delta TD = (1/r)\Delta D$$

where,

ΔTD = change in total quantum of deposits

ΔD = change in the initial deposit

r = reserve requirement (per cent) and 1/r = m (the money multiplier)

A more complete formulation of the money multiplier concept can be found in the expression;

$$M1 = m(M0)$$

where,

M0 = C + R = high-powered money (HPM) controlled by the central bank

M1 = C + D = broad money supply (currency + deposits created by the banking sector)

C = currency in circulation

D = deposits

R = quantum of reserves of banks held with the central bank

Since r < 1, m > 1, or in other words, the money supply is some multiple of HPM. In this view, bank credit expansion is controlled or limited by the reserve requirement. Based on this logic, the central bank can control the broad money supply M1 through changes in HPM.

Is there a heterodox view on modern banking?

Yes; this view has been contested by the heterodox view called, Endogenous Money Theory (EMT). First, banks are not intermediaries between savers and investors in the sense that they do not collect deposits of savers (loanable funds) and then go looking for borrowers. This is the dominant view that not only runs in popular media but in academia as well:

> "The savings/investment process in capitalist economies is organized around financial intermediation, making them a central institution of economic growth. Financial intermediaries are firms that borrow from consumer/savers and lend to companies that need resources for investment." (Gorton & Winton, 2002, p.1)

> "The role of the financial system is to intermediate between lenders and borrowers and provide avenues for saving and help investors find their financing needs. The financial markets impact growth by channeling saving to firms and improving the allocation of capital." (Speech delivered by R. Gandhi, Dy. Governor of the Reserve Bank of India, 2014)

In reality, banks are the creators of deposits and not mere lenders of deposits. Second, the central bank does not control broad money supply in the economy by controlling the quantum of reserves available to banks (a part of HPM). Instead, reserves are not a binding constraint on banks; as and when reserves are required by banks the central bank must accommodate their needs by creating additional reserves against bank assets like government bonds (collateral). What is under the control of central bank is the price at which these reserves are made available to banks, i.e. the interest rate. EMT, therefore, turns conventional money multiplier theory in its head. Banks make loans and create deposits in response to the needs of the market, constrained only by prudential banking norms. The need for reserves to back up the credit needs of the economy must then be accommodated by the central bank.

Even Nobel Prize winning economists, Kydland and Prescott (1990) [7] agree that, "there is no evidence that either the monetary base or M1 leads the [credit cycle], although some economists still believe this monetary myth. Both the monetary base and M1 series are generally pro-cyclical and, if anything, the monetary base lags the [credit cycle] slightly."

Is reserve money only be transacted by banks?

Two important remarks must be highlighted here. First, reserves, which are a part of HPM, can only be transacted by banks, not by individuals. Banks cannot lend out reserves; reserves can only be lent or transferred between banks since consumers like A and B cannot have reserve accounts at the central bank. In fact, even NBFCs cannot have reserve accounts at the central bank; the access to reserve accounts at the central bank is the key differentiator between banks and other institutions and which gives them a superior position in the hierarchy of money. As consumers we can deal only in deposits although banks give us guaranteed access to state money (currency) at par. Even NBFC s do not give us such guaranteed access although they do give us access to bank deposits (though not at par but only at the market price of securities). Second, with respect to the above example, if A is unable to attract new deposits from consumers, it would have recourse to the central bank for additional reserves; however, the cost of these could be higher than attracting a deposit from consumers and in a competitive banking sector, could make or break the profitability of its banking operations.

Can banks create money ad infinitum?

It might seem that banks have the power to create an infinite quantum of money since they would always have recourse to reserves from the central bank. However, in reality there are limits to this. While new money is constantly created in an economy, money is also being destroyed as consumers and firms repay their loans. In times of crisis, as the central banks pump money into the economy, banks might actually find that the increased availability of money leads to repayment of loans and de-leveraging of bank money, i.e. they might actually find a paradoxical situation of deposit money contraction. Banks are also subject to strict norms like capital adequacy ratio and liquidity ratios. However, the most important constraint upon banks is the interest

[7] *https://ideas.repec.org/a/fip/fedmqr/y1990isprp3-18nv.14no.2.html*

rate target of the central bank. By influencing the cost of banks borrowing reserves and thereby the cost of other non-government players in raising loans, the central bank can ensure that monetary growth is consistent with their inflation and/or exchange rate target.

Is bank credit supply or demand constrained?

The business model of a bank is to give loans at a higher interest than that paid on deposits made into the bank. The spread between these rates is used to cover operating costs and make a profit. We have seen why banks have to attract or retain new deposits else they will simply run out reserves. In a competitive market this translates into lower lending rates (to attract borrowers) and higher rates offered to deposit holders (to induce them to retain or open new deposit accounts with the bank). This reduces the spread available to the bank and thereby its profitability. The type of deposits made into banks also matters. For example, current accounts can be withdrawn on short notice that can put a bank into a liquidity crisis. Banks therefore need an adequate quantum of longer-term deposits like savings bank accounts and/or fixed deposits. These, however, require a higher interest to be paid and squeeze the bank's interest spread.

Private sector banks seek profits and as they seek new borrowers, they have to carefully assess the risk of non-repayment or what is commonly referred to as bad debts or non-performing assets (NPAs). This is called credit risk; to safeguard against such risks, banks require an adequate amount of capital to absorb losses arising from NPAs. All loans have risks associated with them. As a bank expands its lending activities, the quality of loans would fall and credit risk increases. To factor this, banks would charge a higher lending rate which in a competitive market may mean loss of customers or lending to riskier borrowers. Competitive forces could actually drive banks in this direction that develops into systemic risk. Regulation is then required to ensure that banks follow prudential norms that include capital and liquidity adequacy as well as ensuring that banks do not make very high-risk loans.

The banking system is able to create money out of thin air provided there is sufficient demand for it (both quantitative and qualitative). Ultimately these credit and debts are simply the record of our monetary transactions with the economic system; what we owe and what is owed to us.

Aggregate credit (debt) in an economy shows an unrelenting upward trend? Isn't this dangerous?

Not in normal times. Loans (or bank credit) never cease in the aggregate and can be sustained over an infinite time horizon. There is no start or end date for aggregate credit. Furthermore, an increasing amount of credit cannot be taken to mean a corresponding amount of "pain tomorrow". When a construction company takes a loan to build an apartment complex (which a bank creates endogenously) and you take a loan to buy an apartment (also created by a bank endogenously), the process of investment and production is set in motion. As economic growth happens, incomes and savings take place so that the net worth of individuals too increases even as credit and debt in the economy increases. Individuals and firms will repay their loans over a finite horizon but the system itself grows as the quantum of credit grows in the economy. This can only happen when the financial sector has ever-increasing viable (not crony) opportunities.

How do banks get access to HPM or reserve money?

We have seen how banks are fundamentally different from other financial and non-financial institutions simply because they have access to HPM and only banks can settle claims of other banks (with reserves) and consumers (with currency). But how do banks get access to HPM from the central bank? The Central Bank has the authority and the obligation to supply on demand HPM to banks in exchange for other assets on the bank's balance sheet.

It usually "borrows" these from the central bank but let us say it acquires such reserves by an outright sale of its securities to the central bank. In effect then, the commercial bank swaps securities for reserves with the central bank as a bank cannot "borrow" liabilities of the central bank nor can the central bank lend its liabilities. The reserves held by Bank X can now be used to settle claims of other banks on it. Bank settle their mutual claims on each other using HPM. Other non-banking financial institutions do not have access to HPM.

What are the implications of EMT for macroeconomic policies?

EMT points out what has been missing from orthodox economics; that credit is not generated from savings. Recall that orthodox economics views the monetary systems as one which is merely a veil over the real economy. Money plays no part in the real economy except as a medium of exchange. In a simple one sector economy with no

government and foreign sector, savings must be compensated by an exact amount of investment in real goods so that the circular flow of income is complete. For equilibrium all that is produced must be consumed either by households or by firms. In such a situation, credit can be ignored because all debt is cancelled out by credit, the assets of lenders is equal to the liabilities of borrowers so that savers and investors cancel out each other without any net effect on the economy (except perhaps when their propensities to consume differ). Orthodox dynamic stochastic general equilibrium or DSGE models were based on this simplistic idea of credit where the quantum of money and credit which exists is equal to some proportion to the total value of all the real transactions in the economy (the quantity theory of money). However, with EMT there is a possibility of leverage (the essence of finance) where net claims in an economy can in fact exceed the value of current output. Even Bernanke, although he had acknowledged a possible role for credit in the early 1980s, had, by the mid-1990s, side-lined credit aggregates as largely being uninformative. As Malcolm Knight, then General Manager of the Bank for International Settlements noted,

> "The prevailing mainstream theoretical paradigms, enshrined in current textbooks and research, find it difficult to accommodate a significant role for quantitative aggregates … They typically have limited — or no — room for an active role for liquidity ... They see the economy as being quickly self-equilibrating, which can hardly allow for the cumulative build-up of financial imbalances and the corresponding distortions in real expenditures and capital accumulation." (Knight, 2006 – quoted from Bezemer [8]).

In the real economy all parties gain through exchange. For the real economy, growth in credit should be synonymous to the growth in the real GDP – credit is needed to support the real economy.

Can an expansion of bank credit be a cause for financial crisis?

While orthodox economists consistently failed to predict the crisis of 2008, many heterodox economists anticipated the crisis. To them, the debt built up by households was unsustainable (see SFB model) and realized that at some time they would have to deleverage by defaulting on debt and/or cutting back on consumption.

[8] *https://www.ineteconomics.org/uploads/papers/bezemer-dirk-berlin-paper.pdf*

The heterodox approach to macroeconomics is not rooted in equilibrium analysis but in double entry accounting relationships. Moreover, all money is seen as debt – money must be distinguished from assets. Debt is a counterpart of credit. Banks can create credit ex nihilo, which means a corresponding amount of debt in the economy. This process can go on ad infinitum, constrained only by prudential banking norms. Even mainstream agent-based models (ABMs), although they do away with the need for a "representative agent", only allow for agent heterogeneity and interaction of agents and do not address the core concerns of the heterodox economists.

"The financial sector can support growth but it can also cause crisis." [9] Credit inflates markets for financial assets and property (speculation). Excessive credit that leads to asset bubbles have an effect on rising inequality, falling capital formation, rising uncertainty and even fraud and corruption. Credit fuels the FIRE (finance, insurance, and real estate) sector and financialization. Finance is both credit and debt. Debt to different sectors have different implications on economic stability. Nineteenth and early twentieth century economists were concerned by the impacts of credit on economic stability. This seems to have vanished completely from the later part of the twentieth century analysis.

Can you succinctly summarize the key highlights of EMT vis-à-vis mainstream views of banking?

Without this exogenous increase in money supply, the banking system is constrained as a financial intermediary to collect money from savers and distribute to lenders as loans/credit. In this case money simply changes hands – loans and advances cancel out each other so that there is no net effect on the economy (except for differences which arise due to marginal propensities to consume of savers and borrowers – DSGE representative models cannot even take these into account).

Prices and output influence credit creation by banks, not the other way around. Banks supply credit as long as there is a demand for it. Banks supply credit at a mark-up over the "base rate". They are price-makers but quantity-takers (depends on demand). Banks do prefer to obtain deposits from the public – it's usually cheaper than borrowing from the central bank – the latter being the lender of last resort. The central bank does

[9] *Ibid.*

not control money supply; it controls only the cost of borrowing by banks through its interest rate policy.

Deposits do not lead to new lending. Lending leads to new deposits. For the economy as a whole, lending (credit) leads to increase in savings in the economy.

The orthodox or exogenous money theory takes the view that money supply determines interest rates, the price level and/or the level of real output. EMT takes the opposite view; it is the economic environment which determines the demand for loans and thereby the supply of credit. Note, however, that one can have exogeneity of a variable (money) without any need for controllability (through policy instruments); example, rainfall. Exogenous money theory is built around the Quantity Theory of Money which states that the quantity of money in circulation would increase real output but after full employment would lead to a rise in the price level (assuming that the velocity of circulation of money is fixed).

For the orthodox economist money is simply a veil that must be lifted to study the real economy. Money only determines nominal variables in the economy. EMT stresses the need to understand the need to understand how money is linked to production and exchange. As the economy grows banks increase their loans so that firms can make payment of factor costs in advance of realization of proceeds from sales. These loans are made on anticipation of sales and must not be considered as income. Banks also advance loans for roll over of debt by firms. Banks are never passive players in an economy and grant loans to finance production and roll over of debt but this depends on the anticipated aggregate demand in the economy. A down trend in anticipated sales could become a self-fulfilling prophecy when banks restrict the amount of new credit injected into the economy.

Rochon (2001) [10] underlines that the theory of endogenous money consists of five propositions:

- The causality between money and income in the Quantity Theory of Money is reversed. The supply of money is a function of profit expectation (Wray, 1992). The causality runs from profit expectation (PE) – the expected (or desired) income of firms – to the demand for credit (DC). It is the demand for credit that leads to the creation of money (MC). The creation of money through loans leads to the creation of effective demand (ED). The flow of causality can then be summarized as follows:

  PE → DC → MC → ED
- The causality between reserves (R), deposits (D) and loans (L) is reversed. L → D → R.
- Being endogenous, bank reserves have no causal influence on loans. This suggests the rejection of the money multiplier model.
- The causality between savings and investment is reversed. In other words, savings cannot cause investment. Investment cannot be financed by savings because in a world of endogenous money it is the creation of income resulting from an increase in investment that creates savings.
- The rate of interest is exogenous. Interest rate is not determined by the market mechanism – it is determined neither by the supply of and the demand for savings nor the supply of and the demand for money. The nominal interest rate is exogenous because it is set by the central bank. Interest rate is exogenously determined according to internal and external economic objectives.
- The money supply is 'demand-determined and credit driven.' Money which is primarily a flow exists as a result of the demand for credit that allows firms to fulfil their expenditure plans. Being endogenous, the supply of credit is determined by decision of commercial banks.

How does MMT view monetary policy?

Mainstream theories of interest rate determination, both classical and the Keynesian liquidity preference models are perhaps the most distant from macroeconomic reality.

Most central banks are mandated to ensure price stability or maintain inflation rates at some targeted level. Their instrument to do this is the interest rate, or more precisely the repo rate. The transmission mechanism from interest rates to inflation is as follows:

> Δ (change in repo rate → Δ commercial banks' cost of borrowing reserves from central bank → Δ lending rates by commercial banks to firms and households → Δ quantum of borrowing demanded for investment and consumption spending → Δ GDP growth → Δ inflation rate.

[10] *https://ideas.repec.org/a/taf/revpoe/v13y2001i3p287-307.html*

We have seen that banks create money ex nihilo; however, interbank transactions must be settled only with reserve money that commercial banks hold at the central bank. This reserve money is the financial asset of the commercial bank but the financial liability of the central bank. Even if the central bank does have a stipulated reserve requirement, the fact that interbank transaction must be settled through the reserve accounts of commercial banks held at the central bank make reserve money and accounts an essential part of monetary policy operations.

Now when the bank increases its lending activity, it may face a shortage of reserve money. To overcome this problem, it could look for deposits from its customers – which brings reserve money into its account at the central bank. If this does not happen, then the bank would look for reserve money in the interbank money or call money market where banks with a surplus of reserve money may be willing to lend it to others at a price – the call money market rate. If the surplus of reserves is huge in the money market, there will be a tendency for rates to fall to zero → tempting commercial banks to lower interest rates and lend more → driving up inflation. If the is deficit of excess reserves in the call money market, the interest rates could skyrocket → commercial banks to increase interest rates and lend more → slowing down the economy and lowering inflation below the target.

The central bank can intervene in the call money market to maintain the interbank market rates within a stipulated band that is consistent with its interest rate target. If there is a scarcity of reserve money (liquidity) it will "lend" reserve money to banks against a collateral (government securities), at an interest rate called the repo rate (the higher limit of the band). When there is an excess of reserve money in the interbank market, the central bank will drain out the excess reserves at the reserve repo rate (the lower limit of the band) by absorbing liquidity, i.e., reserve money in exchange for securities.

As a lender of last resort, the central bank will always provide liquidity to the commercial banks. Inadequacy of reserve money in the system would lead a failure in the payment system and a major economic crisis.

Counter to mainstream theories, the interest rate per se does not reflect the excess or scarcity of reserve money in the system. Rather, the rate is a policy decision – based on the inflation target – which can be maintained by the central bank.

Are bond sales a fiscal or monetary policy operation?

MMT views bond sales and purchases as a monetary policy operation, not fiscal policy. Bond sales are not necessary to raise money for the government; instead, bond sales and purchases are required to drain excess funds from the market that arises from government spending, maintain interest rates and prevent inflation.

When the government spends money it injects reserve money into the system, driving down interest rates. The central bank can sell bonds to drain this excess liquidity. When the government collects taxes, reserve money in the system may turn scarce, which can be replenished through bond purchases in exchange for liquidity.

How does MMT help you to articulate and analyze contemporary macroeconomic issues?

Most importantly, we must adhere to the definition of modern money and keep in mind that sovereign governments are not constrained by their own money but only by the real resources available. However, the fact that governments can create their own money does not mean that they should. It is also important to understand that in a modern money economy, debts are settled with financial liabilities either of the state or commercial banks. The interbank obligations of commercial banks are settled with the financial liabilities of the central bank, i.e. reserve money. Physical assets are not modern money. Furthermore, understanding public debt denominated in sovereign currency must be distinguished from debt denominated in a foreign currency.

These basic insights drawn from MMT are invaluable to engage with many contemporary macroeconomic issues that confront us every day from across the world.

Part- II: Macroeconomic Essays

The essence of modern money [1]

The Government of India must run a deficit and accumulate debt so that private sector desire for secure and risk-free savings can be met.

Just a few days ago, the Reserve Bank of India (RBI) decided to close the issue of 7.75 percent Government of India (GOI) bonds, probably on account of the surge in demand for this virtually risk-free asset. Why are we so keen to hold financial liabilities of the government? Aren't GOI bonds the other side of the much-dreaded public debt or accumulated financial liabilities of the government?

Before answering these questions, it is important to understand how these bonds are purchased. Suppose I had bought Rs 2,000 worth of bonds in cash, I would have given a Rs 2,000 currency note in exchange for the bond. Isn't this actually a swap of one liability of the State (i.e. of the RBI) for another (a GOI bond)?

If I was to purchase the bond through my account at a commercial bank, the bank would ultimately settle the transaction by allowing its reserve account at the RBI to be debited (reduced) or in other words, the RBI swaps its liability (reserve accounts of commercial banks at the RBI) for the liability of the GOI, i.e. bonds, which I will be the owner of. Meanwhile, the reduction in the bank's assets (reserves at the RBI) would be compensated by an equal reduction in its liabilities (my deposit account at the bank), keeping its balance sheet balanced.

In a modern money economy, when we speak of money we are really speaking of exchanges of financial liabilities. Unfortunately, mainstream macroeconomics textbooks inculcate the idea of money as an asset. This asset could have been a commodity such

[1] *Moneycontrol.com, 1.06.2020*

as gold or silver in the not-so-distant past. Presently, they argue, it is paper currency with no intrinsic value.

While it is true that money is an asset to the holder, the essence of modern money is overlooked; it is a financial asset which must therefore appear in some other entity's books of accounts as a financial liability. This is not true of a gold or silver coin, which is a physical asset that does not appear in anyone else's books of account as a liability.

To delve deeper into the idea of money as a financial liability, it is useful to begin with (paper) currency. We are often intrigued by the sentence printed on a currency note, 'I promise to pay the bearer the sum of one hundred rupees' (or any other denomination), signed by the RBI Governor. Clearly, this is a promissory note, an IOU (I owe you). However, what is it that the central bank is promising to pay? At a time when the rupee was on a silver standard, it meant the promise by the issuer of notes to exchange Rs 100 for a hundred silver rupees, each rupee being a measure of weight and purity of silver (approximately 11.4 grams of 96 percent purity). Given that the rupee is now fiat currency and not backed by the promise to convert it into anything, it means that the if I were to ask the RBI to exchange the note for a hundred rupees, I could get two Rs 50 notes instead.

These IOUs or financial liabilities are, however, used widely to settle claims that arise in exchanges.

When I buy a newspaper from a vendor, I can settle the claim that arises from this sale with currency, a promissory note, a liability of the RBI. In a modern money economy most claims that arise in such exchanges are not settled with the promissory notes of the State. Instead, we use promises to pay of commercial banks or what is commonly referred to as bank deposits. The money held by an entity in a bank deposit is the bank's promise to pay the sum of money deposited. The bank also promises to swap its deposit for the State's liability (cash or notes) at par. I can settle the claim of the newspaper vendor by a cheque or by a transfer of the deposit, which is essentially the bank's promise to pay or financial liability of the sum involved.

The non-bank private sector can and also does issue promissory notes to temporarily settle claims. However, ultimately, these claims have to be settled with liabilities of commercial banks, and in times of deep crisis if and when bank closures were to become

widespread, with those of the State only. I could for instance, purchase provisions from a neighbourhood store on credit, a promise to settle the claim later. After that period, I would have to issue a cheque or pay cash.

Corporate bond issues are also a swap of financial liabilities. A company exchanges your deposit (bank liabilities) for its own (the bond). Once again, in times of a crisis, there could be a rush for a reverse-swap, i.e. getting back your bank deposit for the bond. The NBFC (non-bank financial company) crisis that arose in the ongoing COVID-19 pandemic illustrates disruptions that arise in such swaps of financial liabilities.

When fund houses couldn't get bank deposits in exchange for bonds (assets of NBFC) which they held, meant that they were unable to settle claims of investors who wanted their bonds (liability of NBFC) to be swapped back for bank deposits. Banks were then expected to come to their rescue. They could exchange the bonds (assets of the NBFC) for deposits so that the NBFC could pay off investors.

When we understand money as a financial liability it is obvious that all liabilities are not equally secure. A hierarchy of money exists with household and individual IOUs at the base, corporate and NBFC liabilities above it, bank deposits higher up and finally, those of the State (central government and RBI).
The question arises as to why are government liabilities the most secure? While all other financial liabilities are ultimately backed by physical assets, which always entails risk, State liabilities are not; they are backed by the fact that the State is the monopoly issuer of legal tender, i.e. liabilities that are accepted in settlement of obligations to the State — primarily taxes. In a modern economy the State, by design, also accepts bank deposits in settlement of tax obligations making use of bank money widespread; however, security of bank deposits is limited by an insurance ceiling (Rs 5 lakh).

This answers the question we posed at the beginning; why 7.75 percent GOI bonds were so much in demand in the ongoing crisis. At the same time, it highlights why the GOI must run a deficit and accumulate debt so that private sector desire for secure and risk-free savings can be met. A reluctance to accommodate this desire could raise the private sector's marginal propensity to save, induce a contraction in the economy through the paradox of thrift and thereby force the fiscal deficit to widen. The economy could be drawn into a vicious whirlpool of austerity policies.

Why Modern Money Theory needs to be taken seriously [1]

We must question blind allegiance to mainstream paradigms rather than dismiss heterodox views without serious inquiry.

In just four minutes of reading time, Ajit Ranade's opinion piece, The Inexplicable Allure of Modern Monetary Theory, published in Mint on 21 October, attempts to bring down Modern Money Theory (MMT), a school of thought that presents a cogent alternative to the mainstream neoliberal macroeconomic discourse by fundamentally reassessing the notion of money, the modern monetary system, and the role of the state in a free-market capitalist economy. Arguably, Ranade's article conveys an inadequate interpretation of its essential propositions, nuances and relevant policy implications.

MMT asserts that economically sovereign states decide the unit of account, or the "money", in which all private sector obligations to the state—primarily taxes—must be settled. In India, for example, tax obligations are settled in rupees and rupees only, either in the form of currency notes or through commercial banks which debit our accounts as well as their reserve accounts with the central bank. But how do we get these notes and how do commercial banks get positive balances of reserve money with the central bank in the first place? The answer is obvious; when the government spends rupees into existence. Theoretically and institutionally, an economically sovereign country issuing its own fiat currency cannot face a solvency crisis. The government can issue an unlimited quantum of money into existence through printing, or by means that would be more appropriate today, such as computer keystrokes, which, incidentally, is what former US Federal Reserve chief Ben Bernanke referred to when he was asked how he bailed out private banks with some $5 trillion after the 2008 US recession. However, and most importantly, "can" does not mean

[1] *Livemint, 4.11.2019*

"should", and no MMT proponent has ever said that sovereign governments should issue unlimited amounts of money. Any critique of MMT must begin with a reading of scholars including Randall Wray, Warren Mosler, Stephanie Kelton and Bill Mitchell, among others.

When a government spends money into existence, it may cause inflation if the spending faces "real" physical and natural resource constraints, such as of labour, capital, technology and skills. The government must then drain out the "excess" money, say, through taxes, destroying the money spent into existence. Here, taxes are not a source of funds for government spending. Given their impact on incentives, governments could alternatively choose to issue and sell bonds to the private sector to drain excess money. Once again, the government sells its bonds only for rupees, though it doesn't need its own promissory notes. Bond sales are not an instrument of raising revenue for the government. They serve as an instrument of controlling inflation (although not all inflation is due to government spending), while also providing safe assets to the private sector and an instrument for the central bank's monetary policy operations.

Repayment of public debt is done through the issue of new debt, rather than imposing taxes on our grandchildren. As Warren Mosler argues, some (if not all) grandchildren are twice blessed—they inherit the bonds and thus repayments on it, as well as the benefits of the physical assets built by government spending. Dismantling erroneous and inconsistent assumptions of the Loanable Funds theory of market interest rates that has given rise to the crowding-out hypothesis, MMT argues that interest rates are not a market-clearing price, but an instrument of monetary policy operated by the central bank to achieve its final inflation target. It is possible that when a central bank anticipates higher inflation, it could raise rates, although this does not have to be based on a naïve correlation between the fiscal deficit and higher expected inflation.

MMT further postulates that fiscal deficit targets and public debt figures are meaningless, per se. Japan, with a debt-to-gross-domestic-product ratio of 250%, struggles to check deflation, while Zimbabwe, even with an average 75% debt-to-

GDP ratio since the 1990s, is unable to tame hyperinflation. In India, inflation has remained in check and interest rates are falling despite the overall fiscal deficit of the Centre and states having supposedly touched 8-9% of GDP. The US fiscal deficit has increased substantially in the last few years due to significant tax cuts, but there is no sign of inflation and higher interest rates. The crisis in Europe, where MMT principles do not apply, sends a clear message to the world: that austerity has failed in alleviating unemployment, and since monetary policy is a spent force, recourse to fiscal policy is inevitable.

Repositioning the importance of fiscal policy in achieving full employment of a nation's resources (labour, in particular), MMT advances an unequivocal policy stance: a universal job guarantee (UJG) programme that neoliberal economists unilaterally dismiss without any study and reflection as an idea of the "leftist crowd". Contrary to intuition, MMT argues that a UJG programme will stabilize prices, aggregate demand, and consequently, private sector investment spending. As John Maynard Keynes put it, "Look after unemployment and the budget will look after itself."

It is important for macroeconomists today to rise to the challenges posed by unemployment and widening regional, income and wealth inequalities by questioning blind allegiance to mainstream paradigms, rather than dismissing heterodox views without serious inquiry. Popular economic commentators like Ajit Ranade could perhaps make this effort, too.

Is a paradigm shift in macroeconomics imminent? [1]

While Modern Monetary Theory has been embraced by the public and by policymakers, mainstream economic theory remains in thrall to obsolete ideas.

"… the question is since we are not funding the government with tax revenue, we have decided that Modern Monetary Theory [MMT] is real, because we could just print money, because we are the reserve currency. Why would you even consider raising taxes on families making 400 grand? Why do that at this point? You don't need to. To punish you, obviously."

This is what Tucker Carlson said – yes, Tucker Carlson – on Fox News, making explicit reference to MMT.

Carlson was, however, not the only one to highlight a key tenet of MMT – whatever may have been his objective in doing so – that taxes actually do not fund government spending. John Oliver who hosts the popular television program, Last Week Tonight, had a full episode recently on the US national debt. Here's what he said: "amidst the current crisis that we are in, many experts are less concerned about us spending too much than spending too little and if it turns out than inflation or interest rates do start to rise, we should absolutely start cutting deficits, although not by cutting government programs that people need but taxing people who can afford it." With a strong dose of humour, Oliver ridiculed deeply ingrained fears that Americans have been led to believe about deficits and debt, propagated by 50 years of neoliberal macroeconomic theory. Interestingly, many of his comments were uncannily similar to what MMT has been repeatedly arguing for decades now.

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[1] *Moneycontrol.com, 23.04.2021*

Reeling under a crisis unleashed by the COVID pandemic, the US bailed out its financial system with an expansion in the Federal Reserve's balance sheet by some $7 trillion while the fiscal deficit hit a 75-year high of 18% of GDP in 2020. This was followed by a rescue plan of $1.9 trillion that includes $1400 relief cheques to the unemployed and poor, and just a few days later an even bigger package of a $3 trillion infrastructure program spread over the next eight years. All this has made one fact unequivocally clear: the US government does not earn money or collect revenue before it spends. In common parlance, it simply "prints" money and spends.

Surprisingly, or perhaps unsurprisingly, the massive infrastructure plan proposed by President Biden has elicited more discussion on how the money will be spent rather than where the money for it is going to come from – something which even Carlson has seen through. The American Conservative, a magazine of "Main Street conservatives", published an article, Modern Money Theory for Conservatives, with the deck, "It's time to debate to what ends, not whether the government should spend." Bloomberg too, in the deck to a recently published article announced that excepting inflation, "Economists are steadily ditching other cues to tighten policy. Deficit warnings fall flat …", and conceding in the article that "In some ways, the new approach aligns with the school of thought called Modern Monetary Theory."

While the Global Financial Crisis of 2008 drew tentative attention to MMT, it is the COVID pandemic that has brought it into popular macroeconomic discourse in the US. The role of the state in alleviating the economic and humanitarian crisis is urgent and undeniable. And it is in times of deep crisis that new paradigms in economics begin to be taken seriously when they connect to economic, social and political realities. Biden must be aware that the neoliberal response to the 2008 crisis was far from adequate. When "top 1% incomes grew by 31.4% while bottom 99% incomes grew only by 0.4% from 2009 to 2012" it is obvious in hindsight why rising discontent was rife in the United States. The urgency with which Biden is confronting this challenge shows that he cannot risk history being repeated. While Trump may have been defeated, Trump(ism) can make a comeback. The failure of fiscal conservatism and austerity policies around the world can no longer guide policy responses to crises especially when the capacity of the government to leverage its financial power is in the open.

The story in academia is, however, neither supportive nor promising. Macroeconomic theory taught at Ivy League universities and followed almost everywhere in the United States – and in the rest of the world – seems to have decoupled itself altogether from reality. Here is the conclusion to a recent paper on recursive macroeconomic theory: "I obtain the results in a complete-market two-agent economy with an aggregate endowment process that is specified as a geometric Brownian motion. The focus of this paper is primarily theoretical and the stochastic structure of the economy is kept deliberately simple to yield a sharp analytical characterization, sacrificing quantitative fit." Incredible!

The rise of neoliberalism – as a counter to Keynesian macroeconomics – was after all due to the ability of its founders – be it Milton Friedman, James Buchanan or Paul Volcker – to communicate issues of the times with the larger world and the political class. Present-day macroeconomists seem to have lost this ability. No wonder the article in the American Conservative derides "a faulty and outdated economic theory." Meanwhile, fence sitters like Olivier Blanchard will rather claim that "we have no explanation" as to why interest rates have been falling in spite of soaring public debt to GDP ratio. Paul Krugman had also raised the same question years ago on Italian and Japanese interest rates, ultimately relenting that "I actually don't have a firm view. But it seems to be an important puzzle to resolve." This in spite of the fact that MMT has a convincing answer to the paradox all along.

How is all this important for a country like India? Many economists dismiss the relevance of MMT outside of the US for the reason Carlson (perhaps inadvertently) mentions: the US dollar is international reserve currency. Although countries are not equally privileged as the US, most do issue their own fiat currencies, possessing monetary sovereignty in varying degrees. It is all the more imperative for them to realize this fact and follow strategic longer-term policies that would enable them to leverage their monetary sovereignty for the common good of their people.

At the same time, it is also important to realize that the US has had a hegemonic influence over the macroeconomic narrative. After all, most standard textbooks are American or rehashes of them and "complete-market two-agent economy" the dominant macroeconomic paradigm across the world. Although many heterodox economists like James Galbraith remain sceptical about a paradigm shift in the US there can be little doubt that if and when it happens, it will certainly reverberate across the world.

The ideological origins of some numbers in economics [1]

An inflation target of 2 per cent, a fiscal deficit target of 3 per cent and a public debt to GDP ratio of 60 per cent were all numbers plucked out of thin air.

I am not sure if the numbers two, three and sixty would have fascinated the great mathematician Ramanujan but they certainly meant a lot to economists, particularly since the rise of the neoliberal era in the last quarter of the twentieth century. The number two or 2% became synonymous with an inflation target, 3% with the fiscal deficit target and 60% as the upper limit in the ratio of public debt to gross domestic product (GDP). In doing so, these target numbers, whether or not they were achieved, encaged macroeconomics and macroeconomic thought for decades.

The early 1960s were probably the best years in modern US economic history, with declining unemployment rates and inflation stable at less than 2%. Although unemployment continued to decline until 1970, inflation gradually began to rear its head from 1965, crossing 5% in 1970, but then declining to just over 3% in 1972. Nonetheless, the trend in rising inflation enabled economists like Milton Friedman to launch an attack on the welfare state based on Keynesian policies but more importantly to check the growing share of labour in US GDP. Then came the oil shock of 1973, triggered by the Yom Kippur war between Israel and Egypt that pushed US crude oil prices per barrel from $3.60 in 1972 to $12.21 in 1975 and $37.42 by 1980. Inflation rates skyrocketed from 3.2% in 1972 to 13.5% in 1980. Although the reason for high inflation and rising unemployment clearly lay in high oil prices – or what is referred to as cost-push factors – the opportunity was seized by economists to dismantle the post-war Keynesian edifice by arguing that government spending or demand-pull factors would only exacerbate inflation without solving the unemployment problem in the longer term.

[1] *Moneycontrol.com, 12.08.2021*

A new economic paradigm took definitive shape soon after Paul Volcker, Chairman of the US Federal Reserve, suppressed inflation by increasing interest rates to record highs of close to 19%, although at the cost of inducing a recession. US GDP growth rate turned negative and unemployment rates reached 11% in 1982. However, with inflation tamed, interest rates could be brought down so that the private sector would be able to propel growth through higher private investment spending. At the same, the push for freer global capital flows and international trade kept US wages in check. Not surprisingly then, by 2010, labour's share in US non-farm business sector had fallen to 56% from a high of more than 66% in 1961.

The neoliberal economic paradigm had arrived, enshrined in the principles of the Washington Consensus, spreading like a prairie fire, and unrooting all other alternative paradigms of development that economists had contemplated. Free market capitalism proffered to take the world from Keynes' 'road to serfdom' and put us on the 'highway to prosperity' if inflation rates were kept low and stable, while at the same time, government expenditure was capped, so that independent central banks were not compelled to raise interest rates to counter the inflationary pressures generated on account of profligate government spending.

Although macroeconomic theory rationalized the ideological faith in free market capitalism, implementation of decisive monetary policy required an anchor in a computable metric. A 2% inflation target was proposed. But where did this magical number come from? Interestingly, neither did it originate from theory nor in a large economy like the US or Japan but rather in the small island-nation with a population of 5 million, New Zealand. A fascinating piece in the New York Times (2014) narrates the sequence of events that culminated in Donald T. Brash, then Governor of the Reserve Bank of New Zealand adopting the number that starkly 'was plucked out of the air'. Even if the number was arbitrary, the effect was indeed magical. Inflation expectations were anchored, resulting in greater confidence and definitiveness over the Central Bank's actions. In a matter of just two years between 1989 and 1991, New Zealand saw its inflation rate falling from almost 8% to 2%. Even as countries across the world set their own targets like 4% (+/- 2%) in India or 6% to 10% in Ghana, there remained a crucial concern. What if the inflation target rate set is too low, constraining the full utilization of resources and not allowing for a higher standard of living?

A few years earlier, on the fiscal front, to check government profligacy, another metric had been introduced: a fiscal deficit target number of 3% of GDP. Its

origin was equally stark: in 1982, when the French government faced a problem with rising fiscal deficits, Guy Abeille, an employee in the finance ministry, was asked to suggest a solution to the problem. Given that France's deficit at that time was 2.6% of GDP, he chose the target number as 3% as it would have been difficult to lower the existing deficit. This rule was then incorporated in the Maastricht Treaty and became a rule that member states of the Eurozone had to adhere to. The 60% debt to GDP target was also introduced in the Eurozone and was equally arbitrary rather than being the outcome of any theoretical exercise. While a deficit target may no doubt be important for the introduction of a common currency as in the case of the Eurozone, its acceptance across monetarily sovereign nations that issue their own fiat currencies was the outcome of the overpowering neoliberal macroeconomic worldview.

The change in macroeconomic thinking post the global financial crisis of 2008 and even more so since the breaking out of the Covid-19 pandemic is evident in the veneration to these target numbers, or more precisely, the lack of it thereof. In the US, like in 1970, inflation has recently crossed the 5% mark, deficits touched 15% of GDP in 2020 and debt to GDP stands at 130%. And in spite of these extraordinarily high numbers, US President Biden is pushing for an additional $1.9 trillion stimulus plan. Whatever happened to those once sacred numbers? Recent tweets by Oliver Blanchard, one of the most cited economists, tell us how confused macroeconomists actually are: even as he thinks that Biden's package may be too large, he questions his own opinion, 'Could I be wrong and too pessimistic? Sure.'

The political fallout of neoliberalism with rising unemployment, sometimes camouflaged in declining labour force participation rates, and the extreme skewness in the distribution of income and wealth, has led the political class to side-line economists and instead pursue policies that can prevent further social and economic polarization. In other words, it has now become obvious that the target numbers – 2%, 3% and 60% – were always ideologically motivated and never based on any objective principles that economists made them seem like, with their mathematically opaque models.

Modern Money and the Obsession Over Fiscal Consolidation [1]

There is a desperate need to break the orthodox, widespread belief that all deficits and debt are equally undesirable.

The dust kicked up by the annual Budget "event" has long settled. What's interesting is that the pre-Budget excitement always seems more intense and more drawn out than post-Budget.
Year after year, one point of tension in the build up to the Budget is whether or not the government will adhere to a low fiscal deficit target or will it reset the fiscal consolidation target.

A specific number turns into the centre of discussion in newspapers and TV channels; is 3.1 too low or 3.4 too high a deficit? This year, for instance, a few days prior to the Budget, one daily stated, "FRBM [Fiscal Responsibility and Budget Management] Panel offers little spending space to government" while another reported that the panel suggested the "government not to keep fiscal deficit below 3% (of GDP)".

And then came the big day: the finance minister announced the deficit target at 3.2% for 2017-18. Stock markets reacted positively, the rating agencies seemed content and Budget analysis programmes did not have too much to argue about. Meanwhile, the general public was left feeling that economists, experts and international rating agencies have it all figured out. The government had done well to heed their advice and keep the economy on track.
But why are economists, and consequently politicians, so anxious about a number like 3%? Didn't the US fiscal deficit touch almost 15% of GDP in 2009? We know it was in response to the global financial crisis, but what were the consequences of this massive

[1] *The Wire, 4.04.2017*

deficit? Did the US economy collapse soon after? Obviously not. Given this fixation over the 3% target, it would be pertinent to ask where this number (3%) comes from? A little-known fact may help: the number was supposedly "invented" by Guy Abeille, an official in the French finance ministry, and adopted by the Stability and Growth Pact agreement between EU member states. In an interview, Abeille supposedly said, "…we came up with this number in less than an hour. It was born on the corner of a table, without any theoretical reflection." Even as an obituary for the EU is being written by many, the 3% deficit target number seems as robust as ever. But if the figure is not spewed out by some complex dynamic stochastic general equilibrium model and was instead an (arbitrary) invention to ensure stability of the European Monetary Union, why is a country like India besieged by this enigmatic target number? The fiscal deficit target number of 3% of GDP has now come to be taken for granted as given; dangerously so because when we reach this point in economic analysis, we stop questioning its basis.

More recently, the FRBM Review Committee has suggested that the fiscal deficit target may adhere to a range rather than a fixed number. This flexibility in the deficit target has, however, been replaced by a preferred anchor: public debt (or the stock of accumulated deficits) at 60% of GDP. One critical factor taken into consideration while arriving at the debt target as articulated by N.K. Singh, chairman of the committee, is "the standard government solvency constraints." This is line with the IMF's position that "prudence dictates that countries target a debt level well below the limit, the limit delineates the point at which fiscal solvency is called into question." To the general public, words like 'budget', 'deficit' and 'debt' are symbolically loaded, conjuring up images of insolvency, bankruptcy, unsustainable indebtedness and countries going broke or simply falling off a (fiscal) cliff.

Ricardian irrelevance

Debts must also be repaid. And who bears the burden of debt at the time of repayment? The obvious answer is that future generations will have to take the tab by paying additional taxes to the government in their lifetime. Although economists have a rather archaic term for this, "Ricardian equivalence", it often finds expression in more poignant phrases: "risking our future prosperity by sticking our children with the bill", "stealing from future generations by running fiscal deficits", "you don't want to take from your children's pocket" or "the unborn must share higher fiscal burden".

From such economic imagery arises the widespread belief that all deficits and debt – including those of the government – are equally undesirable and the necessity to rein them is unequivocal. Short-term deviations may be acceptable but in the longer term, these simply cannot be endured. And if this is true for you and me, then it must be true for the government too.

There is a desperate need to break this orthodox, neoliberal macroeconomics myth, which is unrelentingly being perpetuated in macroeconomic discourse. This is the case even as many of the tenets of neoliberal economics are being questioned under new populist-nationalist regimes. The fiscal deficit is the most important macroeconomic policy instrument available to the state and it is imprudent for sovereign governments not to appreciate and utilise it to the maximum. But this will happen only when we delve deeper into understanding the modern monetary system based on fiat currencies. Orthodox macroeconomics seems to be caught in a time warp, a period when currencies were based on a gold (or silver) standard wherein the state promised conversion of all its debt into gold (or silver) at a fixed rate. Money creation by the state was therefore clearly constrained by its ownership of precious metals. Since 1971, however, that monetary system has been buried when the world abandoned the gold standard and adopted inconvertible (into precious metals) fiat currencies. Even when countries do agree to full convertibility of their currencies into foreign ones, it is mostly not at fixed rate.

In an earlier article in The Wire, I had elaborated one of the most fundamental tenets of modern money theory (MMT): the state, unlike households and firms, does not face a budget constraint. Financially speaking, a state which issues its own fiat currency (like India, Japan or the US but not Greece or Spain) can run deficits in its own currency of 3%, 15% or even 150%. It does not face a solvency issue, although there will be other important economic repercussions. Nonetheless, as a first step, it is critical to dismiss the notion that setting a fiscal deficit target arises from concerns over solvency per se. If deficit targets are emanating from the other economic repercussions – specifically inflation and/or balance of payments deficits – then there is no necessity of a blanket rule on deficits or debt like 3% or 10% of GDP respectively. The deficit is a policy variable that must be contextualised. While a deficit of 1% could trigger inflation in one situation, a deficit of 10% may have little impact on the price level (as in the case of Japan over the last 25 years and the US more recently).

There has also been a situation in history – prior to 1971 – when "modern money" was

actually administered for a few years in the UK during the First World War. Although war is an extreme event, it does illustrate some fundamental misconceptions about fiscal deficits and modern money which neoliberal macroeconomists continue to cling to. Issued just one day after Britain declared war on Germany, the Currency and Bank Act of 1914 "permitted the [UK] Government to print notes as legal tender in place of gold sovereigns and half-sovereigns." The gold standard was de facto suspended. The notes or treasury currency were made legal tender so that obligations to the state (payment of taxes, duties, fees and fines) could be settled with these notes. But since printing of the currency would take time, the Act even allowed postal orders to "temporarily be current and legal tender in the United Kingdom in the same manner and to the same extent and as fully as current coins."

But why was the gold standard suspended with such urgency? The answer is simple – the government needed resources to fight the war and these would have to be obtained from the private sector. By making government debt (IOUs) legal tender in settlement of obligations to the state, it ensured the private sector's willingness to accept its IOU or debt. As MMTers argue, taxes drive money and it does not matter what the money thing is (even postal orders are money) as long as the state makes it legal tender or in other words, acceptable as a means of settling obligations due to the state. By abandoning the gold standard, the UK government had gotten rid of its financial constraints and was able to spend in order to acquire or transfer real resources from the private sector to itself as the war demanded. It should therefore come as no surprise that the government's share in the economy's aggregate expenditure increased from 8% in 1913 to almost 40% by 1917.

A discerning reader will also realise that the UK government did not first raise financial resources through taxes or borrowings and then increase its expenditure. If that were so, what was the need for the Currency and Bank Act to be passed a day after the war began? Could it not have simply increased borrowings or taxes payable in gold sovereigns? Even present-day economic historians are caught in the same time warp as (orthodox) macroeconomists when they articulate the "exceptional nature of the expansion in government expenditure [to finance the War] … required an exceptional fund-raising exercise by the government." Another historian argues that "25% of the government's financial resources were derived from taxes … borrowing from the public were the chief forms of war finance." Although the government borrowed money from the public and taxes were collected in due course it is important to reiterate that it was not a precondition for government spending to happen. Put simply, spending through issue of new fiat currency preceded tax collection and borrowings.

Free from the constraints of the gold standard (that required conversion of currency to gold at a fixed rate), the government was then able to procure resources from the private sector to fight the war. From a small fiscal surplus in 1913, Britain's faced a fiscal deficit of almost 48% of GDP in 1916-17 while the national debt to GDP ratio increased from 26% in 1913-14 to more than 127% in 1918-19 and monetary base (M0) more than doubled between 1913 and 1919 (all statistical data on the war in this article is drawn from here and here). But what were the economic consequences of such profligacy? First, Britain did eventually win the war and second, its economy did not collapse.

Qualitative shifts

Nonetheless, unbridled issue of currency by the UK government and its burgeoning fiscal deficits did have serious economic repercussions both, positive and negative. Real GDP grew by 13% in the war years while employment grew by almost 5%. But this happened at a heavy cost to the private sector. Private sector consumption and investment expenditure as percentage of GDP contracted between 1913 and 1917, from 77% to 60% and 7.6% to 0.9% of GDP, respectively. While total employment grew, the share of civilian employment declined sharply by 15% even as military employment saw a ten-fold increase. The composition of output of selected items also showed an interesting trend – output of essential goods such as grain, meat and potatoes stagnated while supplies of arms and ammunition increased sharply. But these qualitative shifts were obvious, the government was transferring national resources to itself to fight the war.

The question that must be asked is why such action is considered inappropriate during peace times to meet an objective like full employment? Why cannot the government employ resources (specifically, labour) lying unutilised by the private sector by increased spending – the money for being simply "printed" or injected through the banking system? The answer is usually that deficits can trigger high inflation, unsettle the balance of payments as well as strain exchange rates. The impact of war spending by the UK government once again provides us with some useful insights in this regard. The retail price index more than doubled during the war years while imports grew

sharply, taking UK's current account from a surplus of £125 million in 1913 to a deficit of £204 million by 1919.

The trade-off between growth and employment from increased government spending on the one hand and inflation and external account on the other is evident. In fact, the concern over destabilising inflation became a major reason for neoliberal macroeconomists to suppress fiscal activism. It is necessary to mention that MMTers do not reject the possibility of inflation; however, it is necessary to appreciate that first, reasons for high inflation are contextual – especially whether there exists unemployment and surplus capacity across industries – and second, a normative judgment is required to decide the weights that can be assigned to each objective before we rule one out in favour of the other.

One other question remains unanswered. Why were taxes and borrowings at all required by the UK government if they were not required for government spending? MMT provides an answer: to curb excessive aggregate demand and consequent inflation. While tax revenues increased in absolute terms, they were clearly inadequate to drain out the injections arising from increased government spending as seen from the fact that the fiscal deficit grew substantially during the war years. To siphon out the remaining injections of currency by the government and curb the possibility of runaway inflation, "borrowing" or accumulation of public debt was the way out. Not only was the bank rate increased from 3% on July 29 to 10% on August 1, 1914 but banks were even threatened with compulsory purchases of treasury securities if voluntary purchases proved inadequate. Banks supported the purchase of these securities through liberal advances to the public. Unfunded medium and long-term debt increased from a mere £50 million in 1913 to a whopping £4.5 billion by 1919. This drain of excessive money put in circulation by war expenditures through borrowings not only kept inflation in check but also provided the private sector with massive interest yielding assets at the end of the war.

Britain bravely announced its return to the gold standard in 1925 at the pre-war parity of $4.68 to the pound. However, the high inflation rates during the war years meant that the pound was grossly overvalued. The UK government began to witness an outflow of gold, which was stemmed through higher interest rates. The negative impact of this step on the domestic economy ultimately forced UK to abandon the gold standard in 1931.

For us, however, the lesson to be drawn from this historical episode is the power of "modern money" in allowing the state to achieve higher levels of real GDP and, more importantly, employment. The state does not finance its expenditures by raising money from the private sector. Instead, it transfers resources from the private sector by issuing currency. To quell the inflationary and external impact of the increased expenditure the state resorts to taxation and borrowing as a means to drain surplus liquidity from the system and in recent years, to ensure that the interest rate target set by the central bank (and perhaps the government, jointly) is achieved. These implications of modern money are critical if governments want to break free from arbitrary (self-imposed) constraints that originate from neoliberal macroeconomics.

With the growing concern over unemployment, discontent over the preoccupation of central banks with low and stable inflation as well as a recent turn towards fiscal activism in the West, it could be a matter of time before MMT becomes the basis for new populist-nationalist macroeconomic policy. And like so many instances in the recent past, what was once considered left/left-of-centre economics has now been appropriated by the right/right-of centre.

US faces a fiscal cliff: Crisis or farce? [1]

The debate over whether the US debt ceiling needs to be raised will revive pernicious fears about fiscal deficits.

Brace for the upcoming global headlines in the next few weeks: US likely to fall off the fiscal cliff, the US government runs out of money, the US government hits its debt ceiling, will the US government default on debt?

Although the US has never really fallen off the cliff completely – or put bluntly, never defaulted on debt – the episode could nonetheless have important repercussions. For instance, between December 2018 and January 2019, more than 300,0000 government employees were furloughed for a month. Also, as reiterated by the US Treasury Secretary and former Chairperson of the Federal Reserve, Janet Yellen, concerns over the fiscal cliff can trigger uncertainty shocks and economic volatility. In a global economy that is only recently witnessing a return to some sense of normalcy after an extended period of uncertainty on account of the pandemic, heated exchanges between the Democrats and Republicans over the debt ceiling as well as the looming possibility of a taper tantrum amidst inflation concerns is likely to inflame already frayed nerves and undermine a robust recovery.

Although the US Congress has raised the debt ceiling 78 times since the 1960s, the fact that it keeps going through the process repeatedly is perhaps only to instil fear that there are limits over deficits and debt, and their limitlessness should not be taken for granted. More importantly, the US fiscal cliff sends a message throughout the world: after all, if the US – with the dollar as the international reserve currency – faces fiscal constraints, then other countries too face similar if not even more austere ones. It is no wonder then that several countries have formalized self-imposed fiscal constraints through the passing of legislations on deficits and debt.

The position of the US government is presently quite precarious if one believes that the debt ceiling will actually be imposed. On August 1, the debt ceiling of $28.5 trillion became effective and from then on, the government has had to live off balances held in Treasury General Account (TGA), which is now about just a couple of hundred billion. Before it reaches zero, Congress must agree to raise the debt ceiling or else the government will not be allowed to add to debt, although it can refinance its maturing debt. At the same time, during the time the episode plays out, the Treasury will announce "extraordinary measures" to keep the government from defaulting on its payments. This will include, for example, suspending investments in Thrift Savings Plan's G Fund and Exchange Stabilization Fund, at least for a short period of time. Once the debt ceiling limit is raised by Congress, the funds would be made whole.

One danger of the fiscal cliff debate is that it will once again shift the focus of public debate to fiscal constraints rather than appreciating its remarkable role in preventing the US economy from sinking into a depression on account of the pandemic. While the fiscal deficit rose sharply from 4.6% of GDP in 2019 to about 15% of GDP in 2020, US GDP declined by just about 3.5% in 2020 in spite of the lockdowns and systemic disruptions during the pandemic. With continuing fiscal support of more than 10% of GDP in 2021, the US economy is likely to achieve a growth rate of around 6% in 2021. While the deficits will return to 4% levels in 2022, GDP growth will remain above 5%. The debt to GDP ratio will stabilize at about 102% over this decade. All this assuming that there are no further disruptions from the pandemic.

The debate over the fiscal cliff is a part of a wider debate over fiscal deficits and public debt that delineates macroeconomic discourse into competing schools of thought. The decline of the Keynesian era post-1970s led to the rise of a new macroeconomics that advocated monetary rather than fiscal policy. Theories were propounded calling for fiscal prudence and consolidation in order to keep inflation low and stable to support private sector-led growth. The business cycle, it was claimed, had been tamed once and for all. However, the financial crisis of 2008 saw a return to Keynesian fiscal policies, but only for a short while. The return to austerity was slowly creeping back into macroeconomic discourse only to be disrupted once again by the pandemic. The strong budgetary interventions by the Biden administration to the pandemic were a

[1] *Moneycontrol.com, 20.09.2021*

clear sign in the changing stand over fiscal policy as compared to the tentative approach of President Obama after the 2008 global financial crisis.

The rise of Modern Money Theory (MMT) and the wide coverage it has received recently in the US popular media has made people question whether a state with its own sovereign currency does in fact have the power to create money without artificial financial limits. If this wasn't possible, how did the US government spend an additional 3 or 4 trillion dollars during the pandemic without first raising taxes to fund expenditures? As MMT repeatedly argues, borrowings are never a constraint for fiscal spending as the state "borrows" dollars or its own financial liabilities that only it issues in the first place. And as expected, the borrowings came in substantial measure from the Federal Reserve, commercial banks and institutional investors along with the increased spending.

It is virtually impossible that the US Congress will not raise the debt ceiling on this occasion like all the others in the past. The Republicans would not want being held responsible for an austerity-induced recession at this precarious juncture. The question, however, remains whether the whole fiscal cliff episode will revive fears over deficits and debt rather than advancing fiscal policy as an instrument that can be harnessed not just in times of acute crises but also in achieving sustainable growth.

The other side of fiscal deficits [1]

A continued and substantial general fiscal deficit is required to satisfy the domestic private sector's desire for financial security.

The Union budget announced in February 2020 had set the fiscal deficit target for the year 2020-21 at 3.8 percent of GDP. Apprehensions over the ability of the government to achieve the deficit target were already rife at that time. The outbreak of the Covid-19 pandemic and the lockdown which ensued in late March have only raised concerns over the deficit even as the government struggles to achieve a balance not only between lives and livelihoods but also between livelihoods and fiscal constraints. While most economists are sympathetic to the situation of unemployment and the need for fiscal measures, it comes with the usual caveat over the possible burgeoning of the deficit. Given the predicament that we are in presently, it is critical to deepen our understanding of fiscal deficits so that misplaced fears over a widening deficit are allayed and the government can instead shift focus to issues pertaining to the real economy.

Sectoral Financial Balances

Without an accounting perspective most mainstream macroeconomists fail to grasp the essence of modern money as a financial liability – a promise to pay – which is then a financial asset to someone else. The most pertinent manifestation of this unknowing is fear over fiscal deficits. Few economists talk about its "other side" – accumulation of financial assets. This accounting fact is the basis of the sectoral financial balances (SFB) equation, which states that net financial asset accumulation (NFAA) across the three sectors of an economy – the government, the foreign sector and domestic private

[1] *Moneycontrol.com, 30.06.2020*

sector (DPS) – must sum to zero, where net implies external to that sector. Positive DPS NFAA is then possible if and only if either the government and/or the foreign sectors are accumulating net financial liabilities. While a fiscal deficit implies that the government is accumulating financial liabilities, a current account surplus (deficit) implies a net outflow (inflow) of capital from (into) the country implying accumulation of financial liabilities (assets) by foreigners. It is possible that DPS may accumulate net financial liabilities or what is called leveraging, when at least one other sector is accumulating net financial assets; however, this cannot be sustained indefinitely as the private sector must repay its debt over a finite time horizon. Only economically sovereign governments can issue liabilities, perpetually.

NFAA is an important component of the DPS's savings portfolio since physical assets like gold, land and property can not only lose value but are also susceptible to theft, encroachment and so on. While financial assets are safer and more convenient to hold, DPS would usually desire to hold financial assets both within and outside the private sector. The former consists of equity, debt and deposits. However, these financial liabilities within the private sector are ultimately backed by physical assets, which are prone to capital losses and default arising from risk and uncertainty. This induces the private sector as a whole to seek financial assets outside the private sector. The only safe financial assets are the liabilities of the government – the only liabilities not backed by physical assets but by the ability of the state to issue its own currency. In India, these financial assets, i.e. government liabilities include public provident fund (PPF), government bonds and bills, national savings certificates and so on. The desire of DPS for NFAA is a key determinant of macroeconomic outcomes and cannot be ignored in understanding India's present predicament.

The pre-pandemic situation

While the SFB equation does not establish cause and effect, it provides a useful analytical tool to explore possible context-specific macroeconomic scenarios. A study of the evolving trend in sectoral financial balances can allow us to make relevant extrapolations into the future based on present situations. Drawing upon institution-wise savings and investment data, we find DPS NFAA was increasing since 2010-11, remaining at more than 6 percent of GDP since 2015-16; a clear indicator that India's DPS was steadily deleveraging. This desire of DPS for NFAA as well as that of the foreign sector to hold domestic assets (through current account deficits) had been accommodated by the government's large general fiscal deficit (centre, state and off-budget deficits), which was mostly in the range of 7 percent to 9 percent of GDP since 2010.

The SFB equation provides a clue to the possible consequences if drastic austerity measures had been implemented to contain the general fiscal deficit from its 8 percent level in 2018. A severe slowdown, or more likely a recession would have ensued to contract savings so that NFAA decreased. However, if DPS were to continue to desire NFAA at about 6 percent, it would raise its propensity to save or cut back investment spending. Either of these responses would have forced the Indian economy down a vicious spiral.

The decomposition of DPS into household (HH) and private corporate sector (PCS) further provides some critical insights into weaknesses in the Indian economy, pre-pandemic. First, PCS was unequivocally deleveraging between 2011-12 and 2017-18 by increasing its savings from 9.5 percent to 11.6 percent and cutting back on investment spending from 13.3 percent to 12.1 percent of GDP. This amounted to a decrease in leveraging (deleveraging) or de-accumulation of net financial liabilities by more than 3 percent. Second, the HH sector (which includes non-corporate private sector enterprises) data shows NFAA having marginally decreased from 7.4 percent to 6.6 percent over the same period. However, this should not be considered as a sign of leveraging since household savings and investment rates show a drastic decline by almost 5 percent each. The savings rate for HH fell from 23.7 percent to 17.2 percent while investment rate fell from 16.3 percent to 10.6 percent during this period. This sharp contraction is probably due to a sharp decline in savings and investment in property by households in addition to a decline in investment spending by the non-corporate MSME sector. Although data availability is limited to 2017-18, it is likely that DPS has probably gone through an even more significant deleveraging cycle since then given the overall decline in GDP growth from 7 percent to 5 percent.

Even prior to the pandemic, India's situation seemed akin to a "deflating balloon" (exports as a percentage of GDP have also witnessed a steady decline since 2013), driven by a desire for a high NFAA emerging from an overall lack of robust confidence in the private sector.

The post-pandemic situation

The post-pandemic situation is likely to witness faster and more aggressive deleveraging

by DPS. Private sector investment, which was already showing a dismal trend, will only be further dampened by the simultaneous demand and supply shock inflicted by the pandemic. Furthermore, given the uncertainty over jobs, salaries and wages, the propensity to save by the DPS is also likely to increase. While some of these savings will find their way into stock markets, savers will also consider physical assets like gold. However, the safest asset, in terms of nominal returns, default risks and capital protection, are central government securities. The reported surge in demand for the 7.75 percent Government of India bonds (which was recently suspended) and even for state government bonds (although not equal in safety to central government securities) indicates that the private sector is deleveraging and looking for relatively safer avenues to park their savings.

With the external sector almost in balance, this increased desire for private sector net savings must be accommodated by the government. In other words, a continued and substantial general fiscal deficit is required to satisfy the DPS's desire for financial security or NFAA. Any drastic attempt at austerity will drag the economy through the "paradox of thrift" – wherein the higher propensity to save ends up in a lower quantum of savings – into a vicious downward spiral, resulting in a deep recession or even depression. If a larger fiscal deficit with higher government spending and tax cuts, which accommodates DPS desire for NFAA, manages to revive aggregate demand, it could induce an uptick in private sector investment and consequently, a phase of leveraging. This best-case scenario, however, can only be expected to play out in the longer-term when the effects of the pandemic have ebbed.

Evoking India's twin deficits: a flawed guide to policy [1]

While the logic of the twin deficit problem may make intuitive sense, it is at best an incomplete equation that does not reveal an accurate picture of the economy.

India's twin deficit problem of rising fiscal and current account deficits (CAD) as a major challenge to macroeconomic policymakers has been in the news for some weeks now. With direct control over the current account difficult due to macroeconomic conditions across the world as well as the inelastic nature of India's imports, the government seems to be responding strongly to conventional calls of economists to reduce or at least ensure that the fiscal deficit does not cross the targeted 6.4% of GDP. At the same time, pressure is also on states to keep their deficits in check so that the overall deficit is contained to about 10% of GDP.

This is, however, a challenging time for the government to rein in the deficit. The soaring prices of crude oil on account of the Ukraine-Russia war made it necessary to cut excise on petrol and diesel to lessen the impact on local consumers. There has also been an increase in fertilizer and food subsidies apart from granting subsidies on cooking gas. To some extent the government cushioned the deficit arising from these measures by raising revenues through a 'windfall tax' on domestic crude and levies on fuel exports.

Nonetheless, if the fiscal deficit can indeed be controlled, it is expected that this will also have a positive outcome on the CAD, which had become a matter of greater concern due to flight of portfolio investments from the country and the depreciation of the rupee vis-à-vis the dollar.

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[1] *Moneycontrol.com, 11.08.2022*

While the logic of the twin deficit problem may make intuitive sense, it is at best an incomplete equation that does not reveal an accurate picture of the economy. For one, it is not an equation because fiscal deficits are most often not equal to current account deficits. For instance, in FY 2021, India's overall fiscal deficit in India was about 13% with a current account surplus of 0.9% of GDP. This year, the fiscal deficit may be around 12% and CAD at 1.2%, once again nowhere close to being equal. Explicitly bringing in the missing link is crucial if we are to understand the implications of macroeconomic policies fully and clearly.

Not commonly referred to by economists is the sectoral financial balances (SFB) identity conceived by the British economist, Wynne Godley, and based on the double-entry bookkeeping principle that a financial asset of any entity must appear as a financial liability in another entity's books of account. If we divide the economy into three sectors, namely, the domestic private sector including households and firms, the government and the foreign sector, their net financial asset accumulation (asset accumulation outside that sector) must be equal to zero.

In other words, if one sector is accumulating net financial assets then at least one of the other sectors must be accumulating net financial liabilities. It must be reiterated that the SFB equation does not delineate cause-effect relationships but by nature of its construction – it's derived from double-entry accounting after all – must hold true.

India's CAD implies that the foreign sector is accumulating net financial assets (including capital inflows or lending to India). This is around 1.2% of GDP but may rise to even 3% of GDP. If the (overall) government is accumulating net financial liabilities of 10% of GDP by running fiscal deficits, the question is who is accumulating net financial assets to the tune of 7%. By the SFB identity, it must be the domestic private sector whose savings exceed investment spending by 7% of GDP.

We can now articulate the repercussions of reductions in the fiscal deficit on the other sectors of the economy, keeping in mind that the SFB equation must hold good. If the government is able, through whatever measures, to bring down the deficit from 10% to, say, 6%, then the sum of the net financial asset accumulation by the domestic private sector and the foreign sector must sum to 6%. Various combinations are possible but let's assume that the CAD is contained at 2%. If so, the net financial asset accumulation by the domestic private sector must be 4%, down from 7%. Although not the only possibility, this can happen either with a rise in private sector investment spending or a fall in savings.

In fact, economists argue that fiscal consolidation by the government would mean lower borrowings and lower interest rates so that private sector investment will rise. This, unfortunately, is not supported by facts. Even a cursory look at the data between 2012 and 2019 shows that while interest rates fell throughout, there was a distinct secular decline in private sector investment spending. If investment spending does not rise, savings must fall. For this, either consumption expenditure picks up strongly through improved consumer sentiment or savings fall due to (and at a higher rate than) contraction in GDP. The latter could also reduce the CAD by curtailing import demand and even turn it into a current account surplus if the contraction is large enough – as was the case during the pandemic.

This may only be one plausible outcome of fiscal consolidation but it highlights why the SFB equation can serve as a more useful guide to policymakers than the truncated twin deficit hypothesis, which focuses on just two out of three sectors, keeping out the backbone of any economy – the domestic private sector's decisions on savings, consumption and investment.

What Modern Monetary Theory (MMT) has to say about freebies [1]

Critics of MMT have portrayed it as a supporters of unrestrained government spending. In reality, though, MMT has always placed emphasis on the opportunity cost of government expenditure, which diverts resources from other sectors. MMT not only raises concerns over unproductive freebies but is, more importantly, apprehensive of situations where real resources remain unutilised or underutilised.

From a purely economic and public policy angle, it is difficult for Modern Monetary Theory (MMT) to be kept out of the present debate on freebies, simply because if there is any economic perspective that has been closely associated with advocating governments to dole out free lunches, it is MMT. Popular media propagated this opinion: "Top IMF Economist Says No Free Lunch From Modern Monetary Theory"[2] and "Beware the free lunch of modern monetary theory" [3]. Nonetheless, when the US government ran a 15% of GDP fiscal deficit to rescue the US economy from total disaster unleashed by the Covid-19 pandemic, the media was compelled to change its stance: "Op-ed: Pandemic moves Modern Monetary Theory from the fringes to actual US policy" [4] and "Modern monetary theory: the rise of economists who say huge government debt is not a problem" [5].

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[1] *Moneycontrol.com, 23.08.2022*

[2] *https://www.bloomberg.com/news/articles/2019-04-09/top-imf-economist-says-no-free-lunch-from-modern-monetary-theory*

[3] *https://www.businesstimes.com.sg/opinion-features/columns/beware-free-lunch-modern-monetary-theory*

[4] *https://www.cnbc.com/2020/04/29/op-ed-pandemic-moves-modern-monetary-theory-from-the-fringes-to-actual-us-policy.html*

[5] *https://theconversation.com/modern-monetary-theory-the-rise-of-economists-who-say-huge-government-debt-is-not-a-problem-141495*

Keeping the US debate on MMT aside, what are some of the implications that can be drawn from MMT in the Indian context, in particular, in the ongoing freebie debate that has already taken on contentious political overtones? The fundamental tenet of MMT is that economically sovereign states which issue their own fiat currency do not face a monetary constraint in their own currency, and can therefore draw real resources from the private sector against issue of their currency or promissory notes. Given that all obligations due to the state including taxes, fines and penalties can be settled in these promissory notes, and in these only, they come to be generally acceptable.

What is key here is that the state does not 'earn' and spend like the private sector – households and businesses. It must first spend by issuing its promissory notes (say, rupees) into existence and then collect these back as 'revenue' by way of taxes or against issue of bonds. While the ability to create money lies only with the central government in India, state governments depend on the backing of the central government against debt-default, so that they are not reduced to the risk level of the private sector.

However, something commonly overlooked by mainstream critics is MMT's emphasis on the real resources constraint faced by an economy. The government – both central and state governments – through their spending are essentially drawing resources away from their market-based allocations to those that they deem necessary to meet broader economic, social and political objectives. This may include the building of schools, hospitals, courts, roads, defence or whatever else it deems necessary. Although the monetary cost per se is not of essential significance to the government, there is a real opportunity cost in reallocating resources. This is what happened in times of war: governments across the world used factories and labour to build tanks and guns instead of cars and buses. Economies boomed with full employment but there was scarcity in availability of day-to-day necessities resulting in supply shortages and high rates of inflation. The excessive money created by way of government spending had to be subsequently sucked out of circulation through issue of war bonds even as raging inflation was controlled though strictly enforced price controls.

When a government decides to build a school there is an opportunity cost in doing so. Resources like cement, water, steel, an educated work force, are allocated away from building homes, a road or a bus depot. The only justification to build the school must be that it will contribute more to a country's growth potential by way of increases in productivity than other alternatives. Ideally, a ranking of all projects

(and combinations thereof) in enhancing productivity should guide the government's rationale for spending.

A freebie, from an MMT perspective, would constitute a good which does not lead to a positive increase in productivity or even worse, has a negative impact on productivity. The recently launched 'Sake Viva' competition by the Japanese government to actually encourage alcohol consumption would be a case-in-point of the latter. According to MMT, the objective of earning revenue for the government is unequivocally an unsound basis in guiding the (re)allocation of resources within an economy.

The closest MMTers have come to debating about freebies is to argue against a universal basic income (UBI) scheme, favouring a universal job guarantee (UJG) programme instead. Except for crisis situations like the pandemic and for aged or challenged individuals, a UJG is preferred because it can contribute to enhancing aggregate supply through productivity increases and capacity building while also increasing aggregate demand. On the other hand, a UBI scheme would only contribute to raising aggregate demand but may make matters worse by reducing the labour force participation rate, adversely affecting aggregate supply in the longer term and inducing inflationary pressures. A well-planned and administered UJG programme may not only raise productivity and aggregate supply but also stimulate private sector investment given greater stability in aggregate demand.

To sum up, MMT not only raises concerns over unproductive freebies but is, more importantly, apprehensive of situations where real resources remain unutilised or underutilised. Speaking on John Maynard Keynes – from whose work MMT draws upon – the renowned heterodox economist Josef Steindl argued: 'Keynes … had no respect for financial orthodoxy – the gold standard, balanced budgets, sound finance – in so far as they merely hindered a rational use of available material resources.

A better alternative to freebies [1]

Most of the schemes being proposed by the Congress will immediately enhance demand without addressing the issues related to the supply-side-this will be inflationary.

Soon after the Congress victory in the Karnataka elections, there are concerns being raised as to the impact of implementation of their poll promises on the state's exchequer. Reports suggest that their five major poll promises – free bus rides to women, Rs 2,000 per month to women head of families, Rs 3,000 unemployment allowance to graduates and Rs 1,500 allowance to diploma holders, 10 kg of rice to BPL families and 200 units of free power to every household every month along with other schemes to fishers and promises to purchase cow dung – will amount to additional state expenditure of some Rs 62,000 crore or roughly 3.3 percent of Karnataka's Gross State Domestic Product.

Given that the Congress will make any success in prompt implementation of these promises its major plank in forthcoming elections in other states, as well as in the general elections in 2024, it reopens a larger debate on 'freebies'.

Instead of getting mired with data on sources of funds for state government expenditures it is useful to look at the issue from a broader perspective. Modern Money Theory (MMT) can throw light on an issue that is only likely to get bigger given the challenges of widespread youth unemployment, growing economic inequalities and insecurities that people face.

From a purely financial angle, MMT has espoused that an economically sovereign government can never go bankrupt in its own currency. The government is often seen

[1] *Moneycontrol.com, 18.05.2023*

as being in the same position as the private sector including businesses and households. This is untrue – the government is the issuer of currency while the private sector is a user. Government debt is settled only through (re)issue of its own (new) financial liabilities whereas the private sector must settle debt with government (or commercial bank) liabilities. MMT, however, argues that it is only the central government that is truly in this privileged position. State and local governments as well as municipalities are not issuers of currency and should therefore be relegated to the position of the private sector.

While this is perhaps technically correct, state government debt is implicitly backed by the central government. A debt default by a state would throw its economy into recession that will ultimately have to be bailed out by the central government. It is interesting to go back to November 2019 when the RBI allowed retail investors to buy state development loans (SDLs) and note the remarks of the RBI Governor: "On the due date of repayment, RBI automatically debits the state government account and makes the repayment. So, there is an implicit sovereign guarantee... they [SDLs] would not and cannot be considered risky."

More than money and finances, MMT shifts the debate over freebies to the availability of real resources that are necessary to meet the objectives of such schemes. In other words, is there enough electricity to provide, is there enough rice to distribute and buses or bus seats for women and for all commuters? If there aren't, problems of shortages will arise when prices as a rationing mechanism are suppressed.

Providing cash transfers also faces the same question of real resource availability. Giving people the purchasing power to buy goods and services is no doubt necessary; however, is there adequate supply of these goods and services that they will want to buy in the market? If not, inflationary pressures will build up, ultimately hurting the poor most. On the positive side, cash transfers can be useful in boosting aggregate demand especially when business is sluggish. Moreover, more robust demand could also have a positive effect on investment spending.

The problem of moral hazard in the freebie debate must also be addressed – giving free grain to BPL families, many of them possibly marginal farmers, may result in them ceasing to engage in subsistence agriculture and look up to the government for free food instead. This could ultimately have an adverse impact on overall food production and food security in the longer term.

It is for these reasons that MMT advocates a universal job guarantee (UJG) scheme as the most effective and sustainable scheme to target unemployment and poverty. Most of the schemes being proposed by the Congress – many being in the nature of a basic income strategy – will immediately enhance demand without addressing the issues related to the supply-side. These will be inherently inflationary and the problem can get progressively worse as people choose to opt out of the labour market thereby negatively impacting supply.

Integrating MNREGA with a wage goods strategy and progressively expanding its reach across time (more days of work) and space (urban areas) could be a superior strategy to steps in the direction of universal basic income (UBI) plan. Macroeconomically speaking, a UJG is essentially a countercyclical automatic stabilizer – as was unequivocally seen during the Covid-19 pandemic crisis – while UBI is acyclical and inherently inflationary by adding to aggregate demand and not enhancing aggregate supply or perhaps worse, contracting it.

While it may be argued that the poor are in need of immediate measures to alleviate their condition and the schemes proposed by the Congress are politically astute, MMT calls for considering UJG as a superior and sustainable *economic* strategy to alleviate the problems of unemployment and poverty.

The war against COVID is on. This is how we can finance it [1]

As the human tragedy unleashed by the second wave of the Covid pandemic continues to unfold across India with greater intensity and expanse, its economic cost on individuals, families and businesses will only add to the suffering. A decline in GDP growth, increasing unemployment, resumption of reverse migration, closure of MSMEs and disruption of service sector businesses is now more than an imminent possibility even if there are differences in opinion over the degree of impact as compared to the effects of the first wave. The uncertainty over the economy is accentuated by uncoordinated regional lockdowns, the growing pressure from the medical fraternity and public health experts for a country-wide lockdown, the spread of the virus into rural India, the under-reporting of cases and deaths, how long the wave will continue for, and finally, the alarm sounded on the inescapability of a third wave within a few months.

While the Reserve Bank of India (RBI) has announced a few monetary policy initiatives to address the economic impact of the second wave, there are no major policy measures announced by the Ministry of Finance as yet. In fact, its [2] recent position on the matter was that the second wave will have a 'muted impact' on the economy. This seems untenable given the ferocity of the second wave and consequent inevitability of the fiscal deficit breaching the targeted 6.8% of GDP. If this were to happen, economists and experts will issue warnings over the consequences of deficit and debt that will directly or indirectly begin to exert subtle pressure on the government to resort to austerity measures. Fears over the fiscal deficit also gets translated into simplistic remarks that are common in discussions; 'the government doesn't have the money', 'where will the government get money from?' or 'the government cannot afford to spend'. Modern Money Theory (MMT) not only allays fears over such an over-simplified understanding of macroeconomics but could also guide a more discerning financial response to the crisis. And there is perhaps no better way to appreciate this than to look at some lessons from war financing through an MMT lens. After all, aren't we already waging nothing less than a war against a very deadly enemy?

On August 4, 1914, Great Britain declared war on Germany. On the very next day, the Currency and Bank Notes Act, 1914 was issued by which the gold standard was suspended with immediate effect and in lieu of gold sovereigns and half sovereigns, the British government was allowed to print notes or more precisely, issue fiat currency as legal tender. The purpose of the Act was to allow the government to provision itself by purchasing real resources from its private sector – manpower, food and medical supplies, arms and ammunitions, etc. – to fight the war. However, given possible delays in the printing of notes, the Act even allowed postal orders to 'temporarily be current and legal tender in the United Kingdom in the same manner and to the same extent and as fully as current coins.'

This is the essence of modern money: an economically sovereign nation issuing its own fiat currency which is also legal tender, faces no financial constraint. India is a case-in-point. To keep the process simple, the Government of India (GoI) could borrow directly from the RBI – what is referred to as monetizing the debt – to provision itself with financial resources (rupees) that are required to purchase real goods and services from the private sector to control the pandemic including medicines, oxygen, vaccines, healthcare personnel, etc. However, the power to create money ex nihilo is a prerogative of the central government only, and not state governments and/or local authorities like municipalities.

This, however, is part of the story. Although the government does not face a financial constraint, MMT emphasizes the unequivocal importance of addressing real resource constraints. For instance, do we have an adequate supply of oxygen and vaccines available internally? If not, the government could borrow (from the RBI) and utilize a small fraction of the existing US$ 580 billion [3] foreign exchange reserves to purchase what is required (and is available) from abroad. Interestingly, Iran [4] did this late last

[1] *Moneycontrol.com, 17.05.2021*

[2] *https://www.moneycontrol.com/news/business/economy/second-covid-wave-poses-downside-risks-to-economic-activity-says-finance-ministry-6865471.html*

[3] *https://www.rbi.org.in/scripts/WSSViewDetail.aspx?TYPE=Section&PARAM1=2*

[4] *https://theprint.in/world/iran-finds-way-to-buy-covid-vaccine-despite-us-sanctions/573353/*

year to import vaccines albeit clandestinely on account of US sanctions.

Along with medical supplies and infrastructure to be procured on a war footing, the government will also have to deal with contraction in aggregate demand and closure of businesses including those in the informal sector. This aspect can only be addressed with large-scale income distribution, MNREGA spending and direct transfers to MSMEs and small businesses. Once again, such expenditure if it were to be provided by the central government – and in fact would have to be given the likely shortfall in state government revenues – the fiscal deficit would further widen.

What are the implications of the government borrowing from the RBI? The bonds issued by the GoI appear as a financial liability in its balance sheet and simultaneously as a financial asset in the RBI's balance sheet. However, when the GoI spends the money, it will increase reserves held by commercial banks at the RBI as well as deposit accounts of the non-banking private sector (NBPS) held at commercial banks. The final effect will be net financial asset [liability] accumulation by the NBPS [GoI]. It is then possible that excessive purchasing power with the NBPS could exert inflationary pressures in the economy – a consequence that MMT has repeatedly cautioned about.

Here again, there is a lesson to learn from war financing. To drain excessive purchasing power the British government issued 5% national war bonds in 1917 with advertisements and appeals:

'If you cannot fight, you can help your country by investing all you can in 5 per cent Exchequer Bonds ... Unlike the soldier, the investor runs no risk.'

'It is the people of Great Britain who must provide the cash with which to finance the war, and there is little reason to doubt that they can do it if only they will. A large part of the nation, instead of being impoverished by the war, has been enriched.'

These bonds were sold as if the government was raising money to fund the war. However, as MMT argues, bond sales are actually a way of deferring spending by the NBPS on goods and services and quell inflation. This is evident once we realize that bonds (financial liability of the government) were essentially swapped for currency (also a financial liability of the government) that had already been spent. In the present context, such bond sales by the RBI to the NBPS would not only drain excessive purchasing power with the NBPS but also drain excess reserves or liquidity that commercial banks have with the RBI (when the GoI spent the money) and thereby ensure stability in money market interest rates.

The clear message from MMT is, therefore, rather than fear financial constraints, there is an immediate need for the government to focus on the availability and creation of real resources to fight the pandemic and at the same time, ensure that aggregate supply does not collapse and is able to quickly respond to a revival of aggregate demand.

A Modern Monetary Theory view of the high taxes on petroleum products [1]

Except for environmental benefits of disincentivising the consumption of fossil fuels, the imposition of a petroleum product tax is not only regressive in its impact but also seems to be defeating the essential fiscal purpose of taxation i.e. controlling inflation.

As the steep increase in petroleum product taxes is causing petrol, diesel and LPG prices to rise, there is growing furore in India over the hardship it is causing to the general public. The root of the problem actually lies in orthodox-mainstream macroeconomics, in which the central government is erroneously conflated with other economic entities including households, firms and state governments so that it must, like all other entities, raise revenues to fund its expenditures. An economy in crisis requires additional spending and the government must therefore take recourse to additional taxation---this narrative is now considered common sense.

The issue can instead be approached from a different perspective, namely, Modern Money Theory or MMT, to provide an alternative basis for policy. MMT argues the fundamental purpose of taxes in an economically sovereign country that issues fiat currency, which is also legal tender, is to make its promissory notes or financial liabilities acceptable and thereby draw resources from the private sector to provide goods and services that are socially beneficial. There is another important role that taxes play in a modern money economy--they are a way of 'destroying' money that is created by the government while spending it into existence. In other words, when the government spends money, it creates financial assets for the domestic private sector and thereby infuses aggregate demand or purchasing power into the economy. If surplus production capacity does not exist, inflationary pressures can build up in the economy. The imposition of the tax and its subsequent payment reduces financial assets of the private sector and thereby drains out excess aggregate demand or purchasing power to curb inflation. Taxes may also serve other purposes like directing the allocation of resources and/or the distribution of income and wealth across class, sectors and geography. MMT is, however, categorical in its assertion that the purpose of taxes is not to collect 'revenues' to 'fund' government expenditures.

If taxes are not a source of government revenue, then what purpose is the petroleum product tax serving or could it perhaps be defeating its very purpose? The taxes collected on petroleum products amount to approximately 2 percent of India's GDP. In other words, if no taxes on petroleum products were to be imposed while government expenditures remained the same, the combined or general fiscal deficit of the central and state governments would increase by 2 percent of GDP. Of course, this would draw a great deal of debate on the government's inability to meet the fiscal deficit target. Rating agencies would go berserk and threaten to cut India's ratings.

Keeping aside the adverse reaction of rating agencies, there are three concerns emanating from high fiscal deficits: first, large borrowings will drive up interest rates and induce the 'crowding out' effect, second, inflation and third, a possible depreciation in the exchange rate of the rupee. The crowding out effect has been dismissed by MMT given that it is based upon the loanable funds model that has little relevance to the present monetary system and institutional realities. The second and third consequences of rising fiscal deficits are of concern although they must be seen contextually and cannot be naively attributed to rising fiscal deficits per se. This brings us to the paradox of petroleum taxes: while a tax is supposed to drain purchasing power out of the hands of the private sector and keep inflation under check, the petroleum product tax – with hundred percent incidence on industrial users and consumers – may be directly contributing to inflation. Moreover, as far as the argument on foreign exchange goes, the main concern is that a depreciation of the rupee induces imported inflation, particularly through its impact on the rupee value of crude oil. The net effect on inflation is thus the same, whether it is on account of the exchange rate or from domestic taxes.

From an MMT perspective, even if the economy is operating at close to full capacity, the effect of a higher fiscal deficit (without the petroleum tax) or of a lower deficit (after imposition of the petroleum product tax) are not very different. In fact, the latter more definitely causes a price increase across all sectors of the economy given

[1] *Moneycontrol.com, 22.02.2021*

that petroleum is a key input in the production process. It is also a regressive tax given that it is an essential consumption item across all classes of consumers. A recent study points out that in 2017-18, a litre of petrol cost about 25 percent of average daily per capita GDP. Moreover, in the context of the ongoing pandemic, where aggregate demand is still faltering, the additional 2 percent fiscal deficit may have a more diffused impact on inflation and inflation expectations – presently, inflation is within tolerance levels in spite of a 9.5 percent of GDP fiscal deficit – than the alarm that petrol prices approaching Rs.100/litre is now causing.

When inflationary pressures do build up, the key fiscal challenge that policymakers will have to address is to find an optimal tax in terms of its effectiveness in controlling inflation and also its distributional consequences. Except for environmental benefits of disincentivizing the consumption of fossil fuels, the imposition of a petroleum product tax is not only regressive in its impact but also seems to be defeating the essential fiscal purpose of taxation, i.e. controlling inflation. This leads to a sensitive question: is some type of direct tax the only available option?

The government must adopt expansionary fiscal measures in Budget [1]

A revival of strong growth will automatically check the deficit through higher tax collections.

Even in the best of circumstances, predicting what the economy may look like in the future is a tenuous exercise. Doing so in the present context, with the Omicron threat lingering, makes it all the more questionable. There are reports that the pandemic will turn endemic and if this happens, life may more or less return to normalcy. This may be a contentious assumption, but we need to begin somewhere.

A useful way of looking at the overall macroeconomy is with the sectoral financial balances (SFB) equation developed by the economist Wynne Godley, which states that net financial asset accumulation (NFAA) across the external sector, the government and domestic private sector must net to zero. If one sector is accumulating net financial assets, then at least one other sector must be accumulating net financial liabilities. This equation is drawn from double entry bookkeeping and must hold good, although it does not establish causal relationships.

When the pandemic struck in April 2020, India's GDP plummeted and with it, domestic private sector NFAA (private sector savings less private sector investment spending) rose significantly from 6.3% of GDP in FY 2019-20 to more than 14% of GDP in FY 2020-21. This huge increase in domestic private sector NFAA was accommodated by a general fiscal deficit (government accumulation of net financial liabilities) of 13.4% of GDP plus external accumulation of net financial liabilities (India's current account surplus) of 0.9% of GDP.

The estimated figures of the general fiscal and current account deficit for FY 2021-22 are close to 11% and 1.5% of GDP respectively. This means NFAA in the current

[1] *Moneycontrol.com, 31.12.2021*

financial year by the domestic private sector will still be at some 9.5% of GDP, although significantly lower than the levels in the previous financial year. The reduction in NFAA has come about by a significant increase in private sector investment spending. However, given that growth in private sector final consumption spending remains tepid, implying the propensity to save remains high on account of the uncertainties unleashed by the pandemic, the private sector NFAA continues to be at an elevated level compared to pre-pandemic levels.

Going forward into the next financial year, 2022-23, if the government adopts austerity policies that are aimed at significantly reducing its spending and consequently, the targeted fiscal deficit, then growth must come through greater leveraging (a reduction in NFAA) by the domestic private sector. An improvement in consumer confidence could possibly mean an increase in consumption expenditure (reduction in savings ratio) as well as increased investment spending. However, if the accumulation of financial liabilities (fiscal deficit) by the government remains higher than the NFAA by the domestic private sector, the balance NFAA must be by the external sector (current account deficit).

The best-case scenario for India would be rapid leveraging by the domestic sector that drives growth, but at the same time keeps the fiscal deficit in check, not by a reduction in government spending, but instead through buoyant tax receipts. At the same time, sustained growth in exports is necessary so that high GDP growth does not allow the current account deficit to widen from a likely increase in imports.

There are some major challenges to the best-case scenario actually emerging. A lot depends on a strong and robust revival in private consumption expenditure. This will also be a significant factor in determining capacity utilization by industry and therefore, domestic private sector investment spending. In a situation where the desire for NFAA by the private sector remains high (poor leveraging), this will have to be accommodated either by the accumulation of net financial liabilities by the government (larger fiscal deficits) and/or in the external sector (larger current account surpluses). For any given quantum of government spending and exports, tax collections and imports must be lower, a situation which implies slower GDP growth.

There are other global issues that will impact the Indian economy in the coming months: inflation rates in other major economies, the US Fed's interest rate hikes, continued supply-side disruptions and oil prices. A more pessimistic outlook on these

will mean the possibility of higher domestic inflation and consequent interest rate hikes by the Reserve Bank of India, two factors that can dampen the possibility of increased domestic private sector leveraging.

The strong plausibility of such a situation playing out will have to be pre-empted by the government brushing aside austerity measures in the forthcoming budget and instead adopt expansionary fiscal measures to support domestic private sector consumption and investment demand. As we know, the fiscal deficit is an automatic stabilizer and a revival of strong growth will automatically check the deficit through higher tax collections. At the same time, supportive fiscal measures will prompt a greater quantum of leveraging by the private sector, which in turn will contain the desire for NFAA by the domestic private sector.

Although the SFB equation allows for a stock-flow consistent analysis of the economy, it does not answer several other questions on the economy that remain outside its scope including the dismal employment scenario. Nonetheless, the broad performance of the Indian economy at a macroeconomic level is a necessary, if not a sufficient condition, for a robust reduction in unemployment rates.

Budget 2022: Is there really a need for fiscal consolidation? [1]

Rather than appreciating the positive role played by fiscal policy, economists are once again attempting to script a return to a world where the governments recede into the background and market forces dominate.

The Union Budget for 2022-23 will be announced next week. Apart from the possible sectoral allocations and tax concessions expected, a key point that is already being discussed and will continue to be discussed fervently over the next few days will be the estimated fiscal deficit. A nuanced reading of the view of economists and experts reveals that calls for 'fiscal discipline' have been replaced by a gentler term, 'fiscal consolidation'.

This implicitly suggests that the government had rightly responded to the economic crisis triggered by the COVID-19 pandemic by relaxing its adherence to the 3 percent of GDP deficit norm with a larger deficit, although it is now time to become more cautious about the deficit. 'Consolidation' is however a vague term: does it mean not increasing the deficit from its present level, reducing it gradually or reducing it all the way back to 3 percent of GDP?

For all its pretentions of being a science with complex mathematical models, when it comes to actual policy, economists craftily use undefined terms. For almost three decades beginning in the 1980s we were told that fiscal policy was ineffective and that an economy would automatically and efficiently adjust to shocks. The government was to take a backseat and state interventions, if at all needed, should be through monetary policy conducted by an independent central bank. All that went for a toss when the US economy was hit by the global financial crisis (GFC) in 2008.

[1] *Moneycontrol.com, 27.01.2022*

Aggressive fiscal policies were again resorted to in 2020 when the COVID-19 pandemic spread across the world. Even the European Union had to concede that austerity policies pursued in the aftermath of the 2008 GFC were untenable in 2020 and fiscal deficits were necessary to rescue their collapsing economies and their citizens from hardship. Expansionary fiscal policies undertaken by governments supported by their central banks saved the world from a situation that could have been far worse than the Great Depression of the 1930s.

Rather than appreciating the positive role played by fiscal policy, economists are once again attempting to script a return to a world where the governments recede into the background and market forces dominate. Sustained fiscal deficits, it is argued, would lead to a wage-price spiral and consequently inflation that would distort an optimal allocation of resources that markets would otherwise achieve. In fact, the rise in inflation rates in major economies like the US is being blamed on the fiscal deficit which had come close to 15 percent in 2020 and in 2021. Paranoia over spiralling inflation and even hyperinflation is being circulated, rather than answering a question that economists would otherwise always begin their argument against spending and deficits: from where does the government get the money to spend?

India too witnessed a steep rise in the general fiscal deficit during the pandemic years, crossing 10 percent of GDP. This intervention, although some consider insufficient, unequivocally helped the return to pre-pandemic GDP levels and can perhaps put the economy back on a strong growth trajectory.

Even as inflation concerns remain, its underlying cause remains debatable: supply-side disruptions, profit-inflation, and global energy prices could be stronger drivers of inflation rather than the general level of effective demand in the economy. Several other concerns remain over factors that may inhibit a return to robust growth: a K-shaped recovery, consumer confidence remaining subdued and way below pre-pandemic levels, sluggish growth in key sectors of the economy including several service sector industries like hotels and tourism, the struggling MSME and informal sectors, and most importantly the persistent high rates of unemployment, particularly urban unemployment.

With these critical challenges ahead, the crucial point is that the government must continue to play a key role through fiscal policy in ensuring a return to normalcy in

specific spheres of the economy. Reliance on interest rates or monetary policy to stimulate market forces to solve these concerns over a reasonable period of time will be inadequate. Rather than raising the bogey of deficits through terms like fiscal discipline or consolidation, it is time that economists emphasize the positive role that fiscal policy has played in alleviating crises and the role that it can continue to play in doing so, especially after the most acute effects of a crisis have passed.

Budget 2023: Sustaining private investment should be a priority [1]

Also, the budget needs to address pressing concerns over unemployment, inflation, rising inequalities in income and wealth, growing concentration in industry and distress in the MSME sector.

With the Indian economy getting back on to a 6-7% GDP growth rate trajectory post-pandemic, it is quite apparent that some of the major challenges to staying on course are and will continue coming from the global environment that are mostly beyond our control. These factors include the persistence of elevated inflation rates globally, the continued hawkish stand of the US Fed on interest rates, the imminent recession in the US and other major economies including Europe and China, the ongoing Ukraine-Russian war, and a trend towards greater protectionism worldwide, posing hurdles to our present growth trajectory. There is little that the Indian government's budget can directly do to counter these issues.

With exports likely to see a decline on account of external factors, the drivers to growth must come from within. Private consumption has grown strongly in 2022; however, according to NSO estimates it is expected to contract in the first half of FY 2023, which means a greater dependence on private sector investment growth and/or government spending including its revenue and capital expenditures.

While bank credit growth rates accelerated since January 2022, there are signs that growth is waning since November 2022. Moreover, bank credit growth includes demand for consumer loans and cannot be taken to only mean an uptick in private sector investment spending. With capacity utilization rates still hovering at 75 percent, the actual growth in private sector investment spending will be a key determinant of

[1] *Moneycontrol.com, 11.01.2023*

the Indian economy's growth rate in FY 2023 as well as robustness of its growth path in the longer term. Perhaps the greatest challenge in many countries across the world is the secular decline in private sector investment. Investment is essentially based on expected demand and as long as the bouts of crises that the world has experienced continue, it is unlikely that private investment demand will witness a robust rebound. It is important that the budget addresses this issue and provides a clear plan to enhance private sector investment, not merely a one-time boost but a more sustained increase.

Over the last decade and a half, particularly since the 2008 global financial crisis (GFC), government fiscal deficits have been the crucial stabilizing force in almost every country. While the US fiscal deficit rose up to 10% in the aftermath of the GFC, it increased to 15% of GDP during the Covid-19 crisis. India's consolidated fiscal deficits also breached 10% of its GDP to ensure the implosion of its economy, particularly during the pandemic. The role of the government's deficit is not simply to enhance aggregate demand to maintain consumption but more importantly; by doing so, it also sustains private investment growth as the it irons out to a significant degree the uncertainties that decision-makers face in a globalized world.

Given that these uncertainties continue to dominate the global landscape, it is essential that the government's budget for FY 2023 does not deviate from its stabilization role to instead focus on fiscal consolidation as an end in itself. This will be especially challenging in a scenario where inflationary pressures are still high at more than 6% and the current account deficit widening to 3% of GDP. Nonetheless, if India has to sustain its growth trajectory, let alone moving to a higher one, it is imperative that government spending supports aggregate demand that induces sustained private sector investment.

Many economists as well as international rating agencies have already started a debate on fiscal deficit numbers thereby exerting pressure on the government to rein in its deficit. The increased tax buoyancy is also taken to mean that the economy is now back on track so that the government can begin curbing its spending. This, however, ignores the fact that tax collections could itself be a function of government spending so that a cutback on the latter may cause the former to falter.

Budget debates are usually centered around macroeconomic indicators like GDP growth rates and the fiscal deficit. However, the budget is at the same time, and perhaps more importantly, a statement of the government's macroeconomic priorities. It will be interesting to see how and to what extent it addresses some pressing concerns over unemployment, inflation, rising inequalities in income and wealth, growing concentration in industry and distress in the MSME sector.

Another subject that the budget must bring more aggressively into its purview are measures to counter the effects of climate change that are becoming more regular and more intense. A case-in-point is the severe heat wave which struck northern India, adversely affecting agricultural output. While central banks are already fearing the effects of climate change on the quality of collateral assets held by commercial banks and the possibility of financial instability thereof, governments must consider broader contingencies that could emerge from natural disasters. Ad-hoc measures may no longer suffice in tackling the catastrophic impacts of climate change.

Perhaps the subject most neglected in any formal macroeconomic analysis is the informal sector, which even today gives employment to around 85% of India's working population. Estimates of GDP usually consider the informal sector to be a proportion of the formal sector and therefore, positive growth in the formal sector translates to an equal growth rate of the informal sector. However, the informal sector has been under severe stress – as evidenced, for instance, by the sharp decline in rural wage growth – but at the same time, continues to provide employment to the masses. GDP growth rates and even growth in private investment, which is increasingly capital as well as highly skill-intensive, is unlikely to absorb India's massive unskilled labor force. Many state governments are experimenting with the idea of urban job guarantee schemes. Support for such initiatives by the central government in addition to MNREGA could be a game-changer for India's informal sector.

Budget 2023: A return to the Washington Consensus [1]

The foremost tenet proposed in the Washington was the need to consolidate the fiscal deficit.

At the beginning of her budget speech, finance minister Nirmala Sitharaman clearly outlined the vision of the present government for the Indian economy and the economic agenda to achieve it. The vision consisted of a technology-driven and knowledge-based economy with strong public finances and a robust financial sector, while the agenda for delivering this vision focused on facilitating opportunities for citizens, especially the youth to fulfil their aspirations, a strong impetus to growth and job creation, and ensuring macroeconomic stability.

The budget proposals were consistent with the vision and agenda, and it would be difficult for commentators to find any arguments against the allocations to different sectors and schemes. From agricultural processing units to capital expenditure in infrastructure, from enhanced spending on green technologies to reduction in personal income taxes, the 2023-24 budget has pressed all the right buttons to sustain India's growth rate.

Given that this is the eighth and the last full budget of the Modi government before the 2024 elections, it is interesting to articulate the government's overall macroeconomic worldview over its tenure that has emerged quite sharply from the present budget. Perhaps the simplest characterization is to liken it to the Washington Consensus, the most celebrated document outlining neoliberal economic policies, drafted by John Williamson in 1990 and extended in 2004. Except for the explicit thrust to globalization in the Washington Consensus which has waned in the present era of deglobalisation, we can see a return to some of its fundamental tenets by the present government, and a break away from the rights-based approach to development that the UPA regime moved towards, albeit tentatively, between 2004 and 2014.

The foremost tenet proposed in the Washington was the need to consolidate the fiscal deficit. Although economists are aware that fiscal deficit target numbers are non-discretionary as government tax collections depend on the performance of the economy during the course of the year, pursuance of deficit target numbers are important in so far as they act as a self-imposed constraint by the government on itself, which limits its interventions to give greater space to the private sector guided by market forces. There is also the belief that reining-in government expenditure will contain the quantum of public borrowings in the market to keep interest rates in check and prevent private sector investment spending from being crowded out. The fiscal deficit target number has become an obsession for successive governments in India since 1991 in spite of deviations during successive crises. This year the target has been fixed at 5.9% with a further reduction to 4.5% of GDP by 2025-26.

The Washington Consensus also called for restricting fiscal activism; however, the one area where government intervention is welcomed is on infrastructure spending. This is seen as important in order to raise productivity, induce demand and support private sector activity. The increase in capex by 33% this year to Rupees 10 lakh crore is a definitive step in this direction. Containing revenue expenditures and the overall fiscal deficit would simultaneously enable greater room for private sector participation in infrastructure projects through directed lending by banks and other financial institutions.

Although there have been no additions to the list of Central Public Sector Enterprises (CPSEs) in this budget, privatization, a key pillar of the Washington Consensus, has been pursued actively by the government. Similarly, rationalisation of the tax structure and adopting moderate tax rates, rather than steeply progressive rates, is another element that was highlighted by the Washington Consensus. It may be recalled that in the 2019 budget, the finance minister had proposed raising the surcharge on the incomes of HNIs by 3 to 7% but in this year's budget the highest surcharge has been reduced from 37 to 25%, an indication that there has been a change in the government's stance towards addressing concerns over rising income inequalities, a move that syncs well with the Washington Consensus.

[1] *Moneycontrol.com, 2.02.2023*

A conspicuous absence in the Washington Consensus was the purposeful targeting of unemployment through macroeconomic policy. In fact, the word 'unemployment' appears only once in Williamson's paper of 2004, and that too in the references, and not the main body of the paper. Ignoring unemployment was in fact a deliberate move away from Keynesian macroeconomics with a belief that if all other neoliberal policy prescriptions were implemented, the market system led by the private sector would ensure that the economy would gravitate towards full employment with price stability. At the same time, some unemployment during this transition cannot be ruled out, making it necessary for governments to provide adequate safety nets particularly to the poorest of the poor.

From a careful analysis of this year's budget, it is possible to delineate that the government has moved in line with the Washington Consensus in this regard too. The allocation to MNREGA, a rural (partial) job guarantee scheme has been slashed by 30%, from the revised estimates of Rs. 89,154.65 crore for 2022-23 to just above Rs 61,000 crore in 2023-24. Moreover, any hope for an urban job guarantee scheme as suggested by the Economic Advisory Council to the Prime Minister (EAC-PM) in 2022 has also receded. At the same time, the allocations for subsidies on provision of free foodgrain and pulses under the PM Garib Kalyan Anna Yojana has been increased to Rs. 2 lakh crores.

John Maynard Keynes had once remarked, "look after the unemployment and the budget will look after itself." Modern Money Theory (MMT), a Post Keynesian economic framework, has strongly proposed a universal job guarantee scheme rather than a more hands-off approach of a universal basic income or food distribution programme since the former is more sustainable and less inflationary as it adds to production capacity, productivity and aggregate supply, and not merely aggregate demand. However, the neoliberal agenda has been to side-line job guarantee programs, especially in advanced countries, based on the belief that full employment would lead to tight labour markets and consequently, higher wages and inflation.

While provision of food is in itself absolutely essential for the poor and has been effectively implemented by the government, it raises a deeper concern over neoliberal policies that see the pursuit of economic growth as both a necessary and sufficient condition to pull the masses out of poverty through the trickle-down effect. Unfortunately, with 80 crore people or close to 60% of India's population still depending on the government for their bare subsistence needs, it raises questions over neoliberal economic policies in alleviating poverty that have been followed since the reforms of 1991.

While neoliberal macroeconomics has decentred unemployment from the budget, it may take decades more to realize whether economic growth by itself can succeed in achieving full employment and surmounting poverty.

The Genesis of the Rupee as Modern Money [1]

One of the key tenets of Modern Money Theory (MMT) is that taxes drive money. The state can introduce any object as money so long as it makes it mandatory (and enforceable) that all obligations due to it can be settled in that object or money-thing only. In other words, if a piece of paper denominated as a rupee is introduced as legal tender, it will make that piece of paper valuable as money even though it does not have any intrinsic (market) value like a silver or gold coin. However, legal tender is only one of the two critical features of modern money. The other, fiat currency, i.e. currency by order, decree, regulation or law, refers to money that is not convertible into precious metals (or commodities), or foreign currencies at a fixed rate.

It is interesting to see how modern money took root in colonial India in the second half of the nineteenth century. As the British began consolidating political power over India, the government became aware of the benefits that could accrue to itself and society-at-large from introducing a paper currency. Quite like the argument made by MMT, the importance of money as legal tender was emphasized. In spite of being in a position to enforce tax collections, the British still found it challenging to surmount the obstacles in issuing an inconvertible paper rupee or, in other words, a fiat currency. The reason for this can be understood when we go back further in time and look at the legacy of the silver rupee.

The rupee or rupyā, which means silver, was introduced as currency in the year AD 1542 during the reign of Sher Shah Suri. The rupee coin weighed approximately 11.4 grams with purity of close to 96 percent. It was a standard coin and its purchasing power fluctuated with the price of silver bullion in the market. It can therefore be conceived as a commodity except that it (as coin) served as the unit of account as well as the single legal tender. This monometallic silver standard with the rupee as standard coin, with few modifications in its weight, continued throughout the Mughal period and then under the rule of the English East India Company except for short intervals of time when the latter, unsuccessfully and with tumultuous consequences, experimented with bimetallism.

Obligations to the state had to be settled in these coins (objects) only so that the government could earn brassage in the process of minting coins from bullion. Exchanges within the private sector also benefited from coinage as a coin's weight and purity was certified by the mint thereby avoiding the need to assay pieces of metal.

The boom in Indian cotton exports which began in the 1850s had led to a severe international shortage of silver and consequently, the rupee. Two options were explored to overcome the shortages in silver; the first, a gold currency for India which never materialized and second, the introduction of paper currency. A plan for the latter was proposed in 1859 by James Wilson, a financier and economist, soon after the transfer of power from the Company to the British Crown. While a complete transition to an inconvertible fiat currency was not in the reckoning at that point in time given that the British government's legitimacy was low, post-the 1857 mutiny, Wilson nonetheless proposed a leverage ratio of one is to four or as Nassau Lees put it, "… [Wilson] proposed suddenly to create about £51,000,000 in currency notes, £17,000,000 only of which were to represent actual coin or bullion …".

Implicit in Wilson's scheme was the belief that an increased supply of money would bring benefits to the real economy by saving precious capital from being wasted in the production of precious metals and its transport as well as stimulating trade and investment, resulting in higher output. While debate broke over Wilson's scheme over issues like inflation and asset bubbles, the key apprehension was whether or not people would accept paper (with no intrinsic value) as currency. For this Wilson emphasized that the government must ensure convertibility as absolutely certain, especially in the interior parts of the country.

However, more than this assurance of convertibility with just one-fourth of the value of paper currency held as silver reserves; Wilson realized that it was paper currency as legal tender which would ultimately create a demand for it. Consider the following remarks made by him:

[1] *Econfinity, 25.11.2020*

> "… in order for that a Paper currency shall fulfil all the purposes of coin, it is necessary that it should be a legal tender everywhere … and it should be received by the Government in payment of revenue and for all other purposes."

> "… let us bear in mind that the proposal is, and we think that essential, that the notes to be issued are to be legal tender in all transactions between man and man, that they are to be received at Government Treasury for all the demands of the Government for revenue or other purposes, and that the system is to be general and to extend over the whole of India."

In fact, it was an ardent critic of Wilson's plan, Nassau Lees, who articulated the importance of legal tender in driving the paper rupee:

> "… it is impossible to examine his [Wilson's] scheme closely, and in detail, without arriving at the conclusion … that he depended more on the 'legal tender' than on the principles that he himself laid down. The edicts of kings and the laws of nations can certainly constitute paper, leather, shells, beads, and other things money. Emperors and kings have ere now done so. And any of these things once made what is called "legal tender", all within the limits of the kingdom being compelled to receive them in liquidation of debts, they necessarily come into circulation."

In spite of Wilson's understanding of the essence of modern money, the plan was ultimately not adopted. Instead, a far more conservative scheme based on complete backing of all paper currency issued with silver reserves was implemented in 1862.

Nonetheless, in Wilson's plan, the seeds for the rupee as modern money had been sown.

The role that currency played in the great Bengal famine of 1770 [1]

About 250 years ago, Bengal suffered a debilitating famine under colonial rule, partially brought on by changes in the colonial currency system.

"The lack of money is the root of all evil" – Mark Twain

History, they say, repeats itself. I hope this isn't true, because history tells us of a terrifying episode some 250 years ago when the lack of currency was responsible, partly at least, for a massive famine that struck Bengal in 1770, claiming some ten million lives or a third of its entire population. Obviously, it is inappropriate, if not imprudent, to draw simplistic parallels between the situation then and the present currency shortage caused by the demonetisation of high-value rupee notes. Not only have options to hard currency and institutional environment undergone a sea of change over centuries, but in terms of impact, even the most pessimistic estimates only see a slowdown of growth rather than anything close to a famine-like situation. Nonetheless, it is interesting to recall history for a couple of reasons; first, to observe a certain commonality in the role money played in these episodes and second, at the margin, going by the several reports that have appeared in the last few days, there have been several instances of disruption, dispossession and even death.

Currency, as is commonly known, was for a long time inextricably linked to precious metals, primarily, gold and silver. For centuries, perhaps millennia, India had always received a steady inflow of these precious metals from its commodity trade surpluses with the rest of the world, which was converted into money or hoarded as jewellery and ornaments. The Romans, Venetians, Portuguese, Dutch and English were all at one point of time or another concerned over the export of their bullion and coin to India

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[1] *The Wire, 12.12.2016*

in exchange for oriental luxuries. In the seventeenth century, Surat alone is said to have received from its trade with the Persian Gulf about half million sterling per annum in specie. The export of bullion from England became the most scathing weapon in the hands of the bullionists – those who believed that wealth was defined by the quantum of precious metals owned by a nation – against the East India Company. Nonetheless, as long as the Company was a mere merchant, it had little option but to conduct its trade on the basis of bullion and coin.

The Battle of Plassey and subsequent grant of diwani in 1765 to the East India Company changed all this. Post diwani, there was a sudden increase in the outflow of bullion from India to England, along with a sharp decline in silver exports to India. The table below gives us a quantitative picture of this dismal story. From an average of around £500,000 annually in the mid-18th century, export of specie by the East India Company to India collapsed to a trickle between the late 1760s and 1785; it rose gradually thereafter and was especially high during 1802–3 (£1,772,085) and 1804–5 (£1,952,651) when it became necessary for Marquis Wellesley to import specie to fund the Company's aggressive territorial expansion plans in India.

Exports by the East India Company of bullion to India, 1708–1810 (in £ sterling)

Years	Bullion (£)	Average per annum (£)
1708/9 – 1733/4	12,189,147	420,315
1734/5 – 1759/60	15,239,115	586,119
1760/1 – 1765/6	842,381	140,396
1766/7 – 1771/2	968,289	161,381
1772/3 – 1775/6	72,911	18,227
1776/7 – 1784/5	156,106	17,345
1785/6 – 1792/3	4,476,207	559,525
1793/4 – 1809/10	8,988,165	528,715

Credit: William Milburn, Oriental Commerce, 1813

The decline in specie imports in the last quarter of the 18th century was not because exports from India were not in demand in the West; rather, it was the right of diwani that ensured the revenues of Bengal passing into the Company's coffers. It then became possible for the Company to utilise the large annual revenue surpluses for purchasing commodities to be exported (called investments), doing away with the necessity of importing specie.

W.W. Hunter, historian and member of the Indian Civil Service, describes how revenues were channelised to investment. In Birbhum district, out of £90,000 collected through taxes and duties a net surplus of some £60,000 was employed for the purchase of silks, muslins, cotton cloths and other articles to be sold in Leadenhall Street, the headquarters of the Company. In short, the revenues of Bengal supplied the means of providing the expenditure for purchases in Bengal, reducing the net annual influx of specie to a pittance.

Hawala of another kind

In his classic work, The Principles of Money Applied to the Present State of Bengal, published in 1773, James Steuart cites several other reasons that further fuelled the scarcity. The relatively undervalued silver in Bengal proved a profitable source to finance the growing tea trade with China. Within a span of just three years, some £720,000 of specie was sent out of Bengal to China. The widespread corruption and plunder by the servants of the Company not only transferred the wealth of the country to these individuals but was also sent out of the country through ingenious means. These included the purchase of diamonds and the private funding of the China tea trade of the Company and even of other foreign trading companies. The French and Dutch, who would earlier bring in a large quantity of specie, were now able to borrow funds in India from Company servants to finance their trade with China. The servants looking for ways to remit their wealth were repaid by the foreign companies in Europe using the proceeds from these sales. The annual tribute paid to the Mughal Emperor in Delhi also added to the specie outflow from Bengal. Finally, the necessity to fund expenditures (including military) in the other presidencies of the Company, namely Madras and Bombay, also meant the substantial export of specie out of Bengal.

The governor of Bengal, Harry Verelst, estimated the deficiency of import of precious metals into Bengal for the years 1757–66 to be about £8 million. When other forms of remittances from Bengal were added to this, including the king's tribute, the actual outflow of specie could have touched some £13,000,000. He remarked that this was, "a sum so immense as will scarce gain credit with those who have not been at the trouble of examining the particulars". While a combination of

easy money and scientific discoveries set off the industrial revolution in England in the second half of the eighteenth century, Bengal, at about the same time, receded into misery – the shortages in specie import added to the woes created by the vitiated currency system that was implemented at the beginning of the 18th century with the decline of the Mughal Empire.

The declining specie inflows into Bengal, combined with a corrupted administrative apparatus, dragged Bengal into an economic abyss and ultimately, famine. Hunter's descriptions of this catastrophe are heart wrenching:

All through the stifling summer of 1770 the people went on dying. The husbandmen sold their cattle, they sold their implements of agriculture, they devoured their seed-grain, they sold their sons and daughters, till at length no buyer of children could be found, they ate the leaves of trees and the grass of the field and in June 1770 the Resident at the Durbar affirmed that the living were feeding on the dead. Day and night a torrent of famished and disease-stricken wretches poured into the great cities. At an early period of the year pestilence had broken out. In March we find smallpox at Moorshedabad … The streets were blocked up with promiscuous heaps of the dying and dead. Interment could not do its work quick enough even the dogs and jackals, the public scavengers of the East, became unable to accomplish their revolting work, and the multitude of mangled and festering corpses at length threatened the existence of the citizens.

There may have been several root causes for the Great Famine of Bengal. Utmost, of course, was the Company's ruthlessness in the collection of land taxes and that too in cash. But the one definitive factor which exacerbated the destruction wrought by the Bengal Famine of 1770 was the prevailing confusion in the currency system along with an absolute shortage of currency for trade and commerce. Money for day-to-day transactions became scarce. In rural Bengal, rupees alone had amounted to about two-thirds of the currency. Money became so dear that prices of all other goods slumped; the scarcity of money was accompanied by deflation. Artisans, weavers and workers were thrown out of work due to the slump in demand. The credit market collapsed because of the creditors fearing that they would be repaid in overvalued gold. Without credit and in the absence of traders, equalising supply and demand became difficult and had a destabilising effect on the economy.

"At present the distress is so great", wrote the English inhabitants in 1769, published later in the Calcutta Review, "that every merchant in Calcutta is in danger of becoming bankrupt, or running a risk of ruin by attachments on his goods." Hunter mentions that merchants deserted their trade and began "locking up their fortunes in their treasure-chests." But it is in the work of Verelst that we find a petition of the Armenian merchants settled in Calcutta, which captures the then prevailing situation, starkly, "the necessity of coin now felt in this capital, amongst the many intolerable evils arising from it, affects every individual to that degree, that the best houses, with magazines full of goods, are distressed for daily provisions and that not only a general bankruptcy is to be feared, but a real famine, in the midst of wealth and plenty." As one present-day historian, Richard Stevenson, put it, "The Famine of 1770 was a simple famine. The British had removed a large fraction of the coinage, evidently, which destroyed the mechanism of the exchange of goods. It is difficult to buy food when there is no money."

But I must mention a grimly insightful comment by the French scholar, Abbe Raynal that caught my attention while scrutinising some historical records: "all the Europeans, especially the English, were possessed of granaries, and these very granaries the famishing natives respected. Private houses were so too. There was no revolt; no murders; not the least violence prevailed. The unhappy Indians, resigned to a quiet despair, confined themselves to the request of that succour they did not obtain, and peaceably waited the relief of death."

On seeing the defenceless expression on an old woman's face when the bank announced it had run out of cash, I realised why Raynal may have thought it significant to have recorded this observation some 250 years ago.

Modern money theory and lessons from Japan [1]

A critique of mainstream macroeconomics through the Japanese case should not be taken to imply that MMT advocates the same policy prescription for all situations; such naïve logic is a common weapon that macroeconomists often use against MMT.

Just about a year ago, with its rising 'rock-star' appeal in the United States media, Modern Money Theory (MMT) faced a brutal attack from the neoliberal orthodox mainstream fraternity with barbs like "smoke and mirrors nonsense" (Kenneth Rogoff), "voodoo economics" (Lawrence Summers) and even "garbage" (Larry Fink). Fear ran alongside slander; and that MMT would turn the US into a Venezuela, Greece or Zimbabwe.

Then came the pandemic and the headlines changed. Some examples are: 'Pandemic moves Modern Monetary Theory from the fringes to actual US policy', 'Can Coronavirus Response Open the Door to Modern Money Theory?', 'Could Modern Monetary Theory rescue us from the Covid-19 economic crisis?', etc.

Even before the pandemic, if there was any country turning out to be a nemesis for mainstream economics, it was Japan. In spite of persistently large fiscal deficits, Japan struggled to ward off deflation rather than fight inflation. Its debt-to-GDP ratio of 250 percent had not 'crowded out' private investment with high interest rates. Way back in 2011, a confused Paul Krugman wondered: "A question (to which I don't have the full answer): why are the interest rates on Italian and Japanese debt so different? As of right now, 10-year Japanese bonds are yielding 1.09%; 10-year Italian bonds 5.76%."

There were also no bond market vigilantes who brought the Japanese government on to its knees. To the contrary, Japanese bonds were being bought by foreign investors, banks, pension funds and insurance companies. The Yen even accounted for some 4.5 percent of global foreign exchange reserves.

Although these facts lent credence to MMT, Japanese commentators and policy-makers such as Koichi Hamada, Finance Minister Taro Aso and Bank of Japan Governor Haruhiko Kuroda vehemently resisted the idea of Japan as an exemplar of MMT. Fear over deficits and debt had prompted Japan to switch intermittently to fiscal consolidation, killing any possible momentum in consumption expenditures, and thereby investment demand, stalling economic growth and buoyant prices.

Between 2013 and 2014 Japan experienced a spike in consumer confidence with employment income increasing by ¥8 trillion and consumer spending increasing by ¥10.4 trillion. However, bitten by the fiscal consolidation bug, former Prime Minister Shinzo Abe increased the consumption tax in 2014 from 5 to 8 percent so that from 2015 to June 2018 employment income rose by ¥24.3 trillion, but consumer spending rose by just ¥3.6 trillion. In October 2019, Abe once again announced another hike in the consumption tax (to 10 percent) to pay for social security costs of an aging population.

These attempts clearly delineate the wedge between MMT's focus on revival of growth and Japan's present policy preoccupation with fiscal consolidation, summarised by MMT economist, Randall Wray: "This has been Japan's policy for a whole generation. Any time it looks like the economy might break out of its long-term stagnation, policy makers impose austerity in an attempt to reduce the fiscal deficit — and thereby throw the economy back into its permanent recession."

Now Japan continues to grapple with the same dilemma, when earlier this month Taro Aso "brushed aside some ruling party lawmakers' calls for a big extra stimulus budget."

A critique of mainstream macroeconomics through the Japanese case should not be taken to imply that MMT advocates the same policy prescription for all situations; such naïve logic is a common weapon that macroeconomists often use against MMT. In general, MMT argues for expansionary fiscal policy until the economy reaches full employment. However, in addition to real resource constraints there is another critical constraint that must be underscored when it comes to 'applying' MMT, particularly

[1] *Moneycontrol.com, 14.11.2020*

to developing countries: the current account. Many developing countries run current account deficits (CAD). Increased government spending can quickly worsen the CAD and trigger a balance of payments crisis. With inelastic exports and rising import demand, the country's currency could go into free fall with major economic and political ramifications.

On the other hand, Japan, in spite of its economic crisis since the 1990s, continued to maintain its position in the top 10 of the Global Competitive Index of the World Bank and World Economic Forum as well as first position on the Global Economic Complexity Index. While imports as a percentage of the GDP increased significantly from 10 percent in 1990 to 17 percent in 2017, Japan's global competitiveness has ensured that exports kept up at the same rate. Current account surpluses and autonomous capital inflows have prompted Japan to build up foreign currency reserves to partially offset appreciation of the Yen. With the probable exception of China, most developing countries do not enjoy this 'degree of freedom' that Japan does, which has allowed it to 'do MMT'.

Developing countries such as India should decentre the debate away from fiscal deficit target numbers, sustainable national debt and questions like where does money for government spending come from, and, instead focus on unemployment, real resource constraints and the external account. This caveat neither contradicts the basic tenets of MMT nor does it give mainstream economists anything to cheer about with their institutionally decontextualised models.

Will Europe recede into macroeconomic instability with its proposed new fiscal rule?[1]

The positive acceleration of GDP growth rates in 2022 it was considered time to reopen the discussion on fiscal rules. Given the disparate levels of debt and deficits across member states, the key question is whether it is fair to impose a universal austerity rule for all of EU.

The austerity debate is set to reopen in Europe with a German non-paper (a paper unofficially setting out the opinion of the government) released earlier this month calling for a minimum debt reduction of 1 percent of GDP per year for highly indebted countries (like Greece and Italy), and 0.5 percent for medium-indebted countries (like Austria and Germany). A return to such a rule-based approach to debt reduction in January 2024 could once again trigger an economic and political crisis in Europe akin to the turmoil that erupted in the aftermath of the 2008 global financial crisis (GFC) that severely inflicted many countries, some derisively referred to by the acronym PIIGS (Portugal, Ireland, Italy, Greece and Spain).

The EU fiscal rules of a 3 percent deficit target and 60 percent debt-to-GDP ratio first introduced in 1997 (strangely, also adopted by many countries outside the EU including India) as the Stability and Growth Pact (SGP) was put to the test in the aftermath of the GFC.

However, in adherence to the rules, severe austerity measures were consequently imposed with the 1/20 rule: countries which had exceeded the debt limit would have to reduce it by at least 1/20th of the difference between their current debt-to-GDP ratio and the 60 percent target every year. At the same time, these reductions in debt had to come from cuts in expenditures and increases in taxes. This resulted in a bout of severe recessions in many EU states that threatened its very continuance. The COVID-19

[1] *Moneycontrol.com, 24.04.2023*

pandemic that followed even before full recovery from the austerity measures, forced the EU to introduce the 'general escape clause', allowing for relaxation in fiscal rules during times of severe economic shocks. It was further decided to keep such measures in place until the end of 2023. The European Central Bank's (ECB), bond-buying support through the Pandemic Emergency Purchase Programme (PEPP) was a crucial tool that prevented a major economic catastrophe in Europe during the pandemic.

Given the positive acceleration of GDP growth rates in 2022 and downward trend in inflation in spite of the ongoing Ukraine-Russia war, it was considered time to reopen the discussion on fiscal rules. In November 2022, the European Commission (EC) proposed that countries breaking debt targets would have to present four-year plans on how they planned to reduce debt, whereas highly indebted countries would be granted an additional three years, while retaining the overall fiscal rules (3 percent deficit and 60 percent debt to GDP) of the EU. These plans would then have to be negotiated with the EC and approved by the European Council. However, and most interestingly, the proposal did not fix the pace of debt reduction in quantitative terms, instead recommending a flexible path, allowing each country to design its own national blueprints. This allowed countries the option of increasing public investments to raise growth rates, a preferred method to austerity in bringing the debt-to-GDP ratio down to the target.

The recent German non-paper, supported strongly by Netherlands, has now taken a U-turn from the November 2022 proposals. Apart from quantitative rules on debt reduction – with more stringent rules for the worst performers – the non-paper also calls an actual reduction in debt ratios on an annual basis to be achieved with 'simple and transparent' (sic) rules to manage public expenditure and furthermore a provision to automatically trigger a new reform process if high debt persists.

Is it prudent to impose a universal rule for all EU countries? This is the moot question given the disparate levels of debt and deficits across member states. While the PIGS (Ireland has now broken away from the group) countries as well as France and Belgium continue to have a debt-to-GDP ratio exceeding 100 percent (Greece and Italy with 200 percent and 150 percent respectively), there are others like Denmark and Estonia with less than 50 percent. With many still reeling from slow growth and even the general GDP growth rate for the EU forecasted at less than 1 percent for 2023 and around 1.5 percent for 2024, the plausible (re)imposition of austerity rules on cutting expenditures and raising taxes is reminiscent of the post-GFC austerity crisis that roiled Europe.

Austerity policies to reduce fiscal deficits and debt are essentially required to eliminate current account deficits (CAD) in the balance of payments (which implies net asset accumulation by foreigners) when private sector leveraging is shallow, the latter implying that the private sector also desires net financial asset accumulation or private savings exceeding private investment. This desire for net asset accumulation by foreigners and domestic private sector forces the government to accumulate financial liabilities or debt. With a fixed exchange rate mechanism in place, countries with an overvalued exchange rate, for instance Greece or Italy, must resort to 'internal devaluations' by running fiscal surpluses/reducing debt or in other words, forcing recessions to bring down costs of production, particularly, inducing unemployment to reduce wages and thereby increase competitiveness so that the CAD is eliminated or even worse, a current account surplus (CAS) results in net financial accumulation of liabilities by foreigners to accommodate the domestic private sector's desire to accumulate net financial assets.

Countries on the other side of the spectrum with low fiscal deficits and low debt-to-GDP ratios may either have large current account surpluses (for instance, Denmark), or like Estonia have a substantial CAD but the private sector actively leveraging, i.e., the private sector is desirous of accumulating net financial liabilities or debt. It is therefore not surprising that we find many Eastern European nations with low debt-to-GDP ratios given that their growth potential is higher (and consequently, the drive for leveraging) relative to some of the more advanced parts of Europe like Italy and Spain.

The imposition of a common fiscal rule is therefore bound to induce an unacceptable GDP contraction in many countries, which are presently at the wrong end of the debt spectrum but with high standards of living. The recent wave of violence in France sparked off by President Emmanuel Macron's proposal to lessen the burden on the exchequer by revising the retirement age to 65 for eligibility to receive pension is perhaps a warning of what is likely to erupt across Europe were the German non-paper to be accepted and implemented in 2024. Olivier Blanchard [2] was prompt in

[2] *https://x.com/ojblanchard1/status/1643960565067395076*

his condemnation of such a move: 'The German "non paper" proposal ... would be catastrophic. It would lead to the worst form of pro-cyclical fiscal policy.'

With the EU's GDP of around $14 trillion or 15 percent of world GDP, it is imperative to monitor the uncertainties unleashed by its rigid fiscal policy that are bound to have repercussions around the world, including India given that the EU is our largest trading partner.

Is UK's return to austerity warranted?[1]

Even though the forecasts for the UK economy are more optimistic from 2024 onwards, the moot question is whether self-imposed fiscal deficit targets should be the priority for the government at this juncture.

Jeremy Hunt, Chancellor of the Exchequer (Finance Minister), in his Autumn Statement announced the UK government's budget on Thursday, November 17. Unlike the crisis that arose from the Truss government's 'mini-budget', there were no major disruptions in financial markets this time.

It is clear that the UK government has adopted a policy of fiscal tightening, if not all-out austerity, in spite of the earlier experience in the aftermath of the Global Financial Crisis (GFC) of 2008. In 2011, just as the UK economy was recovering from the GFC with a 4 percent GDP growth rate, the then Chancellor of the Exchequer in the Cameron government, George Osborne, decided that 10 percent of the GDP fiscal deficit was untenable. Arguing that it is necessary to 'fix the roof when the sun is shining', the government decided to bring down the deficit to 2.1 percent within a period of three years through a program of 'austerity', namely, raising taxes and cutting expenditures.

The final word on the success or failure of Osborne's austerity program is still contested: for instance, Niall Fergusson [2] argued that even though UK recovery was slow to begin, by 2018, with a revival in confidence, the UK was the second-best performer in GDP growth rates among the advanced nations. On the other hand,

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[1] *Moneycontrol.com, 22.11.2022*

[2] *https://www.project-syndicate.org/commentary/the-economic-consequences-of-mr-osborne-by-niall-ferguson-2015-05*

Ann Pettifor [3] contended that by delaying UK's recovery from the GFC, austerity took a terrible toll on women and poor-income groups, and perhaps more importantly, altered UK's social fabric.

The UK is back at the crossroads. The COVID-19 pandemic and the Ukraine-Russia war has driven the country into stagflation with an expected contraction of GDP and a soaring inflation rate of 11 percent. While the policy responses to stagflation are still an enigma, Hunt has deflected attention from reviving growth and taming inflation to the burgeoning fiscal deficit per se, which he referred to as an 'eye-watering black hole' in public finances. Presently, UK's general government deficit stands at 7.2 percent of GDP while gross debt is at almost 102 percent of GDP. The £55 billion black hole amounts to some 2 percent of GDP. In his Autumn Statement he said that the government must give 'the world confidence in our ability to pay our debts', for which he must 'deliver a [fiscal] consolidation of £55 billion'.

However, are fiscal deficit targets and supposed lack of confidence that the UK may not 'pay back' its debts really valid concerns? In recent years, Modern Money Theory (MMT) has questioned myths spurned by mainstream macroeconomic on whether an economically sovereign country like the UK, which issues its own fiat currency that is legal tender, can default on debt denominated in its own currency. Japan is a stark case-in-point: with consistently high fiscal deficits of around 7 percent since the 1990s and a debt to GDP ratio in excess of 250 percent, interest rates have remained close to zero (negative at times) even as it struggles to ward off deflation. Compared to Japan's chronic problems, the situation in the UK is acute, arising mainly from the energy crisis that is presently engulfing Europe. Given the inelastic nature of energy demand, UK's economy may have to contract sharply before inflation can be brought under control.

Procyclical austerity measures are expected to result in living standards (real household disposable income) falling by 7.1% between 2021-22 and 2023-4, wiping out benefits from eight years of growth, and a return to pre-pandemic levels only by 2027-28. At the same time, additional unemployment will increase by more than 500,000, taking the total to 1.7 million by end 2024. To revive growth the UK needs countercyclical expansionary fiscal policy but the government has instead chosen tightening or consolidation. The tax burden is set to rise to 37.1 percent of GDP by 2024 from an average of 33 percent since the GFC of 2008. While allocations on education and health have been increased, these may be too little in real terms to restore UK's deteriorating public services.

Even though the forecasts for the UK economy are more optimistic from 2024 onwards, the moot question is whether self-imposed fiscal deficit targets should be the priority for the government at this juncture. The biggest concern that may have prompted this strategy is accelerating inflation, which is presently unrelenting. However, data from the US shows that the rate of increases in wholesale and consumer price indices may be slowing down. Perhaps the right strategy for the UK at this point would have been to wait and watch a little longer rather than close the black hole in a hurry.

At the same time, some may ask whether the Sunak-government had a choice in the first place. When Andrew Bailey threatened the Truss government that he would go ahead with his bond sales (or quantitative tightening) program in spite of the government's proposed fiscal loosening of £45 billion, bond yields rose sharply, leading to turmoil in financial and foreign exchange markets, ultimately forcing the Truss government to step down.

It seems that the 'meeting of the minds' that Governor of the Bank of England (BoE), Andrew Bailey had spoken of when he met with Hunt in mid-October was really a tacit agreement that the government would lower the fiscal deficit and not force the BoE to raise interest rates further to tame inflation. Hunt kept his word to Bailey, and tacitly to financial markets too, when he announced fiscal tightening measures in the Autumn Statement.

But was this really necessary? Obviously not. When Japanese Prime Minister, Fumio Kishida announced a massive fiscal package of ¥29 trillion earlier this month, there were no tremors in financial markets as the Bank of Japan supported the government's fiscal expansion with bond purchases to keep yields low. UK's financial crisis in October was essentially a credible threat by the BoE to the Truss government to control the fiscal deficit.

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[3] *https://www.theguardian.com/commentisfree/2018/mar/04/george-osborne-eliminating-current-deficit-austerity-terrible-cost-hubris*

If, however, the fiscal tightening measures prompted by the BoE, end up being ineffective in bringing down the fiscal deficit and public debt as a percentage of (contracting) GDP, we may well see the UK returning to full-scale fiscal austerity after the general elections in 2024 that may be more in line with the economic ideology of the Conservative Party.

All debt is not the same [1]

As the Budget announcement for 2021-22 draws closer, fear-filled discussions in the Indian media over deficits and debt numbers will be heard.

A couple of weeks ago, S&P Global made a dire announcement: [2] global debt is set to reach $200 trillion, or 265 percent of the world's annual economic output, by the end of the year, although it doesn't foresee a crisis any time soon. In spite of the reassurance, such revelations do shape the popular psyche and contribute to escalating fears over the macroeconomic impact of debt and deficits. The bigger danger, however, is that public opinion could be exerting adverse pressure on governments, thereby distorting appropriate fiscal and monetary policy responses to alleviate a crisis. It is imperative that economists dispel rather than obfuscate unwarranted fears over such numbers.

Discussions over debt confound and combine all debt into the same basket. Instead, debt should be separated into two baskets. Included in the first are domestic private sector (household and corporate) debt, external debt of the domestic private sector (usually corporate) and sovereign (external) debt. The dangers of 'excessive' debt in this basket are well-delineated and go by standard principles of sound finance. Generally speaking, as long as loans are used productively and generate adequate income to pay back interest and principal there is no problem in debt financing per se.

Cycles in domestic private debt accumulation and paring down are often the root cause of macroeconomic crises. Examples include the US dotcom and subprime crisis. From the early 1990s the US private sector began a phase of leveraging or accumulating

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[1] *Moneycontrol.com, 23.12.2020*

[2] *https://www.moneycontrol.com/news/business/economy/global-debt-to-hit-200-trillion-sp-global-6191391.html*

debt until 2000. The dotcom burst led to sharp deleveraging that entailed a decline in investment and increase in savings, triggering the 2001 recession. Similarly, the housing boom and bust induced the domestic private sector to leverage until 2007 and then deleverage strongly, resulting in the global financial crisis of 2008.

Turkey is a striking example of external leveraging by its domestic corporate sector, which had a debt to GDP ratio of almost 50 percent of GDP even before the pandemic. The danger of external private debt manifested itself when the Turkish lira fell almost 40 percent in 2018, making interest payments and repayments in foreign currency exorbitantly expensive and consequently triggering the threat of widespread corporate bankruptcies as well as a crisis among European banks with large exposure to Turkish borrowers. A similar crisis engulfs Turkey presently.

Finally, the consequence of excessive sovereign (external) debt has no dearth of unfortunate examples: Mexico, Argentina and Zambia, to name a few. To these may be added the member-states of the European Union including Greece, Spain and Italy that faced a crisis post-2010 given that their deficits had to be funded with sovereign debt, i.e. denominated in euros externally issued by the European Central Bank.

Globally, debt in this first basket stands at about 188 percent of GDP. While rise in corporate debt is noteworthy, it is the jump in corporate defaults that are a cause for concern. In reference to this basket, India's overall private sector debt in Q1-2020 is about 70 percent of GDP (external component being about 17 percent of GDP), while sovereign debt is at just 4 percent of GDP.

The second basket consists of national (internal) public debt. Surprisingly, even post-pandemic, this component for most countries across the world, which issue their own sovereign currencies, is below or around 100 percent of GDP, Japan being the exception with a ratio at about 250 percent. India presently has a general government debt to GDP ratio of around 85-90 percent. In spite of this, it is national internal debt which bears the brunt of allegations over profligacy.

As Modern Money Theory (MMT) elucidates, more than the quantum, it is the fundamental difference in the nature of national and private (and sovereign) debt that is critical. Most governments in the world (EU member-states excluded) issue modern money; fiat currency that is legal tender. The private sector, on the other hand, is the user of currency. Modern money is spent into existence by the government and accepted by the private sector since it must be used to settle tax and other obligations due to the state. It also used within the private sector as a medium of exchange. The quantum of money spent into existence but not taxed accumulates over time into national debt or outstanding financial liabilities of the government, which in turn are financial assets of the private sector.

Government 'borrowing' or bond sales are a monetary policy tool to swap excess reserves in the banking system that arise from government spending and drive down money market interest rates below the level targeted by the central bank as well as a swap of more liquid liabilities (deposit accounts of the private sector in commercial banks) for a less liquid one (bond) that could otherwise be spent, thereby resulting in inflationary pressures and a depreciating exchange rate from higher imports.

The notion of 'repayment' of national debt is problematic. The government can roll over its debt across an infinite time horizon by issuing its own liabilities to settle its existing liabilities. It is no wonder that government budgets do not set apart any money for repayment of debt. This also makes it obvious why a government can never go bankrupt in its own currency, except by choice.

Accumulation of internal debt or government liabilities is a policy response to prevailing economic conditions, often to alleviate a crisis emanating from a private sector deleveraging cycle by accommodating its desire to accumulate net financial assets. As the budget announcement for 2021-22 draws closer, fear-filled discussions in the Indian media over deficits and debt numbers will be heard. Not only can such misapprehensions be allayed when we understand the nature of public debt from an MMT perspective but more importantly, it could nudge the government to turn away from the path of fiscal austerity which arises from a misperception of the scarcity of money or from the pressure to counter accusations of profligacy.

Redefining asset classes using default risk is a robust approach[1]

Traditionally, there are four asset classes broken down into sub-classes: equities, fixed-income securities (debt), cash and cash equivalents like fixed deposits. Modern Monetary Theory offers a useful framework for defining assets, physical or financial, by assessing their default risk.

While developing investment or savings strategies for clients, financial advisors recommend diversification between risks and returns associated with asset classes, that is, assets with similar characteristics and subject to similar regulations. Savers have, however, come under severe pressure in times of crisis as during the 2008 global financial crisis, the COVID pandemic, stock market or even cryptocurrency market collapses when risks of assets are exposed, which triggered panic in markets and eroded the wealth of millions. It is, therefore, important that savers fully recognize the possibility of default risk across asset classes. Modern Money Theory (MMT), by revealing the essence of modern money, offers a robust basis to redefine asset classes according to their inherent risks.

Traditionally, four asset classes have been demarcated, sometimes broken down into sub-classes: equities, fixed-income securities (debt), cash and cash equivalents like fixed deposits and money market mutual funds (MMMFs), and alternative investments that consist of commodities including precious metals, real estate, collectibles like art, intellectual property, derivatives and futures, and emerging-technology assets like cryptocurrencies. Although dividing assets into such groups does provide a practical and convenient profile of assets, it is arbitrary and overlooks the fundamental nature of and underlying reasons for differences in the riskiness of these assets.

From an MMT standpoint, assets must, at the broadest level, be separated into physical and financial assets. The prime characteristic of a physical asset is that it appears in the balance sheet of only a single entity. For instance, gold held by an individual will appear only in that individual's balance sheet as an asset and in no other entity's balance sheet. Real estate and collectibles are also physical assets. The same is true of digital assets like cryptocurrencies (but not central bank digital currencies or CBDCs) and intangible assets (although they lack physical substance) like intellectual property. We include all these assets in our broad categorization of physical assets.

Physical assets may or may not yield an income stream or cash flow for owners but their market price, which then determines capital gains or losses, depends on the market forces of supply and demand. Expectations of future prices or speculation could be a key variable in the demand and supply functions of these assets and not merely their use value, which makes their prices volatile and elevates risks. Consider gold once again. Although gold may find usage in industry and for jewelry, its price volatility arises more from speculation.

Similarly, cryptocurrencies like Bitcoin, may have a certain usefulness as a medium of exchange although its high price cannot be from this feature alone. It arises from speculation. Physical assets are also susceptible to wear-and-tear and deterioration over time. Some physical assets like land are fixed in supply and likely to appreciate with time but there is no guarantee that this will indeed happen since demand for any given piece of land remains uncertain. Physical assets are also subject to loss from theft, damage and/or encroachment.

The key characteristic of financial assets, which distinguishes them from physical assets, is that they appear in the balance sheet of at least two entities, in one as a financial asset and in another as a financial liability. A further separation is required here to isolate risks of different asset classes: financial assets (and liabilities) which are backed by physical assets and those which are not. As mentioned above, the price of physical assets is determined by the forces of demand and supply and therefore their realizable value at the time of liquidation in case of default or bankruptcy is uncertain. Equities and fixed-income securities issued by the private sector are both backed by physical assets of the issuer.

Although the preference in order of repayment from the proceeds from liquidation of assets are different, there is essentially no difference in the nature of riskiness of

[1] *Moneycontrol.com, 15.02.2023*

these assets. The financial liabilities of mutual funds or non-bank financial companies (NBFCs) and even those of MMMFs that hold private sector equities or debt instruments are ultimately backed by physical assets owned by the issuer of those securities. Public sector undertaking (PSU) debt, if not backed by the government, may also be exposed to this risk given that they are backed by physical assets.

Up the hierarchy (lower on the riskiness scale) come financial liabilities of commercial banks or deposits, both savings and current account. These correspond to financial assets held by the non-bank private sector including households and the corporate sector. However, demand deposits held in a commercial bank are backed by loans (financial assets of the commercial bank), which when they turn 'bad', result in liquidation of collateral. Such collateral may either be a physical asset or backed by a physical asset (equity or bonds) and is therefore essentially risky. Demand deposits held at banks are insured only up to Rs 5 lakh and anything beyond that, legally speaking, are prone to risk. The same is true when it comes to assessing riskiness of fixed deposits held at commercial banks. Given the systemic failure associated with bankruptcies, bailouts are becoming more common; however, such bailouts are not mandatory. The proposed Financial Resolution and Deposit Insurance (FRDI) Bill, 2017 to facilitate bank bail-ins clearly revealed this intrinsic risk of bank deposits.

Nonetheless, a unique advantage of commercial banks over other financial institutions is that they hold accounts at the central bank, in India's case, the Reserve Bank of India (RBI). While this does not guarantee a commercial bank from solvency risks, it does protect them from liquidity risks arising from maturity mismatches, a facility that may not be available to NBFCs directly.

At the top of the hierarchy, or at least risk from default, are financial liabilities of the government, and in particular, the central government. Cash and debt of the government – from GoI bonds to Public Provident Fund (PPF) accounts – are risk-free because they are not backed by physical assets. Instead, they are backed by the state's constitutional power to issue modern money, or in other words, fiat money which is legal tender. In the case of India, this is the Indian rupee, which is also the unit of account in which all books of accounts must be maintained and taxes paid in. The financial liabilities of the government are settled only by issuing its own (new) liabilities. This is the basis for MMT's claim that a government that is issuing its own sovereign currency can never go bankrupt in that currency. CBDCs are also financial liabilities of the state and are not backed by physical assets, which make them risk-free. There is no liquidity or solvency risk associated with financial liabilities of the state. However, this does not imply that a government must issue unlimited liabilities, only that it can.

State government and municipal corporation debt are not risk-free unless they are backed by the central government since they, like the private sector, are users and not issuers of currency. However, it is unlikely that central governments will allow state governments or local government agencies to default on their debt.

Foreign currency denominated debt issued by the central government is, however, not risk-free. Default on such debt cannot be ruled out. A country going broke or bankrupt usually refers to situations when its foreign currency liabilities (sovereign debt) exceed foreign currency assets (reserves). An option is for the government to issue its own currency to buy foreign currencies in the forex market. This, however, inevitably leads to a depreciating domestic currency and soaring (imported) inflation as many countries have experienced including Venezuela, Zimbabwe and more recently, Sri Lanka.

Allocation of savings in default-risk free assets also has important macroeconomic implications. Private sector entities look for a reasonable allocation of their portfolio in risk-free instruments. Non-availability of adequate risk-free savings opportunities in central government debt, especially when fiscal austerity policies are vehemently implemented, could result in an increased savings rate to compensate for higher risks in other assets arising from default and/or loss in value. The increased propensity to save can consequently result in lower aggregate consumption and slower rates of growth as John Maynard Keynes proposed in his theory on the "paradox of thrift".

US debt ceiling crisis: a self-inflicted wound [1]

As Treasury Secretary, Janet Yellen had put it some months ago, the US is 'flirting with the self-inflicted crisis." Why would any government ever want to do default, given that the economic consequences of such an act would be disastrous for itself, its own people and even the global economy?

As the world anxiously awaits the outcome of negotiations between the Democrats and Republicans over raising the debt ceiling in return for an agreement on future spending cuts by the Biden government, it is perhaps a good time to reflect on what really is 'national debt'.

To begin with, it is critical to distinguish between countries which issue their own fiat (inconvertible) currencies like the US, UK, India, Japan, Canada, and so on from those that do not, in particular, Eurozone member states as well as a small number of others which adopt a fixed exchange rate. This essay discusses national debt of the former group of countries, a majority in the world today.

To understand a country's central or federal government (referred hereon as government) 'borrowings' denominated in its own sovereign fiat currency as 'debt' like those of non-central government (referred hereon as non-government) entities including state governments, local governments, corporations and households is fundamentally flawed and is consequently the root cause of an equally flawed debate. Suppose an individual borrows Rs.100 from a friend to buy a cup of tea, which she promises to repay the next day. What exactly has she borrowed and what must she repay? She borrows the financial liability of the government or more precisely, its institution the Reserve Bank of India (RBI) – the Rs.100 promissory note signed by

[1] *Moneycontrol.com, 4.05.2023*

the Governor of the RBI – in exchange for her own promissory note to her friend (the loan). When repayment or closure of the loan becomes due, she must give back to her friend a promissory note issued by the government. Inability to do so results in debt default. Unfortunately, she cannot (re)issue her own promissory note in final settlement or closure of the debt.

What about the government? First and foremost, it borrows its own promissory notes, which no other institution but its own issues (say, dollars in the US or rupees in India). Calling this 'debt' is problematic because no other entity in an economy 'borrows' its own financial liabilities. Second, repayment is made only in its own fiat currency, i.e., in its own financial liabilities. Once again, no other entity can make a final settlement of its debt with its own promissory notes (keeping aside demand deposits at banks). In some cases, it is possible for non-government entities to roll over debt temporarily with issue of new promises to pay but this is not final settlement.

This immediately raises the question as to why a government needs to borrow its own financial liabilities in the first place? Why not just issue new ones? And most importantly, why does the non-government sector even accept these promissory notes?

Modern Money Theory (MMT) provides answers to these questions. It is because a sovereign government is able to impose and enforce tax payments or other obligations owed to it only in its own fiat currencies. However, unless the government first spends its promissory notes (say, dollars or rupees) into existence, which people accept in exchange for resources that they possess, primarily labour, there is no way for the government to collect them back as taxes. Spending creates money, taxes destroy money. If the government were to seek a balanced budget, it could simply tax all that it has spent. This would mean that the non-government sector is left without any money, a medium of exchange as well as a financial asset. No state would want such a situation. However, if the government considers that the quantum of money or purchasing power remaining with the non-government sector is inflationary, it could issue bonds (or 'debt') to postpone its utilization for purchase of goods and services in return for an interest payment as incentive.

The 'debt' or financial liabilities of the government is at the same time a financial asset of the non-government sector. The $31 trillion dollar US national debt is nothing but financial assets of non-US government entities – held by its own citizens as well as by

foreign governments and non-government entities. It is also the safest financial asset held by the non-government sector since it is backed by the power of the government to issue fiat money to repay its debt and not by physical assets. It is no wonder then that a cursory glance at national debt of economically sovereign states always show a constantly increasing volume of debt even though the debt to GDP ratios may rise or fall. Debt repayment by the state or writing off the financial liabilities of the government in effect means writing off the financial assets of non-government entities.

A debt ceiling by an economically sovereign government is a self-imposed constraint on itself. As Treasury Secretary, Janet Yellen [2] had put it some months ago, the US is 'flirting with the self-inflicted crisis.'

And debt default can only happen if a government chooses to do so.

But why would any government ever want to do so given that the economic consequences of such an act would be disastrous for itself, its own people and even the global economy?

Let's consider a few consequences of a US debt default. Asset values on the balance sheets of non-government entities from individuals to corporations would plunge, resulting in widespread bankruptcies, destruction of businesses and a collapse into recession or even a depression. Bank balance sheets – which hold massive amounts of government debt – would also implode. What we saw in the Silicon Valley Bank (SVB) crisis with just a fall in market price of government securities will seem like a mere blip compared to US government debt default where asset values of government securities fall to zero.

Globally, confidence over the dollar as international reserve currency, which is already being questioned, will be irreparably damaged. Even as some may argue that this could be a positive event, there will undoubtedly be immediate and severe repercussions on international trade and capital flows.

All this would only mean that fiscal policy kicks in as an automatic stabilizer wherein tax collections fall while government spending on social security and other benefits surges, widening the US fiscal deficit and raising its debt to GDP ratio with both an increasing numerator and falling denominator.

While a complete debt default by the US government will never happen, even a small default could open the window of uncertainty. In fact, it is quite farcical for a (struggling) hegemonic power like the US to make the world anxiously wait for some unknown X-date just when countries (including the US) are trying to put their economies back on track in the aftermath of the Covid-19 pandemic and ongoing Ukraine-Russia war.

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[2] *https://edition.cnn.com/2022/10/21/politics/biden-debt-ceiling/index.html*

Deconstructing the DOGE narrative about government debt [1]

The fear of US public debt, often exaggerated by policymakers, overlooks fundamental economic realities. Instead of focusing on debt reduction, the priority should be ensuring government expenditures enhance productive capacity to sustain economic growth.

For several months now, Elon Musk, Chief of the Department for Government Efficiency (DOGE) set up by the Trump administration, has been repeatedly warning that the US "headed for bankruptcy super-fast" on account of its huge public debt that now exceeds $36 trillion or almost 125% of its GDP. To underscore the desperation of the situation, this figure is often conveyed in more personal terms: each citizen of the US would have to pay up more than $100,000 to resolve the US public debt! The solution to the problem: deregulation or streamlining government operations, and expenditure cuts. While these may control the growth in public debt, it will not reduce existing debt per se. The only definitive solution is to run budget surpluses, the consequences of which could paradoxically increase the debt.

We must begin deconstructing DOGE with the basic question: what is public debt? We assume that the US government issues its own fiat currency (inconvertible into gold or silver) – the dollar. To understand the essence of public debt we assume there is no banking system. The US government in order to draw resources from the private sector for the creation of public goods, spends dollars –its financial liabilities or promissory note – into existence. A portion of these dollars (financial liabilities) are extinguished by way of taxes when they are returned to the government. The amount of dollars remaining in the economy accumulates over the years into public debt.

The government may also want to ensure that people are not tempted to spend all the dollar bills (liquid cash) they hold as it may lead to inflation. An interest-bearing bond may be issued to mop up some of this liquid cash. It is important to note that taxes cannot be paid and debt cannot be issued before the government spends dollars into existence as both must be settled in dollars, and dollars only. Moreover, both cash and securities are financial liabilities of the government. When a bond matures (akin to a fixed deposit), it can be settled in cash, which is nothing but a non-interest-bearing financial liability akin to money held in a current account. Since US debt will be repaid in its own financial liabilities, the US government cannot go bankrupt. Default on debt happens only when the government chooses to do so.

How can the government reduce its accumulated financial liabilities or debt? The only solution is to tax people more than the government spends, i.e. run a budget surplus so that people are forced to draw down their cash holdings and/or liquidate their savings held in government securities. From the private sector's point of view, government issued cash and bonds are financial assets, or in other words, public debt is nothing but private sector savings accumulated over the years. Destroying private sector assets through budget surpluses will reduce their spending while increasing their propensity to save from current income resulting in a contraction of the economy – a recession or even a depression – that may ultimately result in a larger budget deficit as tax collections fall and expenditure (say, on social security) rises.

It is difficult to comprehend why fear-mongers over US debt do not look at glaring facts. Japan, for instance, had a yen-denominated (its own sovereign fiat currency) debt to GDP ratio of 250%, more than double the US'. In spite of this, interest rates remained at near zero for several years. And most importantly, Japan never defaulted on its debt. Another fact that Americans seem to have forgotten (conveniently) is the consequences of Bill Clinton's budget surpluses between the late 1990s and early 2000s; the personal savings rate tanked while household debt surged, which has been argued to be the precursor to the Great Recession of 2008.

One of the most common arguments used against public debt is the government-household (or corporate) analogy. The Adam Smith Institute, a pro free-market, neoliberal think-tank, claims that this analogy "is an absolutely great way to describe government debt … Yes, obviously, a government can print money. But so can a household. Getting the pub to run a tab is money printing – debt creation …" However, and herein lies the key difference, while a household can run a tab when

[1] *Moneycontrol.com, 10.03.2025*

it's time to make a final settlement, it has to do so not with its own liability but with the financial liabilities of the government (currency) whereas the government simply settles its liabilities with its own liability – the debt can be rolled over ad infinitum. If you walk into the Fed with a $100-dollar bill and ask them to settle their liability (promissory note), they will give you a new one or perhaps 20 x 5 new notes.

The household analogy, however, applies to sovereign debt denominated in a foreign currency. For instance, if Sri Lanka runs out of dollars, it cannot issue dollars to settle the debt – it can therefore go bankrupt in dollars. In such situations it issues its own debt (Sri Lankan rupees or LKR) to buy dollars in the market, depreciating the LKR, importing inflation that often triggers hyperinflation. This problem does not arise for the US as most of its debt held by foreigners (30% of total debt) is dollar-denominated. If a foreign central bank asks for settlement of US treasuries, the Fed would transfer the amount from their securities account to their deposit account held at the Fed, i.e. similar to liquidating a fixed deposit at the bank, which entails transferring the amount from the FD account to a current (or deposit) account.

If the US government cannot go bankrupt from its debt, does this mean that wasteful expenditures are justifiable? Absolutely not. Economic efficiency means that all expenditures are allocated to their most valuable uses and waste is eliminated. This is important but should not be driven by the fear of the debt per se; instead, wasteful expenditures must be seen as inflationary. When the government spends it adds purchasing power in the hands of the private sector, when it taxes it drains out this purchasing power so that the deficit is the net purchasing power (or aggregate demand) injected into the economy. If these expenditures do not add, directly or indirectly, to the productive capacity of the economy (aggregate supply), the result will be inflation. As long as aggregate supply and demand move in tandem, deficits and debt are never a problem.

In reality, it is difficult to ascertain which expenditures add to productive capacity and how much. For instance, building a museum might be considered wasteful or inefficient expenditure, but is it really so? In their contribution to preserving a country's heritage it can be argued that they contribute to nation-building that ultimately adds (indirectly perhaps) to the productivity of its citizens.

The choice of expenditures is undeniably difficult to make: should the US (or for that matter, any country) spend on a museum, a Mars mission, a high-speed rail network, primary healthcare facilities and/or public housing? Rather than pursue deficit and debt numbers, and laying off workers, it would be more efficient if DOGE focuses on "governance", or in other words, how government expenditures could best raise US productive capacity so that the economy continues to grow with an acceptable rate of inflation.

The importance of appreciating the essence of banking[1]

In order to deconstruct banking, we begin with the term deposit. Do banks take "deposits"? No.

One of the most under-discussed subjects in economics is the true nature of modern banking. It is now common sense and an almost universally accepted notion that banks are essentially financial intermediaries between savers and investors.

Consider this definition from a popular economics textbook by Gregory Mankiw: "Banks are the financial intermediaries with which people are most familiar. A primary job of banks is to take in deposits from people who want to save and use these deposits to make loans to people who want to borrow."

Unfortunately, this idea is far from reality, and one that needs to be contested given its implications on economic stability, growth and development. However, where do we begin? While economists are engaged in heated discussions over bail-ins and bail-outs, the word which is actually crucial in unearthing the essence of banking is 'bailment'.

What is surprising is that questions over terms such as 'bailment' were deeply explored millennia ago in Roman law, but have over time been gradually eliminated from mainstream economic discourse, culminating in naïve notions of banking as propagated by Mankiw.

In order to deconstruct banking, we begin with the term deposit. Do banks take deposits? No. The word deposit taken from the Roman law depositum implies bailment. In other words, a deposit would mean that the bailor (depositor) transfers physical possession of the property (money) for a period of time and for a specific purpose to the bailee

[1] *Moneycontrol.com, 19.10.2020*

(bank), but retains ownership. Henry Dunning Macleod, however, articulated the actual operation succinctly more than a 150 years ago:

'When the customer pays in money to his account at his banker's, the Property in the money passes absolutely to the banker. He [the bank] is not the TRUSTEE or the BAILEE of it, but he becomes the OWNER of it, and is entitled to use it anyway he pleases for his own purposes.' (Emphasis in the original)

This is, therefore, a purchase (sale) of money by the bank (customer). In exchange, the bank issues a 'credit' in favour of the customer with the promise that the bank will deliver an equal amount of money — although no specific money is assigned to it — on demand. In Roman law, these were referred to as 'mutuum' or loan for consumption contracts. This difference between a deposit and a relationship of creditor-debtor can have implications in case of bank distress or failures, and thereby the legal position on bail-ins and bail-outs. Meanwhile, the customer can transfer their new property (the bank's debt) to whomsoever they want, and that person can claim money in exchange from the bank.

The other side of the bank's operations — 'lending' — is also significant. To lend something implies two essential conditions: that it already exists and that something is actually transferred from someone to someone else or some other entity. In an extraordinary empirical study of actual transactions recorded by a bank when he actually took a loan, Richard Werner found that the bank did not 'lend' money. The bank created money 'ex nihilo' or out of nothing. This happened when the bank purchased his promissory and in return opened a kind of 'fictitious deposit account' in his favour. Nothing was really 'deposited' into it. Instead, it was a mere acknowledgement of the bank's debt to him registered with a ledger entry in its books of accounts in return for his promissory note.

In a paper that was published in its quarterly report of 2014 to coincide with Werner's findings, the Bank of England too acknowledged that banks create money out of thin air. The idea of credit creation by banks can, however, be traced back to economists such as Macleod, Ralph Hawtrey as well as Joseph Schumpeter and later among post-Keynesians such as Basil Moore, promoter of Endogenous Money Theory. In spite of the recognition of endogenous money, the financial intermediation model and its defunct predecessor, the money multiplier model — which incorrectly assumes that

banks lend central bank reserve money — continue to dominate the framework for our understanding of modern credit and banking.

In a modern money economy like the United Kingdom, some 97 percent of all transactions are carried out with bank liabilities (the bank's acknowledgement of its debt) and not central bank money (currency notes). Commercial banks, therefore, not only decide how much of money is created in a modern economy but also who gets it. This makes banks extremely powerful institutions in an economy in which a significant portion of investments in productive sectors of the economy depend on credit.

Although central banks can influence credit creation by banks by stipulating capital adequacy norms (like Basel III) and also the repo rate at which it makes reserve money available to the commercial banking system, a necessity for interbank settlements, these per se do not address the problem of how banks decide who gets credit, and how much of it. While lowering interest rates are often known to be the cause of asset bubbles, raising interest rates could also result in a similar outcome by diverting credit to riskier ventures, including speculative purchase of assets.

Some heterodox economists such as Werner, therefore, argue that stricter control over direction of credit as well as a decentralised banking sector that is more responsive to the needs of small and medium industries may be required to increase real capital investment and employment opportunities.

The success of economies like Germany, Japan, Taiwan, South Korea and more recently, China, can be understood only with an appreciation of the essence of banking, namely, its dominance over the creation of money in a modern economy and the need to exercise appropriate control over it.

When connected lending led to bank failures [1]

As experts and policymakers engage in debate and discussion over the new guidelines set by RBI's Internal Working Group, it is interesting to go back in history when connected lending led to bank failures.

No sooner had the Internal Working Group of the Reserve Bank of India (RBI) recommended that corporate houses be allowed to set up banks, than economists and commentators raised doubts over the possible consequences of connected lending. Raghuram Rajan and Viral Acharya were, however, categorical in their apprehension:

'The history of such connected lending is invariably disastrous — how can the bank make good loans when it is owned by the borrower?'

Regulation and supervision could help but only up to a point. The massive non-performing asset (NPA) problem across the banking sector as well as the recent debacles faced by specific institutions including Yes Bank, Lakshmi Vilas Bank and IL&FS are unequivocal examples of the limitations of regulation and supervision in the financial sector. Even as experts and policymakers engage in debate and discussion over these new guidelines, it is interesting to go back in history when connected lending led to bank failures.

Western banking in India was actually introduced by businesses, the 'agency houses', soon after the rise of the East India Company (EIC) as merchant-ruler in the last quarter of the eighteenth century. The agency houses were agents for civil and military supplies of the EIC, agents for planters and merchants, ship-owners, and engaged in several other businesses. They combined these operations with banking, namely,

[1] *Moneycontrol.com, 25.11.2020*

receiving deposits, making advances for produce and even issuing bank notes.

The Bank of Hindostan set up by the agency house Alexander & Co. around 1770 was perhaps the first of its kind in India. However, even at that time, as emphasised by Northcote Cooke, they were aware of the necessity to keep banking operations distinct from their trading businesses. This is evident from the fact that some of the partners in the bank had no interests in the business of the agency house.

This situation, however, changed after the monopoly trading powers of the EIC were diluted in 1813, bringing agency houses into even greater prominence. The large agency houses and their affiliated banks including Alexander & Co/Hindostan Bank, Palmer & Co/Calcutta Bank and Mackintosh & Co/Commercial Bank lent huge sums of money to indigo planters whose products were exported to England. The booming indigo business soon tempted the agency houses to take stakes in the planters' profits — this was essentially a situation in which banks were lending to their own businesses.

There was greater complexity to this relationship between banking and the indigo business of the agency houses.

Post-1813, the EIC faced a problem of transferring its surpluses from territorial revenues collected in India to England. An ingenuous scheme developed: money was advanced to the agency house banks who would make advances to indigo planters and other commodity producers in which they also had a stake in profits. The goods were exported by the agency houses and the importers in England would settle their dues by a payment to the EIC, executed via drawing of bills of exchange.

The abundant availability of credit from the EIC in India was a strong temptation for the agency houses to overlook the actual commercial sustainability of the underlying business. Quality of the exported goods was also compromised. The bubble finally burst in 1829 with a glut in the supply of commodities and a consequent crash in their price. By 1833, most of the agency houses were bankrupt. The estimated loss from crisis was some £11 million.

History soon repeated itself.

The Union Bank was set up in 1829 in Calcutta and by 1838 every director of the bank was connected to a leading commercial house or business. Once again, the bank advanced large sums of money to the connected business houses, in particular, their indigo factories. By 1842, the credit was concentrated in just a handful of accounts, including Colville Gilmore & Co., Cockrell & Co. and Carr Tagore & Co. that added up to a substantial portion of the capital of the bank. When the indigo businesses began to fail, it was decided that the bank must move its investments out of indigo. The question though was how?

Prudential banking principles seemed to suggest that it would have been in the best interest of the bank to stop advances and pull out their investments in the indigo businesses. If these businesses went bankrupt, so be it. Sell the collateral and write off any losses. As Cooke explains, it is here that the problem with connected lending manifested itself:

'Of this, however, there was no chance, while the Directors were men who were heavily and hopelessly indebted to the Bank. The keeping up the factories they had mortgaged, enabled them to ward off, to an indeterminate period, the fatal date of insolvency.'

Although it was amidst the Commercial Crisis of 1847-48 that rocked the world that the Union Bank ceased operations, JC Stewart, former Secretary of the Bank, delineated the specific reasons for its failure:

'It is to the excessive credit given to a few particular houses [whose representatives were Directors in the Bank]; and to the purchase of their Bills in 1847; and to the accommodations to them long after they were insolvent; that the Bank's ruin is truly to be attributed.'

It would be utterly naïve to conclude that the recent recommendations by the RBI's Internal Working Group will once again lead to a similar crisis that colonial Bengal experienced in 1829 and 1847. It would also be equally naïve to disregard what Mark Twain reportedly once said: 'history doesn't repeat itself, but it often rhymes.'

Is there a solution to recurrent bank crises?[1]

The recent Silicon Valley Bank (SVB) and Credit Suisse crises has once again triggered fears over the fragility of the financial system, both in the US and across the world. Shocks, uncertainty and contagion being inevitable, the only 'solution' to recurrent crises could lie with central banks.

The Bank of England's website has an interesting page [2] on its history. The first event is its founding in 1694, the second being the appointment of Sir John Houblon as its first Governor in the same year, and (not) surprisingly, the third event is a financial crisis: the South Sea Bubble of 1720.

Throughout the nineteenth century there were cataclysmic bank failures and bank runs in England, Europe and the US; those of 1825, 1847, 1866, 1873 and 1893 being the favourites of economic historians, often recalled as 'panics' and 'commercial distress'. India too, as Britain's largest erstwhile colony was severely impacted by some of these episodes. The rise of the US as an economic superpower made it the new epicentre of global banking crises from the twentieth century onwards: the Great Depression of the 1930s, the S&L crisis of the 1980s and the Great Recession of 2009 are some of the events that easily come to mind. The recent Silicon Valley Bank (SVB) and Credit Suisse crises has once again triggered fears over the fragility of the financial system, both in the US and across the world.

With such a dismal historical record of crises, two critical questions arise at this juncture: first, why is the banking system prone to recurring crisis in spite of regulation and other prudential banking norms and second, whether there really is any permanent solution to this chronic phenomenon?

Banking crises almost always arise from asset-liability mismatches. A maturity mismatch between short-term liabilities and long-term assets can lead to liquidity risks while a loss in asset values over and above the capital of the bank leads to bankruptcy or solvency risk. Moreover, as the SVB crisis starkly revealed, the loss in market value of assets can arise not just from loans going bad but even from the marked-to-market value of safe government securities. Fear over bankruptcy induced a sell-off of SVB shares on the stock markets, triggering a bank run that resulted in a liquidity crisis, forcing the bank to then sell securities at a loss and consequently, the imminent bankruptcy of the bank.

Despite satisfying Basel III norms on capital adequacy as well as minimum leverage ratio and liquidity requirements, the too-big-to-fail, Swiss giant, Credit Suisse had to be bought out by UBS when it was on the verge of collapse a few days ago. A multitude of factors had contributed to Credit Suisse's predicament: incurring losses on operations, bad investments, money laundering scams and criminal/espionage scandals, larger than reported off-balance sheet liabilities, and lack of confidence of depositors and shareholders. All these factors were reflected in the rising price of its credit default swaps (CDSs), which can essentially be thought of as the price for insurance against default by a borrower.

The recent SVB and Credit Suisse episodes have shown that the fragility of banks is not always captured by regulatory norms. Even the possibility of deterioration in the quality and/or price of assets that leads to a breach of confidence in a bank is sufficient to cause its failure. The strong destabilizing contagion to the global financial system emanating from bank failures is obvious, which therefore calls for immediate action to stem the crisis. And here only one option exists: state coordination and support through its central bank. The market system has no automatic corrective response to a bank failure and even more unnervingly, stem the contagion from such failures.

Although his precise recommendations are subject to misinterpretation, the nineteenth century economist, Walter Bagehot articulated the 'lender of last resort' function of the Bank of England in his book Lombard Street: A Description of the Money Market (1873): '[lend] most freely... to merchants, to minor bankers, to 'this and that man', whenever the security is good.' After the 2008 crisis, Ben Bernanke

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[1] *Moneycontrol.com, 31.03.2023*

[2] *https://www.bankofengland.co.uk/about/history*

had commented on how banks were rescued: 'It's not tax money… We simply use the computer to mark up the size of the account [of banks].' Central Bank interventions during the COVID pandemic – short- and long-term repo operations, standing facility operations to name few – is what saved the day, at least for the financial system. In the SVB crisis, the Fed opened its discount window to swap securities at their par value in lieu of a credit in reserve money in their accounts and even in the case of Credit Suisse it was the Swiss Central Bank that orchestrated its takeover by UBS with an assurance of CHF 100 billion in liquidity assistance.

These examples show that the state is increasingly playing a more critical role in the sustainability of the banking system. At the same time, bank mergers, driven by technology, risk diversification and/or failures, are leading to the gradual emergence of oligopolistic banks dominating the financial landscape. Both these characteristics are contradictory to some of the fundamental tenets of modern banking. The banking sector has essentially developed as an extension of central banks, with the role of credit money creation devolved to commercial banks. These banks at the same time attract deposits of businesses and individuals in order to accumulate a cheap source of reserve balances in their accounts at the Central Bank. With the state's acceptance of tax payments through demand deposits, bank money has become widely acceptable in settlement of liabilities that arise in trade and exchange. Moreover, competition amongst banks and maximization of shareholder value should ensure that banks lent diligently while competing for deposits through enhanced services to their customers.

The growing concentration in the banking sector, more frequent and larger bailouts becoming imperative, and the further intensification of moral hazard, opens up a bigger question on the future of commercial banking. Shocks, uncertainty and contagion being inevitable, the only 'solution' to recurrent crises could lie with central banks – who in any case have ultimately backstopped every recent banking crisis. The emergence of Central Bank Digital Currencies (CBDCs) may not only enable the private sector to hold deposit accounts at the Central Bank but the utilisation of fintech could challenge the role of commercial banks in prudential credit disbursement. If this happens, then any loss arising from bad loans could simply be absorbed directly by the Central Bank, which, unlike commercial banks, is not subject to liquidity and/or solvency (negative net worth) risks.

While there are groups like Positive Money in the UK calling for quicker transition to CBDCs and snipping the role of commercial banks, there are others like Randal Quarles, U.S. Fed board member who argue that 'an arrangement where the Federal Reserve replaces commercial banks as the dominant provider of money to the general public could constrict the availability of credit, fundamentally alter the economy and expose the public to a host of unanticipated, and undesirable, consequences.' But doesn't a warning subtly allude to a threat?

Perhaps it's time to pay heed to another warning (or threat perhaps) in the same context from Mark Carney, former Governor of the Bank of England: 'There will be a change, measured over decades. It is very hard to predict. That which is unsustainable tends to go on for longer than you think and then happen more quickly than you expect … but these structural flaws [in banking], in the end … will ultimately result in a change.'

Do Bank Bailouts Really Use Taxpayers' Money?[1]

While this short analysis does not evaluate the options available to tackle the NPA crisis, it nonetheless makes possible, a fairer assessment of available policies by dispelling our naïve understanding of modern money and the myth that taxpayers actually fund government spending on bank recapitalisation.

India faces a massive NPA problem which not only continues to grow, but is even likely to worsen. The figures are alarming; NPAs grew by a whopping amount of Rs.3.13 lakh crores in the financial year 2018 to cross the Rs.10 lakh crores mark, amounting to some 11% of the total loans given by the commercial banking sector. The Reserve Bank of India (RBI) has further cautioned that Public Sector Banks (PSBs), which constitute about 70% of the banking system, are likely to see their NPAs worsen this year. India now faces one of the biggest NPA problems in the world— of crisis proportions, no doubt— with adverse implications for investment and inclusive growth.

In situations when loans turn bad and must be written off, banks are compelled to do so against their capital, since adjustment against other creditors including depositors (bail-ins) is usually not permitted. When a bank's capital is decimated by bad loans, bank lending suffers. Basel III norms, for instance, require capital adequacy of around 8% to 10.5% of the risk-weighted assets (bank loans) generated. Erosion of capital due to bad debt write-offs, therefore, constrains credit growth and consequently, investment and working capital finance across all sectors of the economy. With India's PSBs accounting for a significant portion of NPAs, the immediate task on hand for the government is to infuse capital into these banks, meet adequacy norms, and restore their ability to lend.

[1] *NewsClick, 6.07.2018*

The political fallout of bank bailouts

From privatisation of banks to the creation of a bad bank into which all NPAs can be hived off, from bank bail-ins to governance reforms, many solutions to the NPA crisis are being currently debated in India. However, the most pressing problem that cannot be circumvented is the recapitalization of banks. Raising money in the market would be one way to recapitalize a bank. However, a bank facing a severe NPA problem may not be able to do so in the markets without offering deep discounts on the price of its shares. Banks, especially PSBs, would therefore look to the government to infuse capital through a bailout package. A question that immediately follows is, "where does the government get the money to rescue the banks?" The most obvious answer is, "taxpayers' money". This leads us to rather hastily conclude that taxpayers bear the burden of rescuing a few crony capitalists, although in some instances the defaulters may well be over-indebted farmers. The political fallout of such a simplistic understanding of bailouts actually pre-empts recapitalisation plans and is instead making bank bail-ins the preferred option in many countries around the world.

Taxes do not fund government spending

At the core of this (mis)understanding lays the notion of money in neoliberal economics. It is taken for granted that taxes fund government spending. This is simply not true; state money comes into existence through government spending, by which the government effectively transfers real resources from the private sector to itself. The private sector accepts state money (an IOU or liability of the state) because it is mandatory that tax obligations be settled only in this money, issued by an economically sovereign government (rupees in India, dollars in the USA, pounds in Britain, and so on). State money consists of both, currency in circulation as well as reserve accounts held by commercial banks at the central bank. Governments, therefore, do not need taxes to spend. On the other hand, the private sector needs state money to settle its tax obligations to the state. Heterodox economics, Modern Money Theory (MMT) in particular, considers taxes as one way of draining the system of money in the hands of the private sector that if left in circulation, is likely to cause inflation. Fiscal deficits are nothing more than untaxed money spent into existence by the government. If governments were to run a fiscal surplus, then all that is spent by the government would have to be "returned" to it and some more too (from our savings). The obsession over fiscal deficits is therefore unfortunate and has been hyped in order to reduce

the role of governments in the real economy to the minimum possible. This has been institutionalised through legislation like the Fiscal Responsibility and Budget Management (FRBM) Act of 2003, in India.

The bank recapitalisation process

Consider a situation where the government decides to override some arbitrary fiscal deficit target (usually around 3%), and instead go ahead with writing-off all bad debts and recapitalise banks through simple and straightforward deficit financing, or what economists refer to as "printing money". This process would begin by issuing bonds to the RBI against which its account at the RBI would be credited with reserve money. This reserve money would be transferred (credited) to the accounts of commercial banks by debiting the account of the government at the RBI. However, at the same time, the commercial banks would issue equity shares to the government against the reserve money credited into its accounts at the RBI. An additional problem could arise here; all else constant, the increase in reserve money with banks (or what is called liquidity) would cause a fall in interbank money market interest rates. To siphon off the entire excess liquidity infused by the government's purchase of bank equity, and thereby maintain its target interest rate, the RBI would "sell" the government bonds it possesses to commercial banks in exchange for reserves. On careful scrutiny, it can be seen that the set of transactions between the government and commercial banks amounts to nothing more than a swap of government bonds for equity shares of banks. In all these transactions, the non-banking private sector's balance sheet undergoes absolutely no change. Moreover, no additional tax burden is levied on it by the government to raise money for the recapitalisation of banks as is commonly touted. Once recapitalised, banks can meet their capital adequacy norms and restore the supply of credit in the economy.

What about the repayment of bonds in the longer term? Without discussing the MMT position on the myth that public debts impose a burden on future generations, it suffices to mention here that while the government has a long-term liability (bond), it also acquires a long-term asset (equity). In the short term, its interest payments on bonds could be offset by the dividend earned on equity.

Bail-outs or bail-ins?

The primary question about bailouts is not "where is the money for it", but the moral hazard problem. If bad debt write offs were so easy— which is actually the case— then commercial banks can become complacent about taking risks in future. This is an issue the world continues to grapple, without any definite solution in sight. At the same time, a rejection of bank bailouts on the grounds that taxpayers are footing the bill of failed capitalists and distressed farmers, is leading governments to consider bank bail-ins as a more appropriate policy tool to deal with stressed banks. The Financial Resolution and Deposit Insurance (FRDI) Bill, 2017, has opened the doors to bank bail-ins in India, wherein bad debts of banks could be written off against the holdings of banks' creditors including depositors and fixed deposit holders. While the FRDI has several safeguards to prevent abuse of bail-ins by banks, it could nonetheless lead to a breakdown in the public's confidence in the banking system and a flight to cash just like it happened in Cyprus in 2013.

While this short analysis does not evaluate the options available to tackle the NPA crisis, it nonetheless makes possible, a fairer assessment of available policies by dispelling our naïve understanding of modern money and the myth that taxpayers actually fund government spending on bank recapitalisation.

How Japan leveraged commercial banks for high economic growth[1]

Privatising banks is no panacea. Instead, India would do well to learn from Japan's 'window-guidance' system that first identified which sectors are most likely to achieve national macroeconomic objectives and thereafter ensure that these sectors receive credit cheaply and to the extent required.

In an exclusive interview with Moneycontrol.com, former Reserve Bank of India (RBI) Governor Duvvuri Subbarao clearly articulated how India adopted a mixed banking sector, with the private sector focusing almost entirely on profit maximisation while public sector banks pursued social objectives, compromising on profits.

Between these two extremes, Japan leveraged commercial banking by using a strategy called 'window guidance' wherein the government induced its central bank, the Bank of Japan (BoJ), to ensure that credit reaches identified sectors or even specific companies to achieve its economic objective of rapid growth, rather than purposes 'social' in nature, as for instance, financial inclusion and lending to microenterprises. The latter objectives fall under the ambit of priority sector lending (PSL) in India, aimed at providing credit to weaker sections of society, which could not have been served by private sector banks motivated by profit maximisation.

To appreciate why governments may want to leverage commercial banking to achieve these objectives – be it economic growth or financial inclusion – it is important to understand the essence of modern banking. There are essentially only two institutions which create money as legal tender, the state through its principal monetary institution, the central bank, and commercial banks. In a modern economy, most of the obligations that arise in exchanges are settled using commercial bank money, or what is generally referred to as deposit accounts or its financial liabilities (promissory notes). The widespread acceptance of bank money has resulted from the acceptance of bank deposits as legal tender in settling obligations, primarily payment of taxes by the private sector, owed to the state.

Commercial banking can be viewed as the extension and decentralization of the state's monopoly power over the issue of legal tender. Banks are not mere financial intermediaries in channelizing savings into investment; instead, they are institutions that overcome the savings constraint faced by an economy to provide finance to businesses – a prerequisite for production that generates new income and wealth, which in turn creates new savings.

When banks were allowed to create money that was legal tender, the question arose as to whom this money would go to. Banks in the private sector are driven by profitability and it is assumed that market forces in a competitive environment will drive them to follow prudential lending norms that balance risk and reward while at the same time, maximize their spreads by attracting customer deposits as a cheap source of reserve money required for interbank settlements. Private commercial banks are able to ensure credit is used effectively and efficiently by borrowers in profitable ventures that are by-and-large able to service as well as settle debts.

However, the moot question is whether profit maximization at the micro-level automatically achieves high rates of macroeconomic growth. Although some economists may argue that this is indeed the case, Japan chose a strategy that first identified which sectors are most likely to achieve their national macroeconomic objectives and thereafter ensure that these sectors receive credit cheaply and to the extent required.

The implementation of such a strategy began in the 1930s. Not only were specific industries protected through the passing of specific legislation like the 1936 Automobile Manufacturing Business Act, but they were also given access to long-term credit. Companies were weaned away from capital markets by the imposition of limits on dividends, making them less attractive to investors, while making them more dependent on commercial bank credit as their main source of finance. Simultaneously, consolidation of the commercial banking sector brought down the number of banks to just 61 in 1942 from more than 1400 in 1926 so that the system could be more effectively coordinated and guided by the central bank.

[1] *Moneycontrol.com, 21.09.2022*

This strategy was further extended after the end of the Second World War when Japan's economy lay in tatters. To revive its economy, the Japanese government proposed to emulate the methods of the wartime economy; however, instead of providing support to manufacturers of weapons, they redirected support to industry and more specifically, to industries that could quickly grow in size and competitiveness. Without such intervention, finance would have naturally flowed into sectors which yielded quick profits and dividends but may not have been to compete internationally. Companies which failed to achieve targets were cut off from cheap credit. At the same, the government ensured protection to low-productivity sectors, which 'mitigated social frictions that would have been brought about by rapid growth of the leading industries.'

Propelled by this strategy, Japan soon recovered and entered a phase of strong growth in the 1950s. The huge increase in demand for credit put pressure on the BoJ to increase interest rates. To regulate the increasing volume of credit creation, the BoJ resorted to window guidance as a 'complementary tool' to ration credit, but it soon developed into 'independent tool' that could be used to provide credit to targeted sectors without the need to raise interest rates that negatively impacted all industries, across the board. Window guidance became a permanent policy tool of the BoJ and was used effectively – both in terms of the speed and reliability in achieving desired results – along with accommodative monetary policy. Although the commercial banks were privately owned, restricting their ability to open branches and raise deposits made them more dependent on the BoJ for reserve money. The discount rate was held below the money market rate so that commercial banks found it profitable to cooperate with the BOJ's window guidance program.

The deregulation and liberalisation of financial markets in the 1980s led to the erosion of Japan's window guidance strategy, replacing finance from commercial banks with capital markets. This, along with the BoJ's accommodative monetary policy, may have ultimately resulted in Japan's bubble economy that expanded through the following decade but finally burst in 1990, a shock from which it has never really recovered.

While the window guidance strategy has been followed by other Asian countries like South Korea and China, implementing it in India may be fraught with challenges. Nonetheless, to argue that the distribution of credit by privatised commercial banks pursuing profits in a competitive market environment is the only effective and efficient system to achieve macroeconomic objectives would be historically naïve as revealed by the success of Japan's window guidance programme.

The Evergrande crisis illustrates real, financial impact of NPAs[1]

While the immediate crisis may be averted, it is unlikely that it will vanish completely as long as real investments fail to yield returns.

In China, the Evergrande crisis, and in India, the proposal to set up a 'bad bank', the National Asset Reconstruction Company Limited (NACRL), are essentially different facets of the same issue – non-performing assets (NPAs) – the former a stark example of the borrower's predicament and the latter, the search for a possible solution by the lenders of money, most significantly banks. While discussions continue on the finer details of the Evergrande episode and NACRL proposal, it is useful to take a broad and long view of the NPA issue.

Banks, as we know, are institutions that exchange financial assets (loans) for financial liabilities (deposit accounts). These financial liabilities or deposits are then used by entities, households and businesses, for investment. Businesses also borrow money from non-bank financial intermediaries (NBFIs), which channel the savings of households and businesses into investment. To economists, investment refers to the purchase of physical assets or 'real' goods, typically plant, equipment, house property, and so on.

These investments are used for the production of goods and services that when sold, yield returns, a portion of which can then be used to service the loan from the bank or NBFI (interest payments) as well as repay the principal amount when due. The problem with investment is that it is made on the basis of expected sales and expected profit. Given that we live in an uncertain world, forecasts can go wrong so that the investment turns out 'bad' resulting in bankruptcy of the borrower and simultaneously, the accumulation

[1] *Moneycontrol.com, 23.09.2021*

of NPAs or bad loans on the balance sheet of the bank or NBFI.

Investment spending or capital formation by businesses is vital for an economy's growth over a period of time as it raises productivity or output per worker. However, in a world of finite real resources, investment in capital goods have an opportunity cost, i.e., they could have been utilized either for present consumption and/or used for alternative investments which may have more effectively served their purpose. Failed investments usually have both, a fixed as well as a sunk (real) asset component. Fixed assets are recoverable and can be salvaged for productive reuse.

It is this fixed asset component that a 'bad bank' like NARCL attempts to salvage. On the other hand, sunk assets are irrecoverable, which must then, based on pure economic logic, be treated as 'spilt milk' or 'bygones.' As the popular adages go, 'don't cry over spilt milk' and 'let bygones be bygones.' Trying to salvage sunk assets will result in further utilization of real resources that could have been put to better use instead, effectively and efficiently. Optimizing the outcome is therefore the task facing asset reconstruction companies.

While the 'real' assets of bad investments are sunk and must be treated as such, it is the financial implications of such investments – fixed and sunk costs – that eventually hog the limelight. As the crisis begins, attention is focused on the borrower. Investments in physical assets are unable to yield adequate returns making interest and loan repayments difficult. A liquidity problem arises. The business will try to access cash by selling bonds, perhaps at deep discounts, or restructure existing debt to stave off a crisis.

This is the stage at which Evergrande is presently in. While the immediate crisis may be averted, it is unlikely that it will vanish completely as long as real investments fail to yield returns. If that were to indeed happen, then when the value of those assets falls by an amount exceeding its capital, the business is bankrupt. The physical assets may be salvaged and sold to pay off some claims of the creditors to whatever extent possible. Nonetheless, some of the physical assets will invariably end up as sunk assets. Equity shareholders and unpaid creditors must bear the brunt of this loss.

On the creditors' side, the repercussions play out for longer, with broader implications. It is unreasonable to expect that the entire amount of NPAs on the balance sheet of a bank or financial institution would turn out to be fixed rather than sunk costs, the latter

akin to 'loss assets' defined by the Reserve Bank of India.

While economists believe that the real resources lost (sunk) must be ignored in decisions relating to the future, a problem arises in dealing with the sunk costs financially because they have to be written off the balance sheet of the creditors, including banks and NBFIs. It is this process which gets complicated. The simplest step would be to write off the NPAs from the capital of the bank.

However, this could impact capital adequacy norms (like those under Basel III) that affect future lending by the bank, which can result in adverse consequences for economic growth. The outcome could be worse if the contagion from bank bankruptcies were allowed to spread, putting the entire financial system in crisis. Bank bail-ins have also been proposed: The Financial Regulation and Deposit Insurance (FRDI) bill if passed would have enabled banks to write-off NPAs against deposits.

This could, however, have led to widespread panic amongst the public. In the case of NBFIs, depositors who have lent money to it will find their capital eroded. Banks, which may have lent money to NBFIs, will also face a similar predicament as banks that have lent directly to businesses.

When the amount of NPAs is large and the problem is at a national or even global level – a 'too big to fail' situation – the only entity that can afford to take the NPAs on to its balance sheet is the state or an institution set-up by the state. In the case of the latter, the NPAs or sunk costs will ultimately have to be written off the designated institution's balance sheet, possibly leaving it with a negative net worth. The losses would then impact the provider of capital to this institution, say, for example, banks or NBFIs. If this is to be avoided, the NPAs would ultimately have to be passed on to the central bank.

The question arises as to what if the NPAs are large enough to turn the net worth of the central bank negative? This opens up a Pandora's box of questions on the feasibility of central banks having negative net worth. Although there is consensus that such a situation does not matter to monetary policy operations, it may affect 'central bank independence'. This is a contentious issue and heterodox economists have often questioned whether this independence was contrived as an instrument introduced à la the Washington Consensus to tame governments from expanding their role in the economy.

Finally, if the government were to restore the central bank with adequate capital, then this would be possible by a corresponding issue of bonds by the government and held by the central bank. Capital infusion by the government cannot be made to the central bank for 'cash' as 'cash' is the financial liability of the central bank itself. When everything is netted, the result of these operations would be new bond issuance by the government, and therefore, new public debt, but no change in its net worth as it acquires capital in the central bank.

Questions over moral hazard, corruption, wilful defaulters, whether or not governments want to discipline profligate corporate enterprises or private enterprises challenging state power (as may be the case with Evergrande) make the NPA issue more complex. Nonetheless, it must be understood that while a decision on dealing with real sunk assets is straightforward, the financial ramifications can reverberate through the economy.

Banks and/or NBFIs, if they were to absorb the loss, will find their net worth eroded, which may in turn affect investment and consequently, economic growth. Ultimately, the only entity that can afford to absorb the financial sunk cost of a significant magnitude is the government and the central bank – the state – as it is the creator of its own sovereign currency.

Why is the US financial system so fragile?[1]

Repeated occurrences of bankruptcies and bank runs in the US, leave uninsured depositors [businesses and individual depositors with large balances] under the potent threat of bank closures. The US Federal Deposit Insurance Corporation (FDIC) reports some 565 bank failures since 2001 with total assets of over $319 billion. Furthermore, although accounts are fully insured up to $250,000, recovery on uninsured deposits has rarely been 100 percent.

The recent Silicon Valley Bank (SVB) crisis has once again turned the spotlight on the US financial system, bringing back memories of US bank closures and the global financial crisis (GFC) of 2008. The question, however, is why are particularly US banks being singled out and considered exceptionally fragile, rather than commercial banking and the financial system more generally across the world. After all, financial institutions are prone to asset-liability mismatches arising from bad loans and also, as witnessed recently, falling prices of government securities.

The most obvious answer to this question is the sheer size of the US economy and some of its financial institutions, the US dollar at the centre of global trade and capital flows, and finally, the linkages of the US banking system to the global real economy. The latter is clearly evident from the immediate effect on tech firms and startups in Europe, India and elsewhere soon after the unfolding of the SVB crisis.

While the 2008 GFC crisis was certainly due to financial deregulation since the 1990s that allowed excessive risk-taking by banks aided by the proliferation of derivative instruments like mortgage-backed securities (MBS) and collateralized debt obligations (CDOs) in the leveraging process, the present SVB crisis and subsequent contagion is due to a diametrically opposite reason: over-investment in safe assets, i.e., government

[1] *Moneycontrol.com, 21.03.2023*

securities. The fall in the market price of these securities from rising interest rates was essentially responsible for the run on SVB.

Quantitative estimates of the fragility of the US banks have been reported by the Hoover Institute. Assets for the US banking sector are about $2 trillion lower than book value, with the average bank assets on marked-to-market (MTM) basis declining by 10 percent and at 20 percent for the bottom 5th percentile. In comparison, a report by Jefferies India Private Limited revealed for Indian banks 'losses may not exceed 6 percent of capital for private banks and 15 percent for public sector banks.' Given that the numbers do not look excessively out-of-place for US banks, why is the fear of a contagion and collapse far more pronounced in the US than elsewhere despite the fact that the Fed acted promptly, assuring banks they would have access to a special discount window to swap securities at par or HTM (held-till-maturity)-value in exchange for a credit in the banks' reserve accounts at the Fed?

The answer to this question is related to psychology, history and politics, not merely economics. In other words, the fragility of US banks lies in the people's psyche over bank bankruptcies and failures, historically, and the government's attitude (not just response) to such failures. The US Federal Deposit Insurance Corporation (FDIC) reports some 565 bank failures since 2001 with total assets of over $319 billion. Furthermore, although accounts are fully insured up to $250,000, recovery on uninsured deposits (dividends) has rarely been 100 percent with many instances of abysmally low dividend payouts. This may be far fewer than the 4,000 bank failures during the Great Depression but nonetheless the number of bank failures over the last two decades still remains substantial.

The fragility of banking is fundamentally related to the possibility of bank runs. Depositors pulling out $42 billion in a single day from SVB showed how susceptible the US banking system is to bank runs when the fear of bankruptcy sets in. As the Hoover Report puts it, 'if uninsured deposit withdrawals cause even small fire sales, substantially more [than the presently estimated 190] banks are at risk. Overall, these calculations suggests that recent declines in bank asset values very significantly increased the fragility of the US banking system to uninsured depositor runs.'

Neoliberalism is deep-rooted in the US. The belief that in a free market system, individuals must take responsibility for their own condition, and not society or the state, is widespread. No one may resent your making money but do not expect support when you are not. The Balance reported in 2021: 'There was a lot of anger about the billions in taxpayer dollars used to bail out the banks [in 2009]. Many people felt there was no oversight … They agreed that banks should not have been rescued for making bad decisions based on greed.'

However, when it comes to an actual financial crisis, not only do depositors come in direct conflict with their neoliberal beliefs but even the state, which festers the neoliberalism, comes into conflict with its own policies because it understands that a bank failure is not just the failure of a single bank but could easily trigger a failure of the entire banking and financial system. It is now common knowledge that the Fed can always bail out a bank or for that matter any debtor – and there is no taxpayer money involved here – the only cost being moral hazard. In the case of systemic risks, the Fed must act to contain the contagion despite the moral hazard of doing so. The alternative will be catastrophic. In fact, the question as to whether rescuing Lehman would have saved the world from the GFC still remains open.

US politicians must, however, convince people that they are not in favour of such bailouts to protect the banks or managers per se, and are only being compelled to do so to protect depositors. While Joe Biden blamed the bank's managers for the SVB crisis, Senator Tim Scott, who sits on the Senate's banking, housing and urban affairs committee, warned that 'building a culture of government intervention does nothing to stop future institutions from relying on the government to swoop in after taking excessive risks." Sheila Bair, former chair of the FDIC, also levelled equal blame on bank management as on the Fed: 'that doesn't excuse the bank management for not hedging their interest rate risk. They mismanaged too … it's their job to manage around them [interest rate hikes].' At the same time, she asserts that depositors must not be complacent and 'make sure you're under the insured deposit limits.'

Such political posturing, along with repeated occurrences of bankruptcies and bank runs in the US, leave uninsured depositors [businesses and individual depositors with large balances] under the potent threat of bank closures, a possible loss in deposits exceeding $250,000 and consequently, a predisposition to engage in bank runs.

The situation is not quite the same in Europe or even the UK. In Europe, soon after the 2008 crisis unfolded, 'it became evident that Europe's banks [were] heading towards

wholesale nationalization.' In the UK, the government nationalised the Royal Bank of Scotland when it was bankrupt in 2008. In early 2012, the UK regulator Financial Services Authority (FSA), claimed that the UK did not have a single bank failure since 2007: 'no UK banks have entered administration in this period, though of course a number were taken over or received support during the crisis.'

In India too, in recent decades, actual bank closures are few and bank runs, rare. An implicit assumption that the government will not allow banks (at least large commercial banks) – public or private to fail – and thereby force depositors to lose money prevents bank runs arising from the possibility of bank failures. The sentiment against bank bail-ins was evident when the government was compelled to withdraw the Financial Resolution and Deposit Insurance (FRDI) bill in 2018 after popular resentment against it despite the deposit insurance cover having been increased to Rs. 500,000.

So, while the US system remains more fragile, does it result in greater efficiency of its financial sector with a superior allocation of resources (say, in more efficient production or innovation) as compared to other countries? Any possible answer to the stability/fragility-efficiency trade-off issue will only throw up even more complex questions on the optimal extent of state intervention and regulation in financial markets.

Does monetary policy really work?[1]

By targeting aggregate demand across the whole economy, monetary policy may be too blunt an instrument to tackle the ongoing inflationary pressures in the economy, instead adding to the already chronic high unemployment rates in the country.

The Reserve Bank of India has just announced a 50 bps or 0.5% hike in repo rates to 5.4% as a measure to control inflation, which is presently above its target level. The transmission mechanism of monetary policy is simple: increased repo rates would mean that commercial banks can access reserve money from the Reserve Bank of India for interbank settlements at higher rates and would therefore charge the final borrowers including households and businesses higher rates of interest on loans. With increased costs of borrowing, the non-banking private sector will defer spending thereby contracting aggregate demand and consequently, inflation.

However, there are many slips between the cup and the lip. While most of these pertain to the responsiveness of the banking sector to pass on the costs or benefits to their borrowers in the same measure hoped by the central bank, there are others that remain unaddressed and unanswered both theoretically and empirically.

Higher interest rates would mean higher interest pay-outs not only on government debt but on all debt. While the latter would mean a mere change of hands of money from borrowers to lenders, higher interest payments on government debt in effect boils down to higher government spending, which, all else constant, would mean net additions to aggregate demand and inflationary pressure. Interestingly, if we look at the first few months of the Volcker experiment in the US, we find that while the interest rates were increased from 11% in September 1979 to 18% in April 1980, the

[1] *Moneycontrol.com, 5.08.2022*

inflation rates soared from 9% to more than 14% in the same period. From then on, interest rate cuts from their peak to 9% in July 1980 coincided with a falling inflation rate over the next quarter. Although this does not establish cause and effect, the facts are too stark to be ignored.

A paper by Kang-Soek Lee and Richard Werner empirically tested data on nominal growth, 3-month interest rates and 10-year bond yields for the US, UK and Japan over 52 years only to find that higher growth led to higher rates and vice-versa. Importantly, the causation happens from growth to interest rates and not the other way around. Even for India, even a cursory look at gross fixed capital formation or investment shows a secular decline between 2012 and 2019 even as interest rates were consistently lowered during that period.

If we were to go with conventional wisdom that higher rates would increase the costs of borrowing and contract investment demand of businesses, the long-term implications of this are disconcerting. If physical capacity-building for the future is being constrained by the present hikes in interest rates then this may mean greater and more chronic supply-side bottlenecks in future, ultimately contributing to inflation when demand revives. In a study of three sectors of the US economy, namely the semiconductor industry, housing and oil, Alex Williams found that 'reflexive turn to monetary policy as an inflation control measure may risk worsening this [physical] capacity shortage.'

The close relationship between fiscal and monetary policy also remains tentative. If monetary policy effectively slows down economic growth and reduces the rate of inflation, there is a possibility that the former will mean a larger fiscal deficit, which is after all an automatic stabilizer. This larger deficit could then, according to conventional wisdom, induce inflationary pressures in the economy, drawing the economy into a vicious loop of austerity, falling investment, capacity shortages and inflation.

Returning to the Volcker years, a study argues that it was fiscal policy that actually induced a recession and brought down inflation in 1980. This is because high inflation rates reduced the real fiscal deficit. Adjusting for inflation, the fiscal deficit in 1980 was just about 44% of the deficit in 1976. Fiscal deficits are usually discussed in nominal terms and real spending is not considered. During periods of high inflation, lower real fiscal deficits, unadjusted for inflation, may induce a slowdown, while making it seem that monetary policy is effectively countering the boom.

All these conflicting views only add to the many existing doubts over monetary policy actually addressing the true causes of the current bout of high rates of inflation across the world: higher profits by oligopolistic businesses, the supply-chain disruptions post-Covid and the ensuing Ukraine-Russia war. By targeting aggregate demand across the whole economy, monetary policy may be too blunt an instrument to tackle the ongoing inflationary pressures in the economy, instead adding to the already chronic high unemployment rates in the country.

As suggested by Modern Money Theory economist, Stephanie Kelton, it is necessary to consider some of the thoughts expressed by US Senator Ayana Pressley: 'There's an old adage that if all you have is a hammer, everything looks like a nail… The Fed knows that raising interest rates will not address the root causes of rising prices…we need a more sophisticated toolkit … to tailor a more precise response to inflation … Regulating the availability of credit in the specific sectors of the economy experiencing high inflation without impacting other sectors.'

In the Indian context, while the RBI has to deal with other issues in addition to inflation, including exchange rate movements on account of the recent hikes in interest rates by the US Federal Reserve, monetary policy as a tool for inflation control needs rethinking.

Global low interest rates? Here are some macroeconomic perspectives[1]

Modern Monetary Theory has a better explanation of fiscal and monetary policy than mainstream economics.

From a peak of almost 20 percent in 1981, the effective Fed Funds rate has seen a secular decline over the last forty years and now stands at just 0.09 percent with a target range between 0 and 0.25 percent. This trend is not restricted to the advanced countries where central bank policy rates are abysmally low, hovering at close to zero, but is also common across emerging economies including India and even many developing nations. Interestingly, the Bank of Japan has set its key policy rate at -0.1 percent, although national public debt is at around 250 percent of GDP.

The cause and implications of this phenomenon drives a deep wedge between mainstream-orthodox and heterodox macroeconomics, in particular, Modern Money Theory (MMT). For decades now, the former has espoused the view that monetary policy is an adequate tool to counter the business cycle and stabilize an economy. However, interest rates at close to zero and the failure of a negative interest rate policy has left them with no option but to advocate fiscal policy, something which had been purposefully put on the back burner. In order to justify this need for change, economists like Lawrence Summers and Olivier Blanchard, have cannily repositioned their stance in favour of fiscal expansion because of persistently low interest rates. A question, however, arises as to why, over the last so many years, were interest rates not set low enough to foster fiscal policy? To complete their argument, they then draw upon the loanable funds model, claiming that a savings glut and declining private sector investment spending have been driving interest rates down. This has provided the opportunity for governments to borrow cheap and spend. Broadly speaking, when

[1] *Moneycontrol.com, 1.01.2021*

interest rates are lower than the growth rate of the economy ($r < g$), public debt to GDP ratio must at some point begin to fall whatever may be the initial size of the primary deficit (fiscal deficit less interest payments), ensuring debt sustainability. If instead, interest rates are higher than the growth rate of the economy ($r > g$), the public debt/GDP ratio will rise to infinity, making debt unsustainable.

Based on an understanding of modern money and institutional realities of a modern economy, MMT, on the other hand, has consistently advocated the use of fiscal policy in realizing full employment with price stability. Interest rate, the key monetary policy tool, is weak and tentative. Consider an economy in recession. Are cuts in lending rates sufficient to stimulate investment demand? Will such cuts not imply a reduction in government payouts and dampening of consumption demand? While the loanable funds model has been severely critiqued by heterodox economists, the noteworthy point is that the interest rate is a policy choice set by central banks and is not a market-clearing price. Stagnating real wages and rising inequalities have led to a glut in savings, which do not flow into an imaginary loanable funds market but are instead largely deployed in secondary financial markets. At the same time, these structural factors have caused a shortage of aggregate demand and dampened private sector investment spending, prompting central banks to stimulate demand for credit – without adequate success – by providing commercial banks reserves required for interbank settlements through repo transactions at lower policy rates.

Although repayment of debt by a currency issuing government is not an impediment per se, MMT has stressed the plausibility of inflation arising from 'excessive' fiscal deficits. It is in this context that the $r > g$ argument may be relevant. However, there are several important points overlooked by mainstream economists. When interest rates are a matter of choice, the central bank can always ensure fiscal sustainability by setting them below the growth rate of the economy. If this is not done, it will result in a rising debt to GDP ratio and ever-increasing interest payments. Increases in private sector financial assets or wealth (corresponding to public debt) and income (interest receipts) will drive inflation and increases in nominal GDP. By maintaining nominal interest rates below nominal growth, the government can ensure that the debt to GDP ratio is inflated away. Furthermore, the contention of debt unsustainability is based on the assumption that the primary deficit to GDP ratio remains constant. In an MMT framework this assumption is illogical given that proactive fiscal policy would induce an increase in taxes and/or cut in government spending so that the primary deficit

contracts or is reversed into a surplus that more than offsets the increased interest payments. Another significant MMT insight is that fiscal deficits lower interbank money market rates by injecting reserves into the commercial banking system so that the natural rate of interest is actually zero. Bond sales are a component of monetary policy utilized by the central bank to raise interest rates to the targeted level. This is a strong counter argument to the mainstream loanable funds model wherein fiscal deficits could raise the interest rate to a level whereby r > g.

To summarize, although mainstream macroeconomists are compelled to revert to fiscal policy in the present circumstances, they have anchored their argument in the loanable funds model. This has prompted them to contend that market forces – supply and demand for loanable funds – could drive up interest rates as well as expected interest rates in the future. Their recommendation is, therefore, to fix the expected debt service to GDP ratio at 2 percent. However, as James Galbraith argues, "this one opens the door to pointless austerity later, based on some specious projection of rising interest rates."

Do we need to change India's flexible inflation targeting framework?[1]

If low interest rates are not enough to revive growth, then the private sector will not really be able to kickstart the economy and the burden for growth will fall entirely on the government, until vaccination restores confidence.

Within a span of just five years after India adopted an inflation targeting (IT) framework, economists and policymakers are debating whether or not there is a need to maintain or change the target band of 4 +/- 2 percent or abandon the framework itself. Recent reports suggest that while the government would like some relaxation in the framework, the Governor the Reserve Bank of India (RBI) is in favour of maintaining it. The final decision, as the target comes up for review in March 2021, ultimately rests with the government.

An IT framework, with a specific number or a band, consists of an announcement of the target across different time horizons by the central bank and/or the government, nature of accountability of the central bank in achieving the target and granting it a degree of independence in setting the interest rate to achieve the target. Uncompromising adherence to the target makes the IT framework credible, anchors inflation expectations so that wage and other contracts can be drawn accordingly, thereby preventing inflation from accelerating out of control in a wage-price spiral. There is, however, another critical element in this framework highlighted by Ben Bernanke and Frederic Mishkin: 'explicit acknowledgment that low and stable inflation is the overriding goal of monetary policy.' This is considered a necessary condition for efficient private sector decision-making that will propel a market economy to full employment or more precisely, the 'natural' or 'non-accelerating inflation rate of unemployment' (NAIRU), which is a buffer stock of unemployed labour that prevents escalation of wages.

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[1] *Moneycontrol.com, 4.01.2021*

Self-imposed targets – inflation, deficits and public debt – act as constraints to delineate the economic role of the state in a market economy. When governments attempt to increase the growth rate by increased spending, the central bank can raise interest rates and make credit more expensive, curbing private sector consumption and investment spending. This 'threat' of neutralizing the effect of government spending on inflation by an independent central bank checks unwarranted fiscal profligacy and ensures that governments adhere to their deficit target, usually around 3 percent of GDP.

After the twin exogenous shocks of demonetization and GST (goods and services tax) implementation, the Indian economy slid into a growth recession with massive unemployment. The situation became more complex after the Covid pandemic struck in March 2020 that soon turned into a 'stagflationary' crisis. Supply was severely disrupted even as demand tanked. The sharp recovery since the lockdown was lifted, however, led to inflationary pressures building up due to a burst of consumer spending but a lag in restoration of supply chains. The government is anxiously hoping that the economy will soon turn the corner and return to its pre-2016 growth trajectory of 7+ percent. For this to happen, the economy must fire on all cylinders. Given its pro-austerity bias until now, the government was relying on the private sector to take the lead. Obviously then, low interest rates seem indispensable to realize this.

However, there are many doubts on the efficacy of interest rates in elevating an economy from recession. Lowering interest rates will mean lower pay-outs by the government and consequently, less money in the hands of the private sector. In order to achieve their savings target, households may raise their propensity to save or lower their propensity to consume. This could adversely affect aggregate demand and consequently, investment spending. Furthermore, lower interest rates can induce the private sector to chase higher returns from speculation, triggering asset and commodity price bubbles. Meanwhile, data shows no evidence that lower interest rates in India have resulted in higher credit growth and/or gross fixed capital formation (investment) as a percentage of GDP. On the external front, capital flight on account of lower interest rates could result in depreciation of the rupee. With inelastic exports and imports, an exchange rate crisis could emerge, especially if oil prices are to spike. In the last meeting of the Monetary Policy Committee (MPC), J.R. Varma, raised an interesting point about lower interest rates benefitting an 'oligopolistic core' that could assert their growing market power by raising mark-ups in future, fuelling inflationary pressures. Finally, a key reason for inflation is supply shocks but given that they are outside a central bank's control, IT can only stabilize the price level by tightening aggregate demand. After all, the inspiration for IT emerged with former Chairman of the Federal Reserve, Paul Volcker taming inflation with a recession in the late 1970s by increasing US interest rates to about 20 percent.

Given these limitations of a low-interest rate regime, the government possibly senses that fiscal support will be required in the immediate future until the private sector recovers, perhaps at the cost of a higher rate of inflation, which has already breached the stipulated upper limit of 6 percent. Adherence to the present target may induce the MPC to put a spanner in the works by hiking interest rates. However, just as in the case of lowering interest rates, the effect of raising interest rates are uncertain too, although economists do believe that pulling on a string hard enough (to rein in inflation) is likely to be more effective than pushing on one (to stimulate growth). If this is indeed the case, it means that private sector will not really be able to kickstart the economy and the burden for growth will fall entirely on the government.

The escape from this Catch-22 situation lies in the widespread success of a vaccination program, restoration of production, a revival of confidence and reversal in the secular decline of private sector investment spending. Until then India is likely to implement expansionary fiscal policy in the coming budget to ensure a recovery. The RBI will probably be accommodative and relax strict IT, just as it is doing presently, although without explicitly stating that it is doing so.

MMT and helicopter money: A contrived association [1]

Critics do not realise that bond sales and purchases are a monetary policy operation and not a method of funding fiscal deficits whether with self-imposed budgetary constraints or infamous helicopter money drops by the government.

While Modern Money Theory (MMT) has been receiving a great deal of attention in the ongoing economic crisis unleashed by the Covid-19 pandemic, it has naively and incorrectly been linked to notions like "helicopter money" and "printing money" and with it, inflation, even hyperinflation, as an imminent and dangerous consequence. It is not only unfair but also unprofessional when critics of MMT ignore the works of its major proponents including Warren Mosler, Randall Wray, Scott Fullwiler and Eric Tymoigne on the operational realities of fiscal deficits and their repeated counterarguments to such simplistic contrivances.

The two components of fiscal policy, namely taxation and government spending, impact the quantum of reserve money available with commercial banks. In turn, these reserves (liquidity) serve two important functions in the monetary system. First, adequate reserves are required for interbank transactions to support the bank clearing and settlement system. Second, the quantum of reserves in the system also influences the interbank money market interest rates, which the central bank as part of monetary policy must keep within fixed upper and lower bounds so that it can achieve the final inflation target, usually jointly agreed upon by the government and itself.

Government transactions take place throughout the year. Money flows into (through taxes) and out of (through spending) government accounts. The net effect will either be an increase or decrease in reserves in the system. Helicopter money, printing

[1] *Moneycontrol.com, 30.07.2020*

money or monetizing the debt refers to the operation wherein the government sells bonds (securities, in general) directly to the central bank in exchange for a deposit (credit) in its account held at the central bank (or at select commercial banks). When the government spends this money, it will be credited to an account held by private sector households or firms while at the same time increasing the reserve balance of commercial banks held at the central bank. If these are substantially more than the drain of reserves happening at the same time from tax collections, there will be a net reserve-add in the system which could then drive money markets rates possibly all the way down to zero. There is no reason to believe that excess reserves will automatically cause a credit boom although low interest rates could trigger lending and borrowing for projects with higher risks. However, if the central bank has a positive money market interest rate targets these excess reserves must be drained out. One method to achieve this is through sale of bonds to banks, dealers, firms and/or households. The net effect of this will be the creation of a financial liability by the government (bond) and a corresponding financial asset for the private sector (the same bond). It is important to emphasize that bond sales to the private sector are not a funding (fiscal) requirement. Rather, they are carried out by the central bank as a monetary policy instrument to achieve the desired interest rate target.

The non-inflationary alternative to helicopter money is considered to be when the government adheres to the self-imposed constraint that it must first "borrow" money from the private sector through issue of bonds and then spend from the amount raised. To make this constraint even tighter, assume that banks do not hold excess reserves. The operation is then carried out as follows: the central bank undertakes a repo with primary dealers (PDs) with old bonds that are already in existence wherein their deposit accounts held at commercial banks are credited along with a credit of reserves held by these banks at the central bank. These old bonds swapped by PDs will be held by the central bank. Banks are now flush with reserves. An auction of new bonds issued by the government is announced. PDs subscribe for these bonds and reserves are once again drained out of the system as government accounts are credited with the proceeds. When the government spends there is again a reserve-add to the system, which is subsequently drained out by completing the repo between the central bank and PDs with old bonds. These complex operations ensure reserve balances in the system are maintained to achieve target interest rates. Working through the balance sheets of all economic agents involved in these operations, the resultant net effect is exactly the same as the in the case of the mythical helicopter drop with the subsequent

bonds sale to hit the positive interest target set by the central bank; a net financial liability of the government (bond) with a corresponding financial asset (bond) held by the private sector.

Ignoring the detailed balance sheet analysis in the MMT literature, critics and commentators do not realize that bond sales and purchases are a monetary policy operation and not a method of funding fiscal deficits whether with self-imposed budgetary constraints or infamous helicopter money drops by the government. For a long time now, MMTers have argued that the natural rate of interest with fiscal deficits is zero. Bond sales are not required per se. Interest paid by the central bank on reserves held by commercial banks could suffice in raising bank lending rates. Another way to control excessive risky lending and borrowing could be enhanced regulation on credit quality as well as higher margins of safety. Government bonds, however, do provide a safe risk-free asset for private sector savings.

The challenges in using monetary policy as a countercyclical strategy[1]

Monetary easing may have helped the global economy escape the worst effects of COVID-19 but questions remain on the ability of interest rates to influence maximum employment with price stability.

On Friday, October 8, the Reserve Bank of India's (RBI's) Monetary Policy Committee (MPC) announced its quarterly monetary policy decision: repo rates would remain unchanged at 4 percent while ensuring that inflation remains within its target 4 percent + 2 percent. Most financial analysts and economists seemed satisfied with the policy: no surprises, its accommodative stance, and supportive of financial market stability. With a positive outlook for GDP growth and inflation pressures receding, there is a sense that monetary policy has navigated the economy reasonably soundly through the crisis unleashed by the Covid-19 pandemic.

Globally, however, there are more fundamental questions being raised on the overall effectiveness of monetary policy – more specifically on the role of interest rates – in achieving its objective of maximum employment with price stability. With higher inflation and concerns over the robustness of aggregate demand, the possibility of stagflation is not being ruled out. It is, therefore, important to reassess the efficacy of available policy instruments to address such a situation if and when a need arises.

The first recent challenge to monetary policy came in 2019 when Rep. Alexandria Ocasio-Cortez cornered the Chairman of the US Federal Reserve (Fed), Jerome Powell into accepting the discernible irrelevance of the Phillips Curve. For decades, the Philips Curve, which argues that there exists a trade-off between unemployment and inflation, had guided monetary policy. This relationship was clearly breaking down and

[1] *Moneycontrol.com, 12.10.2021*

decreases in the unemployment rate were not accompanied by accelerating inflation. Ever since the 1990s, even as the non-accelerating inflation rate of unemployment (NAIRU) was gradually revised from about 6 percent to about 4.5 percent US inflation rates showed a secular decline. Accelerating inflation was nowhere to be seen. Powell ultimately conceded that 'the connection between slack in the economy – the level of unemployment and inflation – was very strong if you go back 50 years and it's gotten weaker and weaker and weaker to the point where it's a faint heartbeat.' He further relented that the economy could 'sustain much lower levels of unemployment than we thought without triggering troubling levels of inflation.'

This brings us to an unresolved question: are better estimates of NAIRU possible or is NAIRU itself a flawed concept? It is an important question because as and when inflation does rear its head, the Fed could revert back to raising interest rates to quell aggregate demand and thereby ease the upward pressure on wages in tightening labour markets. In fact, only last month, a growing number of Federal Reserve officials said they expected to see a rate-hike in 2022. And more recently, Larry Summers declared that US unemployment is now below its 'natural' rate. Rate hikes also remain a possible policy option by the RBI were inflation rates to accelerate once the economy recovers from the pandemic-induced disruptions. The Phillips Curve may not be dead after all.

The second reservation over monetary policy concerns the transmission mechanism. Even if there is general agreement that during a recession monetary policy is like pushing on a string, or in other words, incentivizing private sector investment and consumption expenditure in times of recession when uncertainty remains strong, there is greater confidence in its ability to pull on a string. By raising the cost of borrowing of firms and households for investment expenditure, higher interest rates can rein in inflation. However, what is missed out is that these costs are also simultaneously the incomes of other agents in the economy. Therefore, a rise or fall in interest rates could also mean the rise or fall of incomes respectively, making monetary policy pro rather than countercyclical. The inflection point at which monetary policy turns countercyclical may be substantially higher than expected, effectively necessitating a recession before inflation is tamed. Former Chairman of the US Fed, Paul Volcker's high-interest rate policy may therefore have actually fuelled inflation before inducing the 1981-82 recession that subsequently brought inflation rate under control.

A stronger heterodox view contends that monetary policy is essentially about income distribution, transmitted through both income and wealth effects. While higher interest rates redistribute wealth from the working classes to the wealthier, the propensity to save increases accordingly, which consequently dampens aggregate demand and employment. On the other hand, lower interest rates not only raise the price of bonds but also generate asset bubbles. Moreover, interest rates also have implications for intra-capitalist distribution of wealth, that is between industrial and financial capital. This set of complex redistributive effects are in fact the transmission mechanism of monetary policy, not merely the cost of borrowing channel.

Finally, a recent paper by an economist at the Fed, Jeremy Rudd, argues that the use of inflation expectations as an anchor of monetary policy is unsound. The paper was not only an insider critique of monetary policy but also blatantly attacked 'mainstream economics [which] is replete with ideas that "everyone knows" to be true, but that are actually arrant nonsense.' Rudd claims that inflation expectations don't shape actual future inflation rates or, in other words, inflation expectations are not a self-fulfilling prophecy as economists propose: if workers' inflation expectations were high, they would demand higher wages that end up raising inflation. To Rudd, it is the actual inflation rate which matters in the setting of nominal wages and in determining the response of workers to the real wage. What does this mean for monetary policy? The communication agenda of central banks may be misguided: Rudd argues that 'it is far more useful to ensure that inflation remains off of people's radar screens than it would be to attempt to "re-anchor" expected inflation.'

While central banks will continue to play an important role as lenders of the last resort to avert financial crises, monetary policy as a countercyclical strategy remains problematic given the several pertinent theoretical and empirical shortcomings that both, mainstream and heterodox critics have raised.

The defunct economics that drives US monetary policy[1]

Raising interest rates is too blunt a tool to tackle the inflationary pressures of today.

'The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist.'

- John Maynard Keynes

Keynes' quote can be seen in the context of the present Silicon Valley Bank (SVB) crisis with Jeremy Powell, Chairman of the US Federal Reserve (Fed) and the Federal Open Market Committee (FOMC) members having taken the place of the 'practical men' while the 'defunct economist[s]' and their economics are hidden from view in the dark shadows, obscure to most.

Who are these economists and what is their economics? To answer this question, a look at the 'best' economics departments across the world where the dominant paradigm, 'New Consensus Macroeconomics' or NCM is taught and gets the most research traction reveals the underlying basis for the Fed's hawkish monetary policies. Michael Woodford, once acknowledged by the Insider as 'the world's most influential economist', in a seminal paper categorically summarized the fundamental tenet of NCM: 'monetary policy is now widely agreed to be effective, especially as a means of inflation control. The fact that central banks can control inflation if they want to (and are allowed to) can no longer be debated after the worldwide success of disinflationary policies in the 1980s and 1990s. It is also widely accepted that it is reasonable to charge

[1] *Moneycontrol.com, 15.03.2023*

central banks with the responsibility of keeping the inflation rate within reasonable bounds.'

Ben Bernanke, who needs no introduction, is also an adherent of NCM. In his recent book, '21st Century Monetary Policy', Bernanke vehemently supports the Federal Reserve Chairman, Paul Volcker's epic war against inflation through massive interest rate hikes between the late 1970s and early 80s. He blames Volcker's predecessor, Arthur Burns' tentativeness in his decision to raise interest rates to fight inflation for the crisis at that time.

It is shocking to know how a model which assumed no role for money and banking (now sometimes brought in as an add-on) and at the same time treated inflation as a monetary and therefore macroeconomic phenomenon – to be controlled through interest rates – came to adopted as the mainstay for monetary policies of central banks. Fiscal policy, on the other hand, was downgraded, its role contained by the need for fiscal prudence and an inter-temporal balanced budget. However, the model adopted the New Keynesian premise that frictions like sticky prices and wages as well as asymmetric information, allowed interest rates to impact the real economy, at least in the short-run. Finally, central bank independence was required so that monetary policy would not come under the control of an elected government that might prioritize employment over inflation.

The NCM paradigm unequivocally underlies Jeremy Powell's unrelenting hike in interest rates by almost 4.5% in less than a year. The hawkish stand of the Fed has been criticised by some economists like Joseph Stiglitz who argue that such sharp increases will only add to inflation since low investment would further inhibit increases in supply, elevated prices in non-competitive markets where the additional costs would be passed on to consumers, worsening intergenerational inequalities in housing markets on account of costs of mortgages, and so on. Globally too, there has been a backlash from many countries, especially emerging markets and poor nations, where countries have had to face depreciating exchange rates, higher domestic interest rates that have slowed growth and also the burden of dollar-denominated debt.

Just as economists did not foresee the 2008 global financial crisis despite their (superficially) sophisticated models, it is surprising that something as glaring as the effect of interest rate hikes on the price of fixed income securities and its consequent

impact on the value of 'risk-free' assets of banks could have been missed out. The rise in interest rates caused the price of securities to fall by some 30%. The consequent asset-liability mismatch in SVB's balance sheet was noticed and taken advantage by short-sellers who triggered a run on SVB to the tune of $42 billion on a single day or some 20% of its assets. The liquidity issue soon turned into a solvency issue for SVB.

While the Fed has already indicated a bail out of commercial banks heavily invested in safe securities, and not the usual risky assets, to pre-empt financial contagion and a larger real-economy crisis, this may well be the final straw in the Fed's strategy of an unabated increase in the Feds Funds Rate and more generally, the confidence in monetary policy as a tool to fight inflation.

The question, however, remains as to how inflation can be tackled. At the forefront of a new approach is economist Isabella Weber who sees inflation in the present context as being caused by 'overlapping global emergencies' including climate change, post-pandemic supply chain disruptions and the Russia-Ukraine war that have had an asymmetrical sectoral impact. These shocks in specific sectors cause a systemic rise in the general price level. Monetary policy targets the entire economy and is therefore too wide/aggregated/macroeconomic in its reach and impact. Instead, it is necessary to identify key sectors reeling from and provoking inflation at a more general level.

The set of policy instruments that could also enhance the available stabilization toolkit of state institutions would include 'windfall profit taxes, anti-trust measures, price gouging policies and direct price stabilization.' Some economists have further argued in favour of targeted credit allocation to sectors where investment and output needs to enhanced while curbing demand for non-essential goods and services.

While these policy prescriptions need debate and discussion, particularly with respect to their effect on employment, it is doubtful whether the community of NCM macroeconomists are willing to do so and relinquish their position as defunct economists.

What Modern Monetary Theory has to say about the US Fed's change of strategy[1]

In his speech [2] of August 27, 2020, Jerome Powell, Chairman of the U.S. Federal Reserve effectively laid to rest the Phillips curve which articulated a trade-off between inflation and unemployment rates. This hypothesis had opened up a possible policy tool for governments by which they could use an unemployment buffer to control inflation. Although the recent policy statement by Powell seems like a small victory for labour, MMTers have warned that the Fed is likely to revert to its old ways after the economic crisis unleashed by the pandemic abates.

Price stability, or in other words, a non-accelerating inflation rate at a reasonably low level of about 2 percent for advanced countries and around 4 percent for developing countries, was considered a crucial element in enabling the efficient functioning of a private sector-led market system to achieve high growth rates in aggregate output (GDP). However, a contradiction emerges. High GDP growth rates would at some point cause shortages in the labour market, driving up wages and consequently induce an acceleration in inflation rates as the wage-price spiral sets in. To prevent such a possibility an independent central bank could utilize monetary policy by raising interest rates to contain consumption and investment demand that slows down growth or even contracts the economy, thereby generating unemployment so that an overheated labour market cools down and wages don't rise or even fall so as to lower the inflation rate.

The use of this policy to tackle inflation was used aggressively by the Federal Reserve under Paul Volcker. The oil price shocks of the 1970s had induced inflation rates to accelerate in the US from about 6 percent in the beginning of 1978 to around 10 percent by the end of the year.

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[1] *Moneycontrol.com, 02.09.2020*

[2] *https://www.federalreserve.gov/newsevents/speech/powell20200827a.htm*

To rein-in the "Great Inflation", Volcker [3] categorically decided that "the standard of living of the average American has to decline." Put simply, wage increases had to be brought under control and for this unemployment had to increase. He raised interest rates (the Feds Funds rate) from about 11 percent when he took charge in 1979 to 19 percent in 1981. The consequence on unemployment was brutal. From just about 4 percent in 1978, US unemployment rate shot up to 11 percent by 1981. Volcker had effectively tamed labour with a severe recession. The foundation for neoliberal macroeconomics had been laid.

In the years following the 2008 Global Financial Crisis (GFC), the US economy witnessed robust GDP growth and at the same time, falling unemployment rates from about 10 percent in 2010 to less than 4 percent in 2019. Interest rates remained close to zero until 2016 after which they were gradually hiked to about 2.5 percent only to be lowered again since the end of July 2019. Then the pandemic struck and interest rates are back to being close to zero.

Throughout this period, however, it seemed like the significant fall in unemployment rate did not induce a threat of accelerating inflation. The question then arises as to whether the Fed could continue to let unemployment fall below the *estimated* natural level of unemployment while, at the same time, let interest rates remain low. Effectively then the Fed recognised that the Phillips curve and more specifically, the non-accelerating inflation rate of unemployment (NAIRU) may be overestimated so that the inflation expectations may have been "holding down inflation more than was generally anticipated."

In view of these observed trends, Jerome Powell announced a new monetary policy framework wherein if the Fed notices a fall in the unemployment rate, it will not react with interest rate hikes as long as the average inflation rate over a period of time will not exceed 2 percent. Moreover, the definition of "average" has been kept blurred as the Fed has not specified a mathematical formula to compute this "average".

In a nutshell the Fed has moved from inflation targeting to a "flexible form of

[3] *https://www.nytimes.com/1979/10/18/archives/volcker-asserts-us-must-trim-living-standard-warns-of-inflation.html*

average inflation targeting" and simultaneously, rather than taking pre-emptive action against "deviations from maximum" employment they now assess "shortfalls from the maximum" and use a greater degree of discretion in their monetary policy response. Nonetheless, the Fed has not unequivocally withdrawn its Volckerian threat.

"Of course, if excessive inflationary pressures were to build or inflation expectations were to ratchet above levels consistent with our goal, we would not hesitate to act," said Powell.
This is a clear assertion that the unemployment buffer stock may have been relaxed but certainly not eliminated.

While Powell identifies some reasons for the breakdown in the Phillips curve such as slowing population and productivity growth, an aging population and global disinflationary pressures, he does not mention the wide divergence between real wage growth and productivity growth that has taken place since the 1970s nor does he discuss the weakening power and ability of workers to engage in collectively bargaining that has emerged from neoliberal macroeconomic policies – privatization, liberalization (deregulation) and globalization.

For years now, the proponents of Modern Money Theory (MMT) have been pointing out the breakdown of the Phillips curve. In fact, the political face of MMT, Rep. Alexandria Octavio-Cortez had questioned Powell at a congressional hearing in July 2019 whether the Phillips curve had broken down. His answer was in the affirmative. And this was much before the pandemic. The hearing then articulated a greater role for fiscal policy –greater fiscal space – to address issues of long-term growth, stagnant real wages and unemployment.

Although the recent policy statement by Powell seems like a small victory for labour, MMTers have warned that the Fed is likely to revert to its old ways after the economic crisis unleashed by the pandemic abates. As proposed by the Australian economist William Mitchell more than twenty years ago, a longer-term solution to achieve full employment with price stability is the implementation of a universal job guarantee (UJG) program wherein a buffer stock of employment (not unemployment) is created to stabilize wages and thereby inflation. The UJG minimum wage rate serves as nominal anchor for wage rates and the price level.

Who will be the new Chairperson of the US Fed?[1]

Will US President Joe Biden extend the term of the present Chairperson Jerome Powell, or will he appoint Lael Brainard, a member of the Fed's Board of Governors? This is not simply a choice between two economists, but a political choice between them and their deeper social and political convictions.

At a highly anticipated news conference on November 3, Jerome Powell said the Fed was sticking by its bedrock economic forecast: COVID-19 will eventually fade, which, in turn, will enable supply chain bottlenecks to unsnarl.

Inflation is back at the top of the news charts in the United States with wholesale prices skyrocketing by a whopping 8.6 percent in October 2021 as compared to a year ago. The big question facing US policymakers now is whether inflation can be considered 'transitory' or is it here to stay, at least for a while? Amidst the uncertainty over inflation and the likely monetary policy response to it, there is also the big question over who will be the next Chairperson of the Federal Reserve (Fed). Will US President Joe Biden extend the term of the present Chairperson Jerome Powell, or will he appoint Lael Brainard, a member of the Fed's Board of Governors? This is not simply a choice between two economists; rather, it is a political choice between the two economists and their deeper social and political convictions.

Jerome Powell, a Republican, was nominated as Chair of the Fed by former US President, Donald Trump, replacing Janet Yellen. While Powell was in sync with Yellen on the interest rate front by choosing 'patience' over 'pre-emption', they differed on the regulation front, with Powell favouring greater deregulation in housing markets and liquidity constraints on larger firms as opposed to Yellen's call for a tighter regulatory regime. It was perhaps for this reason that Trump chose Powell, although Yellen's political affiliation to the Democratic Party may have also been a deciding factor.

All through the period between 2009 and 2019, US unemployment rates showed a steady decline from 10 percent to 3.5 percent, and although inflation did seem to pick up briefly, it never deviated too far above the 2 percent target. This led economists to question the validity of the Phillips Curve, in particular the notion of NAIRU (the non-accelerating inflation rate of unemployment), which argued for a buffer stock of unemployment as a pre-emptive step to keep wages and inflation in check. Even Powell had to concede that the Phillips curve relationship between the rate of unemployment and inflation rate had indeed become weak over the years. He was, therefore, more open to a monetary policy stand that was based on 'outcomes' rather than the 'anticipated outlook'.

Although Powell has been accommodative to the massive fiscal expansion on account of the Covid pandemic, it is important to go back to the early period of his tenure when friction developed between Trump and him. For most of Yellen's tenure, as US economic growth accelerated, inflation gradually rose steadily from around 0.1 percent in 2015 to about 2.5 percent in 2018. Yellen responded with steady increases in the benchmark Fed Funds rate, which gradually raised the effective Feds Funds rate from 0.1 percent to about 2 percent. Trump expected a more accommodative stand from the Fed for his tax cut program so that the economy could keep growing while unemployment fell. However, Powell did not oblige. The effective Feds Fund rate rose steadily, much in line with Yellen's policy stand. Moreover, Powell's policy of 'quantitative tightening (QT) on autopilot' by up to $50 billion bond sales also resulted in rising bond yields while equities took a beating. There was increasing pressure for Powell to stop contracting the Fed's balance sheet.

Trump, displeased with Powell's policies, even hurled vicious personal attacks on him. Powell ended the QT program in early 2019 but his hawkish stand on inflation became apparent, a reminder of his aggressive stand on tapering quantitative easing (QE) in 2013. This is something that Biden will be aware of even though Powell has been extremely supportive of Biden's policies in tackling the pandemic crisis.

Recent statements by Powell on inflation seem mixed. In October this year he was categorical that 'the risks are clearly now to longer and more persistent bottlenecks, and

[1] *Moneycontrol.com, 17.11.2021*

thus to higher inflation', while earlier this month he supported the government's stand that inflation was 'transitory'. On the unemployment front, Powell's remarks seem aligned with the Biden government's views. 'While monetary policy does not target any particular group of people...we are attentive to disparities in the labour market, rather than just the headline numbers … [especially of the] many who had struggled for years were finding jobs. Racial disparities in unemployment were narrowing.'

There is a strong contender emerging for the Chair of the Fed, Lael Brainard. Although critics fear her 'progressive' credentials, some dubbing her as the 'MMT [Modern Money Theory] princess' and her possible appointment as 'another Biden disaster', there is no doubt that Brainard's track record on stricter financial sector regulation, her bias towards unemployment issues rather than inflation, and her consistent apprehensions over rising inequalities will make her, politically speaking, the suitable choice for the Biden administration.

Another issue in which Brainard scores over Powell pertains to the Fed's role on the climate agenda. With the growing consensus that climate change could disrupt financial stability, Powell's dismal record of seriously addressing this globally-charged issue, and one in which Biden wants to assert the US's dominant position, will be a factor that may go against him.

There may, however, be a fear that Brainard could adopt a super-easy monetary policy so that unemployment would continue to fall and wages rise, even though she has never explicitly dismissed concerns over inflation. Roiling the markets, the adverse impact of inflation on real wages of the working class, and disrupting a nascent recovery are problems that the Biden administration may not want to contend with at this critical juncture. Here, Powell's experience and supportive monetary policy during the 2020 crisis may work in his favour.

While Biden has a tough decision to make in the days ahead, the positive outcome of this debate is that it starkly reveals the complex trade-offs involved, and more importantly, a recognition of the normative judgments and political priorities intertwined with macroeconomic policymaking.

Why is the US Fed inducing a recession?[1]

The real reason for trying to slow the economy is to ensure that wages do not rise rapidly. That is why the state of the labour market is key to US monetary policy.

On Wednesday, July 27, the US Federal Reserve (Fed) hiked interest rates up by a sharp 0.75 percentage points. Clearly, the Fed is alarmed over raging inflation, which accelerated to an annual rate of 9.1% in June 2022, with year-on-year wage growth at 11% in May, 2022.

Meanwhile, even though GDP growth rate in 2022 has slowed, it has been attributed primarily due to the rising trade deficit. With consumption and investment spending still strong, overall growth is forecasted to average 3.6% for the year. Putting these facts together reveal that this situation is not stagflation, which essentially arises when supply-side constraints (while they may exist) are strong enough to not just inhibit business activity but even diminish it.

The latter seems implausible with some 372,000 new jobs added in June 2022, overriding expectations. Basic macroeconomic theory suggests that the present situation is predominantly because of the strong demand that has been buoyed by expansionary fiscal policies implemented during the pandemic.

The willingness of the Fed to induce a slowdown, or even a recession, therefore emanates from conscious utilization of economic policy to do so. This can be inferred from US President Joe Biden's remark, 'no country is better positioned than America to bring down inflation, without giving up all of the economic gains we have made over the last 18 months.' It implicitly implies that some of the gains could be given

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[1] *Moneycontrol.com, 29.07.2022*

off to bring down inflation. The Fed's Chairman, Jeremy Powell is more categoric on what these gains are: 'the labour market is extremely tight, inflation is much too high … Our goal is to get wages down … to get wages down without having to slow the economy and have a recession and have unemployment rise materially. There's a path to that.' This almost sounds as if the Fed has the tools to precisely ensure that there is only one person applying to fill in one vacancy, because according to Powell wages rise when 'you have two job vacancies, essentially, for every person actively seeking a job.'

The renowned macroeconomist, Oliver Blanchard, in a recent tweet supported this view, 'when inflation comes from overheating … unemployment has to increase to control inflation.' The most definitive directive, however, comes from Larry Summers, former US Treasury Secretary: 'We need five years of unemployment above 5% to contain inflation — in other words, we need two years of 7.5% unemployment or five years of 6% unemployment or one year of 10% unemployment.'

Monetary policy came to be recognized as an effective tool for inflation control when the second oil-shock of 1979 in the wake of the Iranian revolution resulted in growth slowing down while inflation soared. Considering the latter unacceptable, Paul Volcker, then Chairman of the Fed, raised interest rates to an all-time high of 19% in 1980 that induced a severe recession – with an unemployment rate of 11% – to finally suppress inflation. It might be relevant to add that Powell is a great admirer of Volcker: 'I think he [Volcker] was one of the great public servants of the era — the greatest economic public servant of the era', and might be seeing an opportunity here to emulate his legacy.

While discontinuing of convertibility of dollars to gold and the end of Bretton Woods, the financing of the Vietnam war, the crop failures in the mid-1970s, increases in oil prices and even deceleration in productivity, were identified as likely causes of inflation in the 1970s, the moot question is why did monetary policy – particularly Volcker – target wages as the most important variable that had to contained to bring it down? Similarly, in today's context, inflation has been attributed to supply-side bottlenecks, rising oil prices, the Russia-Ukraine war, and higher price marks-ups by monopolistic corporations, but ultimately Powell and Summers target wages and tight labour markets as the key parameters to be controlled.

Volcker answered the question in a speech that he made in 1983: 'it is labour costs

that make up the bulk of the value of what we produce — of all costs accounting for about two-thirds.' Supported by economic models, the necessity to break the vicious wage-price spiral became the overriding policy to 'solve' the inflation problem. The Fed is willing to pull the string so hard (raising interest rates) that aggregate demand contracts, slows down growth and causes enough unemployment (although no one knows exactly how much) to stop wages from rising.

Ground reports from the US, however, shed light on the present cause for concern over rising wages and tight labour markets. Companies across the board, from retail to banking and manufacturing to tourism, are reporting the inability to get labour to meet the demand for their own output and must inevitably raise wages. If labour costs eat into corporate profitability, companies with sufficient market power have the capacity to pass on the increased labour costs to consumers – the reason why some heterodox economists argue that inflation may be on account of companies unwilling to forego their quantum of profits. After all, the ratio of worker compensation to corporate profits has declined sharply in the US from a high of eight in the 1980s to just about five in 2020, but rising to six in 2021.

When Senator Elizabeth Warren recently asked: 'Chair Powell, will the Fed's interest rate increases bring food prices down for families?', his answer was 'I wouldn't say so, no.' And to the question: 'Chair Powell, will gas prices go down as a result of your interest rate increase?', his answer was once again: 'I would not think, so no.' If the direct responsiveness of prices to interest rate hikes remains so ambivalent, the goal of the interest rate hikes to keep wages in check by creating slack in the economy cannot be dismissed off as secondary. Given the stagnation in real wages since the 1980s and rising inequalities in the distribution of income and wealth evident in the US, do tight labour markets, rising wages and an increase in labour's share of total output warrant the necessity to induce a recession?

Volcker may in fact have known the answer all along in spite of relentlessly doing otherwise: 'The gains [from controlling inflation] have been achieved in the midst of recession, with strong downward pressures on prices and costs from weak markets. We cannot build a successful policy against inflation on continued recession.'

Policy challenges to the unfolding crisis in India's external sector[1]

It seems inevitable that India will witness a slowing down in its real GDP growth rate as a response to the pressures in its external sector prompted by the actions of the US Fed.

Just as the US economy recovered from the COVID-19 pandemic by crossing pre-pandemic (July 2019) real GDP levels in July 2021 and continued to grow robustly, a heady concoction of a strong recovery in aggregate demand, tight labour markets, global supply-chain bottlenecks and corporate profit-seeking triggered off an acceleration in the inflation rate.

The inflation hawks at the US Federal Reserve (Fed) finally saw an opportunity to use the weapon that they have been empowered with--setting the benchmark Feds Fund rate. Since March 2022, the Fed raised interest rates steeply, actually inducing a recession in the US that they hope will cool aggregate demand, tame inflation and the labour market too. By announcing a commitment to the +2% inflation target, Chairman of the Fed Jeremy Powell hopes to lower inflation expectations. Nonetheless, with (annualized) core inflation still around 5%, there is a still a long way to go. The sharp hike of 75 basis points earlier this month, has indeed made Powell's threat that, 'it may take some time. Hope for the best, plan for the worst', a credible one.

Unfortunately, the recession that the Fed seeks is not restricted to the US. Every rise in US interest rates sucks dollar liquidity out from the rest of the world, causing it to appreciate and other currencies to depreciate. To overcome this trend, central banks in other countries across the world are forced to raise domestic interest rates that dampens domestic spending and, consequently, growth.

[1] *Moneycontrol.com, 27.09.2022*

Resistance to raising interest rates will either result in a depreciating exchange rate that induces imported inflation, eventually forcing central banks to raise interest rates, or to deplete their dollar reserves to maintain the exchange rate of their currencies. Propping up the domestic currency could, however, mean a loss of export competitiveness and consequently an increasing current account deficit. Speculative forces anticipate that an eventual depreciation of the domestic currency is inevitable as the country depletes its dollar reserves, resulting in a situation that rekindles memories of the 1997 Asian financial crisis.

There seems to be no easy way of escaping unscathed from the web that the US Fed has drawn the world into.

India too is caught in this crisis unleashed by forces outside its control, just when the economy showed signs of a strong recovery from the pandemic. Since the beginning of this financial year, the Reserve Bank of India (RBI) resisted the depreciation of the rupee through strong interventions in the foreign exchange market, selling off some $80 billion of its reserves. This has, however, impacted India's trade balance: with competitors in the export sector benefiting from their own currency depreciations, India's exports have seen a sequential decline in the past few months. This decline in exports has been further accentuated by the adverse economic situation in Europe, primarily on account of the slow post-pandemic recovery and worsened by the ongoing Ukraine-Russia war. Meanwhile, with a relatively strong rupee, total imports have seen a steady increase, with India's consumption picking up in spite of high global commodity prices including oil.

If the RBI were to pull back from its interventions in the foreign exchange market and let the rupee depreciate, the current account will have to find a balance through readjustments in exports and imports. This can, however, be a painful process given the inelasticity of demand for both exports and imports to changes in exchange rates. The plausibility of imported inflation remains high with global oil prices still strong. Competitive depreciation of exchange rates and global recessionary trends also make exports inelastic to exchange rates. Ultimately, the RBI will have to raise interest rates to slow growth to control import demand. The logic is straightforward here: if prices (exchange rates) cannot equilibrate the balance of payments, then quantities (real GDP) must. It, therefore, seems inevitable that India will witness a slowing down in its real GDP growth rate as a response to the pressures in its external sector prompted by the actions of the US Fed.

What makes this scenario more challenging is that the depreciation of the rupee, rising interest rates and slowing growth all happen simultaneously. This poses policy challenges that countries usually encounter during stagflation. Expansionary fiscal policy that may be needed to enhance growth will put more pressure on the balance of payments. Austerity measures, on the other hand, would mean slower growth, lower taxes and more spending on welfare schemes that ultimately widen the fiscal deficit.

If this is true for India, it must also hold true for many other countries. What this implies is that the US Fed's policy of inducing a recession to tame inflation domestically will also become imperative for the world. With exchange rates alone unable to bring about an equilibrium in the balance of payments, countries will be forced into a recession that will lower aggregate demand and consequently import demand, which means that countries which have surpluses in their current accounts also face a slowdown.

As long as the US Fed continues to hike interest rates to quell inflation, the world, including the US, is likely to witness growing recessionary forces. At the same time, there will be mounting pressure – economic and political – on the Indian government to tackle the trade-off between high imported inflation induced by a depreciating rupee and slowing growth and rising unemployment induced by high interest rates.

Demystifying G-SAP with Modern Money Theory (MMT)[1]

By announcing a massive bond purchase program, the G-SAP, the RBI assures infusion of enough liquidity (a swap of bonds for reserves) into the system before it will be drained out when it auctions new government bonds (a swap of reserves for bonds), thereby maintaining money markets rates within the target range.

The last few days has seen a flurry of discussion over the possible disruption in money markets due to the necessity of large borrowings by the Indian government to fund this year's fiscal deficit. It began with concern over bond vigilantes but has now moved on to the Government Securities Acquisition Plan or G-SAP. Engagement with the technicalities of operations by the Reserve Bank of India (RBI) shifts focus away from the macroeconomic implications of why such operations are necessary in the first place and what are their larger objectives. An MMT perspective of fiscal-monetary operations helps in clearing the air over these broader questions.

At the most fundamental level it is important to be aware of what a state (combining the government and the central bank) issuing its own sovereign currency actually borrows and what it repays; the answer to both being its own financial liabilities, which it is the monopoly issuer of. Currency, government bonds, and reserves or reserve accounts held by commercial banks at the central bank are all financial liabilities of the state. Some are interest-bearing while others may not be. When a central bank "buys"/ "sells" bonds from/to banks, it essentially swaps its own financial liabilities, i.e. bonds for reserves or vice-versa.

The question then emerges as to why does the state need to "borrow" its own financial liabilities in the market for its spending? In fact, for a very long time it did not.

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[1] *Moneycontrol.com, 13.04.2021*

Governments would simply issue bonds to their central banks in exchange for a credit of the corresponding amount in their account and then spend. This is called debt monetization. The spending would then lead to net credits in the reserve accounts of the commercial banks (an increase in liquidity) as well as net credits in the deposit accounts (held at commercial banks) of non-bank private sector (NBPS) recipients of the spending. If this amount with the NBPS was likely to cause excess aggregate demand in the economy it could be drained out through increase in taxes and/or savings schemes like provident funds, which are essentially issue of financial liabilities by the government. At the same time, the excess reserves held by commercial banks at the central bank were drained out through swap of reserves for bonds so that money market rates were within the target range to achieve the inflation target. If such money markets were undeveloped and/or inflation targeting policies had not been adopted, the state ensured that excess reserves did not incentivize cheap lending by banks using administered interest rates, credit rationing and/or even nationalizing banks to enforce control over credit creation and consequent inflation.

All this changed in the era of the Washington Consensus. State spending was sought to be curbed and this was done by pressurizing governments to impose constraints on themselves – a 3% of GDP fiscal deficit target and making it mandatory that they first tax or "borrow" and then spend, i.e. they must have positive balances in their accounts before spending. In India, this revised policy framework was legislated by the passing of the Fiscal Responsibility and Budget Management (FRBM) Act 2003. The package of fiscal constraints was followed by the subsequent introduction of two crucial policies on the monetary front: inflation targeting and central bank independence. The government and the central bank would jointly decide on an acceptable inflation target, which had then to be achieved by the central bank. To do so, the central was given an instrument – setting the interest rate (the repo rate) – which was solely at its discretion although this has been partially watered down by appointing a monetary policy committee (MPC). Inflationary pressures arising from profligate government spending could then be checked by hiking interest rates and curbing private sector demand.

Governments and central banks have from then on functioned within this neoliberal fiscal-monetary architecture. Government spending and tax collections create liquidity imbalances that impact money market rates and the central bank's ability to achieve the inflation target. As described by the MMT economist, Scott Fullwiler, these liquidity imbalances are corrected through a well-timed sequence of repo and open market operations (OMOs) involving a network of primary dealers and major banks.

In India, given the unusually large fiscal deficit this year, and the resolve not to resort to debt monetization, implies that the RBI must deal with the government's huge borrowing program. This initially led to a concern whether bond vigilantes could demand higher yields in order to supply necessary funds for the government's borrowing program. However, as MMT has always argued, the power of bond vigilantes is overestimated given that the central bank can always control the interest rates. And this is precisely what happened last week. In a single stroke, by announcing a massive bond purchase program, the G-SAP, the RBI assures infusion of enough liquidity (a swap of bonds for reserves) into the system before it will be drained out when it auctions new government bonds (a swap of reserves for bonds) thereby maintaining money markets rates within the target range. While the G-SAP has calmed nerves on adequate availability of liquidity for its forthcoming auctions, the RBI has further clarified that it will continue to use existing instruments including repo, reverse repo and operation twist to manage shorter term mismatches in demand for and supply of liquidity as well as the yield curve.

When we look at the whole sequence of fiscal-monetary operations from an MMT lens, it becomes clear that even within the present architecture, the state is really not "borrowing" only (its own) existing financial liabilities – if this were indeed true, there would be no net change in public debt or net accumulated financial liabilities over time. Bond purchases/sales and repos/reverse repos are therefore monetary policy instruments to manage liquidity, which constantly oscillates with government spending and tax collections as well as the need of banks in response to credit expansion and contraction. In particular, bond "sales" are not a fiscal policy instrument to fund government expenditure and the Indian government's ability to spend is not constrained by private sector savings or lending.

How monetary policy triumphed over fiscal policy in the UK crisis [1]

The Bank of England's inflexible stand was in direct opposition to the fiscal stance of the Liz Struss government, ultimately forcing her downfall.

While Elizabeth Truss' resignation as UK Prime Minister has been attributed to misplaced priorities and even personal ineptitude, it is necessary to articulate the essence of what really happened over her short tenure in office: the assertive stance of an independent central bank (the Bank of England, BoE) that triumphed over the (UK) government's fiscal independence.

Globally, the Covid-19 pandemic compelled governments to intervene aggressively through fiscal spending supported by monetary policies that lowered interest rates and provided abundant liquidity through quantitative easing (QE) programmes. However, post-pandemic, the world experienced a sharp rise in inflation rates, triggered by several factors including release of suppressed demand, supply-side constraints, tight labour markets and profit-gouging. The Russia-Ukraine war added fuel to the inflation fire by severely disrupting energy markets, particularly in Europe and the UK.

A first step to bring inflation under control by central banks was to taper an existing quantitative easing (QE) programme, which may have been implemented during the pandemic to flood money markets with liquidity as interest rates were lowered. Governments in the normal course of spending, 'borrow' money by issuing new (on-the-run) assets (bonds or gilts) to 'fund' their spending. Central banks then ensure that there is adequate liquidity in the market by first buying back off-the-run assets issued in earlier periods. Under a taper program, the incremental asset purchases are less than incremental asset sales so that some excess liquidity in the market from an earlier QE programme is mopped up, making it easier for the central bank to achieve the interest rate target that is set to control inflation.

As inflation continued to accelerate in the UK, the BoE in May 2022 indicated that it may elevate the taper programme into quantitative tightening (QT): 'We haven't actively sold any government bonds yet. But we have started to consider when and how we will sell some of the government bonds we have bought.' By August, the Monetary Policy Committee (MPC) of the BoE voted 'to reduce the stock of purchased UK government bonds held in the Asset Purchase Facility (APF), financed by the issuance of central bank reserves, by £80 billion over the next twelve months, to a total of £758 billion' while explicitly assuming that 'fiscal policy as a whole tightens over the projection.'

The risks of QT were, however, clear to the BoE: falling price of bonds or capital losses with rising yields. The impact of falling bond prices was to be minimized through proper communication between the BoE and major market players as well as by opening a special short-term repo window to prevent extreme volatility in market rates on account of QT and possible liquidity shortfall.

It was in the context of this monetary policy that Chancellor Kwasi Kwarteng under PM Truss announced the infamous mini-budget on September 23 wherein taxes on the richest were cut while government spending on energy subsidies were increased. Some reactions to the budget were grossly flawed: the UK was on the verge of bankruptcy, Truss had not heeded Rishi Sunak's warning that there was 'no magic money tree', the bond vigilantes were back and that financial markets can tame governments. Without justifying or supporting the nature of the mini-budget, it is important to understand that a monetarily sovereign country like the UK, which issues its own fiat currency accepted as legal tender, cannot go bankrupt in sterling pounds. After all, the UK had run a fiscal deficit of over 15% of GDP in 2020-21, increasing its national debt to more than 100% of GDP with interest rates down to almost zero.

What then had led to the present crisis? With inflation accelerating and expected to touch 13% by the end of 2022, the Bank of England categorically announced in August: 'It's our job to make sure that inflation returns to our 2% target, and that is what we will do.' Kwarteng's mini-budget came in direct opposition to the BoE's monetary policy stand. The shortfall in government revenues required the BoE to sell

[1] *Moneycontrol.com, 27.10.2022*

off-the-run bonds in the market so that ample liquidity would be available for the sale of on-the-run bonds by the Debt Management Office. At the same time, the fiscal deficit was raising the expected inflation rate so that a hawkish BoE was expected to raise interest rates accompanied by a more aggressive QT programme, causing yields to rise from 3.6% to above 5% between September 22 and 28, resulting in substantial capital losses from the fall in price of bonds.

This set off a crisis in two contiguous financial sectors: the mortgage market and pension funds. The bank rate was expected to rise to 6% instead of 4.5% as previously anticipated. Many lenders began pulling mortgage deals. The default risk from additional annual mortgage payments also rose sharply. Meanwhile, pension funds resorted to fire sales in order to markup the value of their collateral to market prices, drawing the bond market into a vicious circle of falling prices.

The higher expected inflation along with uncertainty over the monetary policy response from the BoE led to a run on the sterling pound, taking it from £0.89/$ on September 23 to £0.94/$ on September 26.

Although the BoE reluctantly agreed to undertake emergency bond purchases to stabilize the financial and foreign exchange markets, Governor Andrew Bailey was unrelentingly hawkish in his stand: 'The MPC will not hesitate to change interest rates by as much as needed to return inflation to the two percent target sustainably in the medium term, in line with its remit.' He added: 'The BoE said it would sell back the gilts it buys once market conditions had stabilised, and that Britain's finance ministry had agreed to indemnify it against any losses.' On October 11, Bailey warned that BoE bond purchases would cease in three days. The government buckled. Kwarteng was asked to step down on October 14 and his successor, Jeremy Hunt, made a U-turn by scrapping the mini-budget on October 17.

The lessons from the UK crisis are stark: it is easier for central banks to accommodate the government's fiscal deficits in a crisis when aggregate demand and inflation are low by implementing cut in interest rates and flooding the money market with liquidity through QE programs. However, when inflationary pressures begin to build up along with supply-side constraints, it is far more difficult for the government to raise the fiscal deficit with an unsupportive and independent central bank that is inflexible in its decision to curb inflation by raising interest rates along with implementation of a QT program. Any increase in inflationary expectations on account of expansionary fiscal policies would lead to increasing yields and falling bond prices that could disrupt financial markets and send the exchange rate into free fall.

Paradoxically, the call for independent central banks, promoted by neoliberal economists and adopted in the Washington Consensus, ultimately destabilised the government of the Tories, a party that had always promoted neoliberal policies.

The UK government must now fight for fiscal independence from the BoE.

The US dollar will remain the only global reserve currency[1]

The countries whose currencies are considered as the most likely contenders to end dollar dominance are the ones which run large current account surpluses; how can they provide liquidity to the rest of the world?

Since the start of the Russia-Ukraine war, reports are abuzz with the imminent rise of the Chinese yuan as an international reserve currency. This urgent need to end or weaken the dominance of the US dollar in international exchanges perhaps stems from the fear of enforcement of politically motivated US-led sanctions on countries, thereby abruptly plunging them into economic crisis. While this may be a legitimate concern, economic considerations of an international reserve currency cannot be overlooked.

Foremost is the size of the economy and its ability to produce and sell goods and services, and more importantly, provide a large market to absorb exports from the rest of the world. The US was best qualified to do so at the end of the Second World War. While it made sense for the rest of the world to run trade surpluses with the US as the dollar was convertible to gold at a fixed rate under the Bretton Woods system, the question arose as to why would they want to hold dollars after the gold window was closed in 1971 and the dollar was no longer backed by gold.

The reason for reserve accumulation was because the dollar wasn't merely a 'reserve' — meaning something useful for future use. It was something more. It gave a country the possibility to remain competitive (the only option being to continuously raise productivity) in spite of running current account surpluses by buying the dollar and keeping their domestic currencies undervalued. By this they could export their goods and services — and the US provided a large market to do so — attaining high levels of growth without depending on domestic demand. Of course, the politics of the US accommodation for current account deficits was not based on benevolence. The Cold War was perhaps the motivating force to wean countries away from erstwhile USSR.

An important reason for China's exceptional growth since the 1970s has been its export-led strategy with massive positive net exports to the US and also with Europe. Its accumulation of reserves to undervalue the yuan is well-known. Moreover, almost 85 percent of its foreign exchange reserves are held in dollars and euro. While the share of dollars may be declining, this could be because of the substantial trade between China and the EU, with large portions of trade being invoiced in euro. So, China's accumulation of euro reserves may be more to do with undervaluing the yuan against it than breaking away from dollar dominance per se. China, presently, is said to be holding about 20 percent of its reserves in euros, which alone accounts for 25-30 percent of total euros held as reserve currency.

Japan follows a similar strategy and even other large reserves holders like India, Switzerland, Vietnam and South Korea have been accused by the US of being currency manipulators. The declining share of the US dollar is possibly arising not from a lower dependence on the dollar for a large part of the world but rather the accumulation of euros by China and others like Japan, which alone hold 40 percent of total international reserve currencies, as they run large current account surpluses with the EU.

Meanwhile, the US-led sanctions on Russia have given new impetus to the Central Bank of Russia to accumulate yuan as a reserve currency. Although Russia's switch to the yuan is because of its inability to access dollars, it is also clear that Russia now runs a trade surplus with China so that accumulation of yuan could also be to prevent the ruble's appreciation against the yuan, making its exports uncompetitive. Such specific trade imbalances, as well as political factors, may induce countries to maintain multiple reserve currencies.

Interestingly and paradoxically, the countries whose currencies are considered as the most likely contenders to end dollar dominance are the ones which run large current account surpluses — the EU, Japan and China — amounting to a total of some $700 billion. This obviously raises questions of how these challengers to the US can actually provide liquidity to the rest of the world for settlement of international trade and capital flows.

[1] *Moneycontrol.com, 12.07.2022*

For instance, if the EU alone runs a current account surplus of €350 billion, how can the rest of the world have sufficient euro liquidity? Put differently, if the EU were to be running perpetual current account surpluses, it will be accumulating financial assets in the rest of the world and the latter accumulating the corresponding financial liabilities. At some point, when the rest of the world has to deleverage to pare euro debt, there would be a dearth in available means of settlement.

It is therefore imperative that we distinguish between international and global reserve currencies. While the euro, yen, yuan and even others like the Australian and Canadian dollar may serve as reserve currencies between specific nations depending on quantum of trade, trade imbalances and geopolitical configurations, they cannot serve as a global reserve currency. Only the US dollar at present qualifies to take the position of global reserve currency, given the overall size of its economy and its ability to run persistent current account deficits over more than four decades.

Why countries want to de-dollarize the international economy? [1]

US monetary tightening is playing havoc with the world's economies as the dollar is the main global currency. This has reignited a desire to end the dollar's dominance in the world economy.

The Ambassador at Large of Russia's Foreign Ministry Pavel Knyazev recently announced that the BRICS nations were working together to de-dollarize international trade, replacing it with a new currency based on a basket of the group's currencies. While political reasons including US-led sanctions and disqualification from utilization of SWIFT cannot be ruled out as a credible threat to countries opposing US hegemony, there may be some strong economic motivations that provoke countries to look for an alternative to the dollar's dominant position in the international economy.

The first, of course, is the 'exorbitant privilege' that the US has because it can fund its imports with its own currency or more generally, its own financial liabilities or dollar-denominated bonds. To put it bluntly, while the rest of the world must 'earn' dollars to fund their imports, the US need not do so to buy goods and services from the rest of the world.

It might seem that by issuing their financial liabilities (dollars), the US is indebted to the world or that the world is funding US trade deficits. Concerns are raised as to what would happen if China or other countries were to call in US debt. Could the US face a crisis? These are, however, naïve arguments once we understand

[1] *Moneycontrol.com, 13.10.2022*

that the dollar is to the world what the rupee is to India or the real to Brazil. The government of an economically sovereign country is the issuer of its own currency or legal tender and cannot be compared to private sector entities. Governments settle their financial liabilities only through the issue of their own financial liabilities. Debt is simply rolled over. In quite the same way, if China were to call in US debt, the Fed will settle it by issuing new debt. There is no promise to settle it with gold, silver or anything else.

There is one difference though between an economically sovereign country that issues its own legal tender and the US dollar as the global reserve currency. A sovereign country can legally enforce that all obligations due to it (taxes, fines, etc.) can be settled in its currency only and nothing else. This makes legal tender widely acceptable in a country. In the international arena, there is no such mechanism to make the dollar legal tender. The question therefore arises as to why countries accept the dollar as the international medium of exchange?

Access to the massive US market to sustain high domestic GDP growth through exports has prompted nations to accept the exorbitant privilege of the US. This is true for post-World War II Europe followed by Japan and the South East Asian tigers, and more recently, even China. Accumulation of dollar reserves not only allowed them to keep domestic currencies depreciated to encourage exports but also gave them the ability to acquire real assets across the world. At the same time, US trade deficits provided the rest of the world sufficient liquidity for trade among themselves.

The dollar as a 'mutually beneficial' medium of exchange cannot therefore be a strong economic basis for de-dollarization of international trade. Instead, there is another 'exorbitant privilege' of the US that countries are constrained by and seek to escape from: US control over monetary policy, globally. This is evident from the present situation wherein the Federal Reserve (Fed) has hiked interest rates since March 2022 to tame accelerating inflation in the US. The purpose was unequivocal: bring down inflation even if necessitates a recession.

This strategy of the US, however, is not limited to reining in their economy. Most countries have no option but to follow suit: slow down growth to reduce global demand and inflation. First, their central banks have had to hike domestic interest rates to prevent capital flight. This, however, adversely impacts domestic spending and thereby GDP growth. Second, allow the currency to depreciate but face rising imported inflation that may ultimately compel a hike in domestic interest rates or lastly, support the domestic currency through a sale of dollar reserves but then face the risk of speculative attacks on the currency as reserves deplete. Fiscal policy is also impeded as any expansion in spending will only add to inflation and imports thereby drawing the economy into a vicious circle of rising interest rates and currency depreciation.

Keeping Russia out, a look at other BRICS nations reveals why countries may be seeking policy space, breaking free from US priorities over inflation. India's predicament since the Fed's interest hikes are a case-in-point: growth projections have been lowered from 7.2 percent earlier this year to the most recent 5.7 percent for 2022 and a further decline to 4.7 percent in 2023 (UNCTAD). The rupee has been steadily depreciating in spite of hikes in the repo rate by the Reserve Bank of India (RBI). Inflation has still not shown a steady downward trend. South Africa faces a similar predicament as India.

GDP growth rate for 2022 is projected at just about 2.1 percent in 2022. China's growth projections by UNCTAD are down to 3.9 percent and 5.3 percent for 2022 and 2023 respectively even as the yuan has sharply depreciated by around 10 percent in recent months. Brazil has, however, bucked the trend with an appreciation of the real. This, however, has come with a steep hike in interest rates from around 2 percent in the beginning of 2022 to 13.5 percent presently. Real GDP growth projections by UNCTAD are 1.8 percent for 2022 with a sharp deceleration to just about 0.8 percent in 2023.

With Jeremy Powell, Chairman of the Fed, showing no signs of relenting interest rate hikes, the possibility of a global recession cannot be dismissed. At the same time, with control over oil supplies being under the control of a few countries, there are growing doubts whether monetary policy can actually contain inflation since any reduction of demand for oil can be matched by cutting production to ensure elevated oil prices.

It is perhaps this sense of powerlessness over domestic fiscal and monetary policy as well as the political dominance of the US that is driving the current push for de-dollarization of the international economy, and not the benefit that the dollar enjoys as the principal medium of exchange in international trade.

Will China's digital currency end US Dollar dominance? [1]

Were the world to decide to shift their dollar reserves to any other currencies, the country likely to benefit most in terms of production of real output would be the US on account of a depreciating dollar.

The successful launch and growing usage of China's Central Bank Digital Currency (CBDC), the Digital Currency Electronic Payment (DCEP), has triggered an intense debate among economists and commentators over whether this marks the beginning of the end of dollar dominance in international trade and financial settlements. While there are those who believe that this is indeed the case given China's growing share in world trade and the possibility of DCEP becoming a common platform for digital currencies among several of its trading partners, there are others who think that DCEP per se is inadequate to challenge the dollar – which presently accounts for 80% of cross-border invoicing and 60% of international reserves – and there is little possibility that the renminbi will replace the dollar in the foreseeable future. Before taking a stand on this debate, it is important to be clear what dollar dominance entails and the conditions which gave rise to it. Only then can we be sure we are posing the right questions, let alone having an opinion on the issue of the renminbi, DCEP, and dollar dominance.

50 years ago, in August 1971, US President Richard Nixon, closed the gold window, ending the long era of fixed exchange rates under precious metal (gold or silver) standards and the post-war Bretton Woods system. Although countries, including the US, had long before Bretton Woods stopped the conversion of their currencies to gold or silver internally, under the Bretton Woods system, the US promised to convert dollars held by foreign central banks to gold at a fixed rate of $35/ounce.

[1] *Moneycontrol.com, 27.08.2021*

Further, countries had to devalue or revalue their currencies if they had chronic BOP imbalances and exchange rates fluctuated more than +/-1% of the par value. So, for instance, the sterling pound was devalued in 1949 by 30% from $4.09 to $2.80 per pound. The German mark and Japanese yen were revalued upwards sharply in the 1960s. In spite of these adjustments in par values, the Bretton Woods system suffered from a fundamental flaw captured succinctly by the Triffin dilemma: the US would have to perpetually run autonomous balance of payments (BOP) deficits to feed the world adequate dollars as the international medium of exchange, thereby eroding confidence in the reserve currency (dollar) over time. It was this phenomenon that ultimately led Nixon to go back on the US promise to convert dollars to gold.

The abandonment of the Bretton Woods arrangement and the regime-change from fixed to floating exchange rates did not, however, unseat the dollar as the international currency. One might have expected that with floating exchange rates, all BOP disequilibria would be automatically corrected through exchange rate movements rather than putting pressure on internal adjustments through recessionary contraction or inflation in domestic economies. However, many countries adopting export-led growth strategies including Japan and the Asian Tigers, followed by China, realized that engagement with the US market (whose share of world GDP was around 25% in the 1970s) was essential to achieve their economic objectives. Even India, where tech exports have been an important of engine of growth, the US alone absorbs more than 60% of its total tech exports. And for this growth strategy to be successful, free market exchange rates were not appropriate, intervention to ensure depreciated domestic currencies vis-à-vis the dollar was required.

While path dependency, the development of Eurodollar markets, the size and complexity of the US economy, as well as political stability, are important factors that led to the continuance of dollar dominance post-Bretton Woods, the switch of the dollar to a fully fiat currency in 1971 seemed to have actually increased confidence in the dollar with the uncertainty over adequate gold reserves no longer relevant. There are nonetheless two questions that need to be answered: first, why did the US 'agree' to run BOP deficits to provision the rest of the world with adequate liquidity to finance international trade and investment and second, why did the rest of the world continue to allow the US to gain 'exorbitant privilege' from dollar dominance wherein they were actually exporting real output in exchange for financial claims (Treasury bonds) on the US?

It is important to remember that in the 1970s, the erstwhile USSR and USA were still in the grip of the Cold War, both seeking global hegemony. Unless the US gave countries the opportunity to access its markets to propel rapid growth among their allies, a tilt towards the USSR remained a strong possibility. This made the US willing to run BOP deficits. On the other side of the equation, the countries seeking rapid growth through exports were more than willing to trade real goods and services for US dollar bonds so that their own currencies would remain depreciated and exports could be sustained. The exporting countries tolerated the US's 'exorbitant privilege' only because US markets gave their own countries the opportunity for rapid growth. Moreover, in the longer term, dollar reserves would give them access to resources from across the world. China is a clear example of a country that followed this neo-mercantilist strategy.

Keeping this background in mind, we now return to our question. Will the widespread use of DCEPs globally enable the Chinese renminbi to dethrone the dollar? Let us suppose that a growing number of countries actually begin to use the renminbi for international settlements and consequently also decide to switch their reserves from dollars to renminbi. This will result in massive sale of dollars and purchase of renminbi, consequently depreciating the dollar and appreciating the renminbi. This is exactly what China countered all these decades through accumulation of dollar reserves: an appreciating renminbi and diminishing export competitiveness. In fact, were the world to decide to shift their dollar reserves to any other currencies, the country likely to benefit most in terms of production of real output would be the US on account of a depreciating dollar – something that they have been striving for by threatening many countries, China foremost, as 'currency manipulators'.

More important than asking whether DCEPs will trigger the end of dollar dominance and rise of the renminbi as the dominant international currency is to ask whether China actually wants this to happen. And how will they prevent the threat posed by DCEPs in inducing this possibility? The only other solution open to China, if it does let the renminbi attain dominance, would be to accept BOP deficits in order to provide the world with adequate liquidity. Continued demand for renminbi will cause its appreciation to such an extent that even export competitiveness through productivity increases will be inadequate to stem the world's thirst for international liquidity.

This is the exorbitant cost that must be borne for an exorbitant privilege.

Trump's tariff gambit sparks dollar dominance debate [1]

Donald Trump's renewed tariff threats underscore the United States' deep concern over the dollar's global dominance. While such threats may temporarily disrupt efforts to reduce dependence on the dollar, they could also hasten the search for alternatives.

US President Donald Trump has once again threatened to impose a 150% tariff (up from 100%) on any nation that even hints at disrupting or undermining the US dollar. Trump also tauntingly commented that the "BRICS states just broke up. I don't know what the hell happened to them." Recognizing the dollar's vital role in maintaining its hegemony, the United States sees any reduction in its use as a significant threat to its global dominance, even as it reluctantly acknowledges a multipolar world.

While such threats may temporarily hinder efforts to find alternatives to the dollar, they are unlikely to completely eliminate them. In fact, these threats might prompt the global community to recognize the more urgent need for an alternative. Nevertheless, any potential replacement for the dollar as an international currency encounters substantial challenges that must be thoroughly and fully comprehended.

In popular discussions, the dollar is often seen merely as a medium of exchange in international trade or as a reserve currency. It might surprise some that in 2022, only 50% of international trade was invoiced in dollars. Additionally, of the total foreign exchange reserves, only 60% were dollar-denominated, with the rest held in assets including the euro, yen, and gold. More importantly, the dollar's influence extends

[1] *Moneycontrol.com, 21.03.2025*

beyond these functions, particularly in the realms of financial markets and financial stability.

Historical Roots of Dollar Dominance

Before examining these aspects, it is useful to understand the developments that led to the dollar's acceptance as an international currency. Until 1971, under the Bretton Woods system, the US promised the dollar's convertibility into gold at a fixed rate of $35 per ounce for international balance of payments settlements. However, in 1971, President Richard Nixon closed the gold window, making the dollar an international fiat currency no longer convertible into gold. Why would countries be willing to hold dollars as a reserve currency then? If they did, there was a good chance that the US would over-issue dollars, causing depreciation and a reduction in its international purchasing power.

Simultaneously, in the absence of gold or any other international currency, international trade would devolve into barter where countries would aim to balance trade and capital flows with partner countries on an individual basis. This, coupled with beggar-thy-neighbour policies, would effectively lead to a race to the bottom, reminiscent of the collapse of international trade in the pre-Bretton Woods era.

The Role of the Petrodollar

Moreover, a far more serious concern than the trade in goods and services between Western economies existed at that time – oil. With OPEC's share in global oil production surpassing 50% in 1973, and the disruptions caused by rising oil prices in the early 1970s, it became necessary to ensure that Middle Eastern oil exporters accepted the dollar as the international currency for payment settlements, extending beyond the United States to encompass all countries. Facing structural balance of payments surpluses, Middle Eastern countries had to hold these surpluses in dollar reserves. The United States used various threats and tactics to ensure Middle Eastern oil exporters accepted the dollar for international payment settlements, including curbing food and raw material supplies from the international community, developing alternative energy sources to reduce petroleum usage, and, as recently revealed in declassified documents, even considered a military seizure of Middle Eastern oil.

A significant issue with holding dollar reserves, particularly for Saudi Arabia, which was not only the leading OPEC exporter but also held the highest proportion of dollar-denominated reserves (over 80%), was the depreciation of the dollar. In 1977-78, the dollar depreciated by around 40%, effectively eroding the purchasing power or value of Saudi's oil exports by the same amount. As Saudi Arabia considered diversifying its reserves into yen, Deutsche marks, and the International Monetary Fund's Special Drawing Rights (SDRs), the US responded by offering Saudi projects and committing "to a strong dollar and to reducing the budget deficit … [and] easing of interest rates only when there [were] signs that the effort to curb inflation [was] succeeding." Consequently, the Volcker Shock – consisting of steep increases in interest rates – that began in 1979 and the shift in macroeconomic policy focus from unemployment to inflation may have stemmed from the need to ensure the dollar's position as the primary international currency. More broadly, a prerequisite for international currency status is stringent control over inflation. This was also evident in the rise of the euro as a reserve currency, where fiscal deficit targets of 3% of GDP were mandated across member-nations to curb inflation.

Another question that needed to be addressed was "petrodollar recycling," i.e., the investment of surplus U.S. dollars earned by oil-exporting countries through the sale of oil. It is often argued that these petrodollars deposited in Western (U.S. and European) banks were lent out in private capital markets and eventually found their way to deficit countries, particularly the less-developed economies (LDCs) at the time. However, closer scrutiny of petrodollar flows reveals that only a small percentage went to LDCs; the majority were invested in industrialized countries in the West, as well as newly industrializing countries (NICs) that borrowed dollars for capital investment. This was because the risks associated with default made private banks wary of lending to the poorest countries, which had to rely more on official sources, including foreign aid and international organizations, for their foreign exchange borrowing.

With inadequate investment opportunities for petrodollars and to further address the issues of secrecy and risks, the US entered into an "add-on arrangement" with Saudi Arabia in 1974, allowing its central bank, SAMA, to purchase Treasury securities outside the auction. By the end of 1977, Middle Eastern oil exporters held 65% of US Treasury bonds and notes issued. While this arrangement facilitated the safe recycling of petrodollars and prevented the depreciation of the dollar, it also pushed the US into trade deficits. This is an important lesson for aspiring international currencies to consider.

The failure of Bankhaus I. D. Herstatt and Franklin National in 1974 highlighted the importance of liquidity for interbank transactions, particularly in the petrodollar market. Today, the development of repo markets, foreign exchange derivatives, and related forwards provide essential liquidity management tools. Dollar transactions dominate this space, accounting for 90% of global FX transactions, with an average of $6.6 trillion per day on one side of a transaction.

Lastly, the provision of countercyclical long-term lending by the US Federal Reserve to financial institutions and other central banks – acting as a dealer or lender of last resort – during the 2008 Global Financial Crisis and more recently, the pandemic of 2019 has become a critical necessity for maintaining the dollar as the international currency. For example, currency swap lines, where the Fed exchanged US dollars for foreign currencies with other central banks, ensured that financial crises were effectively mitigated.

For an alternative currency to achieve the dollar's status as an international currency, these functions are crucial in addition to its being just a medium of exchange or a reserve currency.

The Mar-a-Lago Accord: An imminent proposal to restructure the global financial order [1]

Global markets are on edge as the US advances a bold and controversial financial strategy. With world leaders expected to face mounting pressure from Washington, a new economic realignment may be in the making—one that could shake the foundations of international trade, currency markets, and geopolitical alliances.

Amidst the turmoil caused by the sweeping tariffs imposed by the Trump 2.0 administration, debates are intensifying over whether this is merely a prelude to something far more foreboding: a comprehensive restructuring of the global financial system. This ambitious initiative, informally referred to as the "Mar-a-Lago Accord"—named after the President's Florida resort—envisions world leaders convening there to deliberate and, under U.S. pressure, align with this controversial plan.

In November 2024, Stephen Miran unveiled a User's Guide [2] titled "Restructuring the Global Trading System," which may provide insights into the objectives and implementation of the Mar-a-Lago Accord. Notably, Miran was confirmed by the Senate on March 12, 2025, and officially took office as the Chair of the Council of Economic Advisers the following day.

In his document, Miran identifies the persistent overvaluation of the dollar, driven by the inflexible demand for reserve (dollar) assets as the root cause of economic imbalances, which disrupts the balance of international trade. As global GDP expands, the strain on the U.S. to provide reserve assets—leading to dollar appreciation—and uphold its defense commitments intensifies, disproportionately affecting its manufacturing and

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[1] *Moneycontrol.com, 2.04.2025*

[2] *https://www.hudsonbaycapital.com/documents/FG/hudsonbay/research/638199_A_Users_Guide_to_Restructuring_the_Global_Trading_System.pdf*

tradeable sectors. Miran further contends, echoing Trump's populist rhetoric, that this dynamic has harmed U.S. manufacturing and the working class while favoring the financialized sector and affluent Americans.

Miran, however, opposes the idea of a tariff shock, a strategy Trump has been both threatening and implementing. Miran's skepticism about the effectiveness of tariffs stems largely from the impact of an appreciating dollar, which could partially or entirely negate the intended effects of a tariff. For instance, if India exports a product priced at $1 with an exchange rate of ₹85 to the dollar, a 10% tariff imposed by the U.S. would increase the price to $1.1. However, if the dollar appreciates to ₹93.50, the price reverts to $1. This shift in the exchange rate, while non-inflationary, fails to support U.S. manufacturing—the very goal of the tariff. On the other hand, if the demand for the imported product is elastic, the exporting country may bear the cost of the tariff as a tax. Alternatively, if the U.S. manages to adjust the exchange rate to ₹76.5—a depreciation of the dollar—the price of the imported product would rise to $1.1, effectively safeguarding U.S. industries.

Dollar depreciation can be deliberately pursued by aligning international trade, finance, and security frameworks at a global level. Strategies such as the implementation of tariffs, combined with restricted access to the U.S. security umbrella, can serve as potent tools—or even forceful pressures—to persuade trading partners to agree to the depreciation of the dollar. Miran advocates for the strategic application of tariffs, a stance that Trump's current policy direction appears to echo, with the offer to ease them serving as a motivating factor for nations to support the proposed U.S. currency plan.

To orchestrate the depreciation of the dollar, reserve-holding nations would deliberately divest their dollar-denominated assets, focusing primarily on Treasury bills. The remaining bonds could be converted into long-term instruments, such as 100-year (century) bonds, which would elevate their prices and lower yields, aiding in the financing of U.S. security commitments. Simultaneously, this strategic asset sale would weaken the dollar, ultimately shifting manufacturing jobs and aggregate demand back to the United States.

Countries typically maintain dollar reserves to manage volatility in their domestic currencies, deploying dollars to stabilize exchange rates and prevent sharp declines.

However, during periods of high U.S. interest rates, the mark-to-market valuation of these reserves—especially illiquid, longer-term bonds—can result in substantial currency losses. To mitigate such risks, Miran proposed offering these nations an incentive through access to Federal Reserve (Fed) swap lines. This approach would enable liquidity provision at the face value of the bonds, alleviating financial pressures and facilitating smoother currency management.

Another approach Miran examines involves the Federal Reserve "printing" dollars to purchase foreign currencies in the market, subsequently accumulating these assets as reserves—a strategy already employed by several nations. However, this method could lead to increased dollar liquidity and inflationary pressures, requiring the Fed to undertake sterilization operations. Additionally, the risks of foreign government debt defaults and the impact of "printing" dollars on elevating U.S. national debt make this option less favorable compared to the first.

The current proposal to devalue the dollar mirrors the Plaza Accord of 1985, where G-5 nations (US, UK, Japan, Germany and France) agreed to weaken the U.S. dollar against major currencies, including the yen. While it aimed to correct trade imbalances, the stronger yen hurt Japan's exports, induced expansionary monetary policies, and fueled an asset bubble. The bubble's collapse in the 1990s led to Japan's "Lost Decade," with economic stagnation persisting to this day.

In a similar vein, the Mar-a-Lago Accord targets nations that hold substantial dollar reserves while exporting high-value, technologically advanced goods to the U.S. Key players include China, Japan, India, Taiwan, South Korea, Malaysia, and Singapore. Switzerland, with its impressive $800 billion in reserves, could also be on Trump's radar, whereas the EU collectively holds around $300 billion, and Canada maintains reserves of $65 billion.

Middle Eastern nations, despite holding significant dollar-denominated assets, are unlikely participants in the Mar-a-Lago Accord. They might prefer shifting their investments away from low-yielding dollars to more profitable alternatives. Similarly, China, viewed by the U.S. as a principal competitor and adversary, is expected to oppose the Accord due to misaligned priorities, particularly regarding security guarantees. However, should discussions materialize, it will be intriguing to see whether China might entertain tariff reductions in exchange for renminbi appreciation.

The responses of other nations will be just as pivotal, as their individual and collective actions could not only redefine global trade and financial systems but also further strain the already tense relations between the U.S.—particularly following Trump's return—and the rest of the world in the coming years.

Trump's diktats are undermining the dollar as international currency [1]

As global markets reel from the Trump administration's trade blitzkrieg, a seismic shift may be brewing in the financial world: the unravelling of America's role as lender of last resort. With Washington backing away from its dollar diplomacy and central banks in Europe and Asia stepping up their game, the era of unquestioned dollar dominance may be closer to its end than anyone thought.

In 2022, Joshua Aizenman explored the US Federal Reserve's (Fed's) currency swap lines in his paper, concluding with a prescient question: "Will the closer alliance between the US and the EU survive beyond the Biden administration? … The possible return of a future US administration that will apply 'America First' isolationist policies may raise questions on the credibility and the depth of US Fed backstop dollar policies." [2]

Fast forward to April 2, 2025, President Trump's aggressive stance towards key allies like the EU and Canada, coupled with the chaos of newly imposed tariffs targeting both allies and adversaries, casts doubt on the US's willingness to act as a stabilizing force in the global financial system. Instead, the Trump administration appears to thrive on the unrelenting uncertainty and disruption it creates.

Currency swaps by the Federal Reserve are far from a modern innovation. During the Bretton Woods era, prior to 1971, these swaps were employed to

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[1] *Moneycontrol.com, 17.04.2025*

[2] *https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4253443 Moneycontrol.com, 17.04.2025*

shield the dollar reserves of foreign central banks from potential devaluation. As nations accumulated dollar reserves exceeding the gold reserves held by the United States, the fixed gold-to-dollar conversion rate of $35 per ounce made the prospect of dollar devaluation increasingly likely. Currency swaps provided a strategic solution to mitigate this risk.

Currency swaps between the Federal Reserve and central banks of other nations gained prominence during the post-Bretton Woods era, particularly in 2007, as the Global Financial Crisis (GFC) unfolded. Although the GFC originated in the United States, with US stock markets and major financial institutions experiencing the initial collapse, the crisis quickly spread across global financial markets. This, somewhat paradoxically, triggered a surge in demand for the US dollar, making it appreciate in some cases by 7% against other major global currencies like the euro, yen and sterling.

The Eurodollar market, comprising US dollars held in banks outside the United States, typically operates independently of the Federal Reserve's oversight or support, relying solely on its own liquidity during normal conditions. However, during the GFC, the sudden surge in demand for dollars, as institutions scrambled to exchange their currencies, triggered a severe liquidity shortage in the Eurodollar market. To address this, the Federal Reserve, in collaboration with major central banks, established currency swap lines—agreements to exchange dollars for foreign currencies for a fixed period. By stepping in to backstop dollar liquidity shortages, the Fed not only prevented the financial system from collapsing entirely but also bolstered global confidence in the dollar as the premier international currency.

The dollar's status was further reinforced during the COVID-19 pandemic, as the Federal Reserve reopened currency swap lines, expanding the list of participating central banks beyond those included during the GFC.

By acting as a global lender of last resort, the Fed demonstrated that the US is committed to supporting the stability of the global financial system. This proactive support boosted confidence among foreign governments, central banks, and investors in holding dollar reserves. Through mechanisms like currency swaps, the Fed ensured that the dollar remained highly liquid and accessible, even during market turmoil. This access to liquidity solidified the dollar's status as the dominant global currency for trade, investment, and reserve holdings.

Trump's criticism of the Federal Reserve, coupled with trade tariffs and isolationist policies, has fuelled doubts about the US's commitment to maintaining global financial stability. In fact, there is an increasing perception that the Trump administration might exploit such crises to enforce economic terms on other nations, often resorting to public humiliation and coercion.

Project 2025, a policy framework linked to conservative think tanks and aligned with the potential agenda of a Trump 2.0 administration, outlines significant changes to the Fed's role. Among its monetary policy recommendations is a proposal to limit the Fed's lender-of-last-resort (LOLR) function. While this appears primarily aimed at curbing domestic bailouts of banks and financial institutions, it further diminishes the likelihood of extending such support to foreign central banks during crises.

Interestingly, while a global economic crisis looms, triggered by Trump's policies, the dollar has been depreciating against most major currencies since January 2025—a stark contrast to its strengthening during the GFC and the COVID-19 pandemic.

Even as the US continues to score a self-goal by undermining the dollar's status as the dominant international currency, many other nations have embraced the critical role of liquidity backstops during financial crises, recognizing them as essential for elevating a currency to international prominence.

Since the pandemic and more recently, the Ukraine war, the European Central Bank (ECB) has also opened euro liquidity lines with some non-euro area central banks through swap and repo operations. Liquidity lines serve as a crucial "backstop," with surcharges on lending rates to ensure non-euro area banks prioritize borrowing from private markets before turning to the ECB as LOLR. The BoJ also has bilateral currency swap agreements with central banks like those of Australia, China, and Thailand, enabling yen-local currency exchanges to bolster regional financial stability. The People's Bank of China (PBoC) too has implemented renminbi (RMB) swap agreements, with the majority of these arrangements being made with central banks in emerging and developing nations.

The Trump administration's recent hostile policies, coupled with the increasing emphasis on central bank collaboration among other major nations, could weaken the dollar's position as the dominant global currency.

Deutsche Bank's George Saravelos echoed this concern, highlighting that fears about the reliability of the currency swap lines could "create the most significant impetus to global de-dollarisation since the creation of the post-World War global financial architecture." [3]

[3] *https://www.bnnbloomberg.ca/investing/2025/03/27/us-fed-backstop-fears-could-threaten-us-dollar-deutsche-bank-says/*

The pros and cons of RBI's massive build-up of forex reserves [1]

Given the ample forex reserves for precautionary purposes, it can be inferred that accumulation of reserves is mostly to ensure that the rupee remains depreciated to sustain exports.

A recent paper [2] by Ashish Saurabh and Nitin Madan, Department of External Investments and Operations, Reserve Bank of India (RBI), 'highlights the scope for looking beyond traditional ways to manage foreign exchange reserves in order to augment portfolio returns without undermining the predominant goals of safety and liquidity.'

The paper lists various options that can be considered by the RBI to increase yields on its forex reserves. These include increasing the duration of portfolio, investment in new product classes (including FX swaps, repos, and even equity index funds), active management of gold, and investment in new markets (including direct investment as well as in passive funds and ETFs). If risk-balanced higher yields are an objective of central banks, it is perhaps only a matter of time before they consider adding Bitcoin and other cryptocurrencies to their portfolio. After all, several large private financial institutions including hedge funds are seriously contemplating diversification into cryptocurrencies.

However, given that the objective of central banks is not profit, there

[1] *Moneycontrol.com, 27.10.2021*

[2] *https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/05AR_1910215ABA9C3AEDA7484BA4954E6EB8F173FD.PDF*

are broader questions that need to be addressed when it comes to forex reserve management strategies: why do central banks accumulate forex reserves, what are the costs of accumulating excessive reserves, is it necessary for a central bank to pursue higher returns on these reserves, and how could this pursuit undermine their larger goals of safety and liquidity?

An important benefit of large reserves rarely discussed is the possibility for a country to expand its fiscal space. Modern Money Theory (MMT) articulates that there exists a spectrum of monetary sovereignty. Large forex reserves do place a country in a better position along the spectrum, enabling the government to leverage its own sovereign currency for national development.

However, the more commonly accepted reason to accumulate forex reserves is to enable central banks to avert financial crisis, particularly one which arises from the balance of payments that could trigger a plunge in the foreign exchange price of the domestic currency. The Guidotti-Greenspan rule considers a short-term external debt to forex reserves ratio of one as adequate. With reserves currently at US$ 640 billion and total short-term external debt by residual maturity at some US$ 225 in 2019, the ratio for India is close to three. Next, an import cover of three months is considered adequate. India has a cover of about 12 months, going by imports in September 2021. Finally, the potential demand for foreign assets arising from domestic sources is monitored by considering the forex reserves to broad money supply (M2). The benchmark is set at 20% for countries with full capital account convertibility. Even with partial capital account convertibility, India is adequately covered with forex reserves.

Given the ample forex reserves for precautionary purposes, it can be inferred that accumulation of reserves is mostly to ensure that the rupee remains depreciated to sustain exports. If this is indeed the case, then it seems that any effort to augment portfolio returns on forex reserves as proposed by Saurabh and Madan will only mean greater inflows of foreign exchange and consequently more pressure on the rupee to appreciate, pulling the RBI into a vicious circle of accumulating even larger reserves to keep the rupee depreciated.

The benefit accruing to exports from a depreciated currency in serving national interests must be viewed as an end in itself. The pursuit of higher returns becomes self-defeating if it results in putting additional pressure on the rupee to appreciate. Put differently, the RBI's achievements must be judged from the realization of its primary objectives by utilizing its delegated powers, not from accumulation of financial assets.

Even from a narrower perspective of pursuing higher yields on assets, there are costs associated with such strategies. Purchase of foreign exchange by central banks in markets leads to an infusion of reserve money into the banking system, dragging down money market interest rates. To ensure that interest rates remain within the target band, open market bond sales to drain out excess liquidity may be needed. If the interest on bonds exceeds the yield on reserves, the central bank loses.

Low-yielding reserves could also be used to pare down higher-cost foreign debt. Although somewhat dated, Dani Rodrik, in 2006, estimated the spread to be as much as 1% of GDP for some countries. However, the study did not consider the benefits that may accrue in terms of lowering costs of borrowing on account of the safety perceived by lenders with higher levels of reserves held by central banks.

There is also a moral hazard issue that arises with large reserves. Agents perceive lower lending risks, thereby lowering rates and easing terms, which encourages greater external borrowing and risk-taking by domestic firms. Enhanced inflows of foreign exchange will consequently put pressure on the domestic currency to appreciate, once again drawing central banks into a vicious loop.

At an even broader level, it is important to look at the repercussions of excessive reserves accumulation, not by any single central banks but by many major central

banks, simultaneously. The neo-mercantilist policy of competitive devaluation of currencies not only distorts the optimal allocation of resources across markets but is ultimately a race to the bottom. It is for this reason that the Bank of International Settlements (BIS) has recommended that a strengthening of the domestic economy and financial institutions can deter the perceived necessity for central banks to accumulate large reserves. Moreover, efforts for cooperation among countries to provide some form of international insurance as, for instance, the opening of swap lines in times of emergencies may alleviate the need for large reserve accumulation. However, once again, the politics of such backstops cannot be ignored.

While short-term questions over augmenting returns of the RBI forex reserves may be pertinent, there are several broader questions that must be raised, not merely pertaining to reserves per se but even more generally on global structural imbalances spawned by the post-Bretton Woods international monetary system.

What does 'using' foreign exchange reserves for infrastructure spending mean? [1]

When government spends, even when funded by utilization of dollar reserves, it essentially has the same effect on prices as deficit spending.

On August 11, the Union Road Transport and Highways minister Nitin Gadkari [2] proposed the formulation of a policy that would enable the government to utilize the growing surplus of foreign exchange (forex) reserves held at the Reserve Bank of India (RBI) for infrastructure development in the country.

Before I attempt identifying the possible suggestions contained in the proposal, it is important to recognize what is meant by and what gives rise to 'surplus' reserves. The 'necessary' portion usually refers to the quantum of forex reserves required to cover imports for a certain period of time particularly during a crisis, plus the amount required by central banks to mitigate speculative attacks on their home currencies. The surplus portion implicitly refers to the amount of dollars (or forex) bought by central banks to keep domestic currencies depreciated vis-à-vis the dollar so that the export sector – which is often the engine of growth – remains unaffected. For instance, People's Bank of China presently holds huge forex reserves of more than US$ 3 trillion while the Bank of Japan holds more than US$ 1.3 trillion. While there is no objective metric to delineate the necessary and surplus portions, the US Treasury is concerned

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[1] *Moneycontrol.com, 18.08.2021*

[2] *https://www.news18.com/news/business/nitin-gadkari-pitches-for-using-rbis-rising-forex-reserves-for-infrastructure-development-4072466.html*

about these countries manipulating exchange rates by accumulating surplus or excessive reserves. In December 2020, India was added to the US Treasury's watchlist.

The problem for emerging markets is also that if dollar outflows were to rise sharply, as for instance, when interest rates are raised in the US, their central banks depend on forex reserves to prevent depreciation in their domestic currencies. What seems like a "surplus" then becomes 'necessary' to prevent a possible speculative attack on their currency. Therefore, from a strategic as well as economic perspective, reference to any portion of forex reserves as 'surplus' is problematic.

If a country were to decide that a certain portion of reserves is indeed "surplus", then the foremost question is why accumulate them to begin with? Obviously, the reason for this is that the central bank does not want the dollars in the market as this will raise the exchange rate of the domestic currency. Nonetheless, for sake of argument, let us assume that a portion of reserves is identified as 'surplus.' One way to interpret what is meant by utilizing forex reserves is for the central bank, say the RBI, to sell dollars in the market and transfer the rupee proceeds to the government, which then makes a budgetary allocation for infrastructure projects to be built by domestic companies. However, dollar sales results in the dollar depreciating or the rupee appreciating. This would defeat the purpose of accumulating dollars to keep the rupee depreciated for the benefit of exporters. But if the infrastructure projects give rise to imports, then this effect on rupee appreciation will be at least partially offset with the new demand for dollars. However, these imports are likely to increase (if at all) only over a longer period of time and not simultaneously with dollar sales by the RBI.

The impact of forex sales has complex repercussions on liquidity and monetary policy. When dollars are bought by the RBI in the forex market, it injects liquidity into the banking system, putting downward pressure on money market interest

rates, which may have to be sterilized. Also, the RBI cannot simply transfer the proceeds from sale of reserves directly to the government. It can only do so if the government issues bonds in exchange for the amount. Next, when the government spends the rupees on domestic companies, it again increases liquidity with commercial banks and drives down money market interest rates. This may then have to be sterilized with bond sales by the RBI to mop up excess liquidity and maintain interest rates within the targeted band.

Further, when government spends, even when funded by utilization of dollar reserves, it essentially has the same effect on prices as deficit spending. There is an immediate increase in aggregate demand while aggregate supply on account of new infrastructure will be positively impacted through productivity increases only over a longer period of time so that the economy may witness a spike in inflation rates in the shorter term. To manage their inflation target, the central bank would have to raise interest rates, which may negatively affect other private sector investment spending.

Gadkari's statement adds that the "RBI may also look into the feasibility of utilization of the surplus reserves for the creation of a sovereign wealth fund [SWF] to finance long-term infrastructural assets." A possible interpretation of this suggestion is creating something akin to Norway's Government Pension Fund Global (GPFG) wherein returns from investments are used to finance its domestic non-oil fiscal deficit. Paradoxically, when Norway faced a recession after the oil price crash of 2014, there was pressure on the krone (NOK) to appreciate, threatening non-oil exports. This was simply because dollars were sold for NOK to fund the non-oil fiscal deficit. A problem of an appreciating rupee while utilizing accumulated dollar reserves similarly remains even if an SWF can generate higher returns for the RBI. Interestingly, however, these higher returns could be considered as RBI profits and its transfer to the government will enable larger spending without increasing the fiscal deficit.

The remaining suggestions by Gadkari in the press report do not seem to be directly related to forex reserves held by the RBI. Concerns over the growing debt of the

National Highways Authority of India (NHAI) and its massive interest-servicing costs of Rs.39,000 crore in 2020-21 had prompted a parliamentary panel late last month to suggest that the NHAI securitize its existing assets, which could then be sold to foreign financing institutions like pension funds and SWFs. A sovereign guarantee for dollar repayments would enable the NHAI to lower its overseas borrowing costs.

Finally, given the difficulty of India's infrastructure companies inability to raise money from commercial banks, which are reeling under a large volume of accumulated non-performing assets, Gadkari calls for foreign direct investment (FDI) in infrastructure projects. This would, however, once again mean higher forex inflows and pressure for the rupee to appreciate. At the same time, if autonomous demand for dollars is adequate then there would be no need for RBI intervention in the forex market in the first place.

While it is tempting to consider surplus forex reserves as low hanging fruit that can be easily plucked to finance infrastructure spending it is important to appreciate the raison d'être for its existence. Moreover, any policy to utilize foreign exchange reserves must study its repercussions on exchange rates, liquidity and inflation, the latter essentially depending on how quickly aggregate supply responds to infrastructure spending and consequent increases in aggregate demand.

Why Russia should fear appreciation of the ruble against the dollar [1]

The appreciation of the ruble has resulted in a loss of oil revenues of around 27 percent, apart from the discounts that have to be offered to Chinese and Indian buyers.

An ominous headline from Reuters [2] on June 30, 2022, announced, 'Russian ruble rallies; Gazprom shares plummet after it skips dividend'. Contrary to what may seem obvious, it is the appreciation, not the depreciation, of the ruble that Russia is and must be wary of.

The ruble, if it were to continue on its present path of being the 'best performing currency' in 2022, may actually trigger a major economic crisis. This is becoming increasingly clear with action by the Central Bank of Russia to relax strict capital controls as well as norms requiring payment by 'unfriendly' countries to pay for its oil and gas in rubles. The problem, however, is for Russia to influence the US dollar ($)-ruble (RUB) rate through interventions in foreign exchange markets. The US sanctions imposed on Russia in late February 2022 prevents transactions by/with the Central Bank of Russia to purchase/sell dollars to control the ruble-dollar rate. At the same time, international oil prices being outside its direct control, makes Russia increasingly vulnerable to ruble-dollar appreciation.

Consider the situation with oil prices at about US dollars ($) 108/barrel and the RUB/$ rate at 51.50. This means that Russian oil companies receive RUB 5562/barrel of oil. If the rupee (INR)/$ rate is close to 79, then given that the maximum price that Indian importers will pay for Russian oil is RUB 5562, the maximum INR/RUB rate

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[1] *Moneycontrol.com, 7.07.2022*

[2] *https://www.reuters.com/markets/europe/russian-rouble-rises-gazprom-shares-plummet-no-dividends-move-2022-06-30/*

must be about INR 1.53/RUB. Any appreciation of the ruble above this will make oil cheaper for Indian buyers from international sources. Of course, oil is not the only commodity that Russia trades in – coal and other commodities could play some part in the rupee-ruble rate.

There is a further problem for Russian producers. If the rupee-ruble rate were INR 1.53/RUB, there is no real advantage for Indian buyers to procure Russian oil. It is therefore imperative that Russian producers offer an attractive discount on their oil so that Indian buyers will be willing to defy US sanctions to buy Russian oil. Reports say Russian oil producers are offering cheaper prices to attract Chinese and Indian buyers. In fact, the present rupee-ruble rate of 1.40 itself implies that Indian buyers are paying almost 10% less for Russian oil as compared to the international price. Further price discounts may be necessary – and there are reports that 30% discounts are actually being given – to induce buyers from India and China to source Russian oil. It is, therefore, obvious why Gazprom had to skip dividends with the rising ruble.

If the ruble were to appreciate against the dollar to, say, RUB 50, with no change in international oil prices, the amount received by the Russian producers will decline to a maximum of RUB 5400. Everything else constant, the rupee-ruble rate must also adjust to a maximum of INR 1.58/RUB. An appreciation of the ruble above this level will induce Indian buyers to switch to other international oil suppliers. The bottom line is that Russia's Gazprom cannot get more than RUB 5400 if the ruble appreciates to RUB 50/$.

It is interesting to note that the dollar-ruble and rupee-ruble rates have moved closely in tandem. Both currencies appreciated vis-à-vis the ruble by close to 75% between February 17 and March 7, 2022, and then depreciated by 60% since then.

If the RUB/$ exchange rate were at the pre-sanction rate of about RUB 71/$, with the price of oil at $108/barrel, Gazprom would have been receiving a revenue of RUB 7668/barrel. The appreciation of the ruble has therefore resulted in a loss of revenues of around 27% apart from the discounts that have to be offered to Chinese and Indian buyers. Meanwhile, with real wages rising in Russia - nominal wages increasing in excess of the already high inflation rates – would have put further pressure on Gazprom's profitability, especially as net receipts have actually fallen in spite of strong crude prices.

Other oil exporters do not face this predicament. For instance, the Saudi riyal (SAR)/$ rate pegged to the dollar at approximately 3.75 gives Saudi Arabia a steady revenue of SAR 375 per barrel from oil exports. Of course, the possibility for Saudi Arabia's central bank, SAMA, to intervene in preventing the riyal to appreciate is crucial for it to maintain its oil revenues.

The other fears that Russia has to contend with are falling oil and commodity prices that could arise if the US economy were to descend into a recession on account of the interest rate hikes deployed by the Fed. The possibility of both occurring, namely an appreciation of the ruble with falling oil prices could spell disaster for the Russian economy. However, oil prices since March 2022 have remained firm at about $ 108/barrel, with highs of about $ 120 and lows of about $ 95/barrel. The only silver lining for Russia in the present situation would be is oil prices rise further in the near term.

Can cryptocurrencies unseat modern money? [1]

The growing utilization of cryptocurrencies has led to fears that they may replace modern money as legal tender.

Modern state money is essentially a unit of account, fiat currency and legal tender. Examples of modern money would include, for example, the US, Canadian and the Australian dollar, the yen, the renminbi, the sterling pound and the Indian rupee. They are inconvertible into precious metals or foreign exchange at a fixed rate, prices of goods and services are generally expressed in these units, it is mandatory that all official books of accounts be maintained in these currency units only in their respective countries and finally as legal tender, all obligations due to/of the state must/will be settled in these units of accounts and the 'money thing' ordained by the state. Enforceable tax payments, fines and penalties are some of key obligations that the private sector must settle with the government.

There is another aspect of modern money which is important to understand: it is a financial liability, a promise to pay or an 'I owe you' (IOU). When paper currency was first issued in India it was a promise to pay by the issuing authority, the colonial government at that time, a specified physical amount of silver, i.e. approximately 11.4 grams and 96% purity. The circulation of the paper rupee began to grow when the government declared it as legal tender so that tax payments could be settled with the paper rupee or in other words, the promissory note of the government itself. Today, as we know, the promise to pay by the state (which includes the central bank) will no longer be settled with a piece of silver but merely a new promissory note.

Money – an IOU – can be created by anyone. For instance, obligations that arise in the purchase of goods can be settled with an individual's or a firm's promissory note. However, 'final' settlement of these obligations will entail use of the financial liability of the state, which in India is the rupee note. In today's world, however, most obligations that arise in trade are settled using the financial liabilities of commercial banks called deposit accounts, i.e. current or savings accounts. Interbank transactions are then settled using the financial liabilities of the central bank that are commonly called reserves or reserve accounts. Commercial bank money has come to be widely accepted and used as the state agrees to settle obligations due to it with deposit accounts and not just its own currency. The essence of modern money is therefore best understood as financial liabilities rather than assets, in particular, physical assets like gold or silver that are no one's liabilities. This also has implications for traceability: given that deposit accounts appear in the ledger or books of accounts of independent entities, i.e. the bank and an individual or firm, it is difficult to hide transactions that utilize deposit accounts as a means of settlement. On the other hand, transactions utilizing undeclared physical assets as a means of settlement can remain completely hidden from view of authorities.

Before delving into the essence of cryptocurrency, further elaboration on the use of physical assets for trade and exchange is necessary. Can a painting be sold for a tola of gold? Yes, there is nothing illegal about this transaction – essentially barter – per se. The problem is that in order to make it 'legal', books of accounts must be maintained and any tax obligations due to the government that arise from profits in the sale of the painting must be settled, not in tola of gold, but in rupees only, which could be in the form of currency notes or commercial bank deposit accounts. Further problems would arise in valuing the tola of gold in rupees. While its price today may be Rs 50,000 it could well change to Rs 60,000 or Rs 40,000 at the time of filing returns. It would therefore make sense to sell the painting for rupees, settle tax obligations and then store the desired balance as gold.

A physical asset like the old silver rupee did serve as a unit of account wherein prices of goods and services were expressed in terms of a physical quantity and purity (a rupee) of a metal. This is no longer so. The price of silver is today expressed in terms of an abstract unit of account, like the rupee or dollar, and its price just as all other commodities is determined by the forces of demand and supply.

The essence of cryptocurrency is more akin to physical assets like gold or silver than

[1] *Moneycontrol.com, 26.05.2021*

modern money. Since it has no physical form – physical Bitcoins are more like collectibles – they are sometimes referred to as 'digital assets' but are nonetheless no one's liabilities. Buying a painting in Bitcoin faces the same issues if it were bought for a tola of gold. The question, however, is where do cryptocurrencies derive their value from? The answer is in its use as a means of remittances without intermediaries. Suppose a payment has to be made from A to B bypassing intermediaries all together. One way would be through the physical transportation of cash. Another could be by the conversion of rupees to gold or silver and its subsequent transportation to the location of B, which the latter can sell for cash. A more efficient way is through cryptocurrencies like Bitcoin.

Consider the case of a bank as an intermediary, with deposit accounts of both, A and B. To make a transfer from A to B, the bank would first verify whether A has an adequate balance in her account and then debit it while crediting that of B. Not only could this be expensive but also lacks confidentiality. Now imagine a situation where the bank is replaced by a set of computer servers and complex programs – blockchain technology – that verify whether A owns adequate Bitcoins and then transfers the necessary amount to B. No single entity exists with full access to the information of the transaction, rather it lies scattered among 'miners' across the world in the form of encrypted code. To commence the process of transfer, A would have to purchase Bitcoins in exchange for dollars or other fiat currencies. The price of the Bitcoin is expressed in terms of a fiat currency just like gold or silver and is determined by market forces. However, once purchased, she leaves no trace of her subsequent transactions. Compensation to miners for operating the blockchain does not come from A or B but from issue of new Bitcoins to them.

By keeping the supply limited (Bitcoin is limited to 21 million), the demand for transaction secrecy and/or lower costs of remittance, attraction of speculation in cryptocurrencies has ensured an overall increase in value although it has also resulted in volatile prices of cryptocurrency. This brings us to another crucial difference between modern money and cryptocurrency: while the former as a financial liability is created through government spending or bank expansion of credit it can also be destroyed by taxes and loan paybacks respectively. This possible expansion or contraction in supply enables greater stability in its value. On the other hand, cryptocurrencies as digital assets cannot be destroyed once created, which then requires their supply to be capped to support the market price.

While it is presently inconceivable that cryptocurrencies could replace modern money as long as the latter remains legal tender, there are concerns that the growing utilization of the former for trade and exchange may destabilize the monetary system that now exists. People who believe in unfettered free markets and a minimalist state like the Austrian School see this as a positive development but others fear that the state's ability to leverage its monetary sovereignty for the common good of society may be undermined if the use of cryptocurrencies grows unchecked.

El Salvador's Bitcoin experiment is not as disruptive as it may seem at first sight [1]

The crucial question is the implication of the simultaneous circulation of two 'assets' – the dollar and Bitcoin – as a medium of exchange and as legal tender. Monetary history is actually replete with such situations.

When President Nayib Bukele of El Salvador announced that Bitcoin would be accepted as legal tender for settlement of tax obligations owed to the State, it promptly stirred intense reactions across the world with some announcing that the next frontier for cryptocurrencies would be emerging markets while others dismissed it as a stupid decision.

As confusion continues over El Salvador's move and the future of national currencies, it is useful to dissect the issue using the fundamental tenets of 'modern money'.

An economically sovereign country with its own modern money defines its unit of account and issues a fiat currency – its own promissory notes or financial liabilities – that is legal tender. These financial liabilities are then the only medium with which tax and all other obligations owed to the state by the private sector can be settled. An extra word of caution over the term 'fiat' currencies is necessary. The state can promise convertibility of fiat currencies into other currencies as with full capital account convertibility. This promise, however, must not be at a fixed rate but only at the market rate for the currency to qualify as modern money. When obligations to the state are settled, the financial liabilities or modern money created by it are destroyed. In modern economies, bank deposits – the financial liabilities of commercial banks – also serve, by design, as legal tender.

[1] *Moneycontrol.com, 25.06.2021*

While fiscal policy controls the quantum of money created by the state, monetary policy seeks to influence the demand for credit and consequently, creation of bank money or deposit accounts by commercial banks. Sharp fluctuations in the supply of money and its value or the inflation rate can be therefore be controlled by the state.

El Salvador does not issue its own modern money. It is a fully dollarized economy. The US dollar acts as the unit of account, medium of exchange as well as legal tender. To obtain dollars, El Salvador must either sell goods and services in international markets or issue liabilities denominated in dollars. When there is an excess inflow of dollars, the country could face inflationary pressures. In such a situation, the government could raise taxes, collect dollars and accumulate them as reserves. On the other hand, if there is a shortage of dollars, it can make them available from its dollar reserves or, if insufficient, seek loans as, for instance, the present bailout package of more than a billion dollars that El Salvador is currently negotiating with the International Monetary Fund (IMF). Without this option, to earn dollars, the country must take recourse to severe 'internal devaluation' wherein export competitiveness is forced upon the country through a reduction in labour costs.

However, the crux of full dollarization is that the money in circulation (the dollar) is not the financial liability of the El Salvadorian state. It is instead a financial asset to both the government and private sector but no one's liability within the country, making it more akin to the use of physical assets as money, typically gold or silver, which are no one's liabilities. A dollarized or precious metal-based monetary regime is, therefore, starkly different from modern money of an economically sovereign country. Bitcoins, much like precious metals, are digital assets. Importantly, to reiterate, they are no one's liabilities.

Two assets

The crucial question is the implication of the simultaneous circulation of two 'assets' – the dollar and Bitcoin – as a medium of exchange and as legal tender. Monetary history is actually replete with such situations.

As long as a country held one metal (say, gold) as the unit of account and let the price of the other (say, silver) float according to its market rate, the two metals circulated smoothly as medium of exchange. If, however, the state tried to fix the rate or

ratio of exchange between the two metals – bimetallism – it failed miserably. Any small deviation of the market price from the fixed ratio led to the metal which was overvalued as currency (over its market rate) simply driving out from circulation the metal undervalued as currency. This is known as Gresham's Law.

A piece of trivia: Sir Isaac Newton, as Master of the Royal Mint in 1717, undervalued the silver shilling as currency and drove it out of circulation, which eventually led to England moving on to a gold standard.

To illustrate this phenomenon, assume that El Salvador declares the dollar as the unit of account but fixes the ratio between the dollar and Bitcoin at 1 Bitcoin to $36,000. However, a week later the market rate is 1 Bitcoin to $40,000. Will an individual who has an obligation to the El Salvadorian government of $36,000 use dollars or Bitcoin to settle the debt? Obviously, dollars because she could fetch $40,000 in the market with a single Bitcoin, settle her obligations of $36,000 and still have $4,000 with her. Only dollars will remain in circulation as currency while Bitcoins are hoarded. It is for this reason that El Salvador has chosen the dollar as the unit of account, made both, the dollar and Bitcoin as legal tender but allowed the dollar-Bitcoin ratio be determined at the market rate.

What if El Salvador were to make Bitcoin the unit of account, which is tantamount to phasing out the dollar? To understand the consequences of such a move, suppose the dollar-Bitcoin rate were 1 Bitcoin to $40,000. Further, El Salvador's exports (clothing) are priced at 0.001 Bitcoin per shirt ($40) while its imports are priced at $40,000 (1 Bitcoin) for a luxury car. If the Bitcoin-dollar rate were to drastically change to 1 Bitcoin to $80,000 then with the 1000 shirts the El Salvadorian exporter could now import two cars. As in the case of an appreciation of domestic currency, El Salvador's exports become costly while its imports become cheap. If El Salvador as a small country cannot influence the dollar-Bitcoin rate or the dollar price of the car, it will undergo a phase of internal devaluation until the unit price of shirts fall to 0.0005 Bitcoin ($20). A depreciation of Bitcoin, on the other hand, would cause a spike in El Salvador's price level as exports thrive but imports contract. Although the numerical values are logical as a theoretical exercise, it nonetheless remains more than likely that, in general, fluctuations in international Bitcoin prices will result in wide oscillations of El Salvador's Bitcoin-denominated domestic prices, and ultimately have disastrous effects on its domestic economy.

El Salvador introducing Bitcoin as legal tender with the dollar-Bitcoin exchange ratio at the market rate while simultaneously maintaining the dollar as the unit of account is not as disruptive as it may seem at first sight. Instead, it is the transition to Bitcoin as the unit of account that poses a bigger challenge, but for now El Salvador has assured the IMF that it has no plans to replace the dollar with Bitcoin.

Will cryptocurrencies replace gold as an asset? [1]

Essentially, bitcoin and other cryptocurrencies are no different from gold, apart from the fact that central banks are yet to hold them in the reserves.

As inflation raises its head across the world, there is growing debate as to whether cryptocurrencies could be a better hedge against it than gold. When people accumulate wealth, they seek a wide portfolio of assets to park their wealth in. Typically, this will include both financial and physical assets with a range of risk-return profiles. Among financial assets, there is no safer one than government securities denominated in the sovereign currency of the country, but their risk-free character is counterbalanced by low returns, sometimes barely enough to give the holder a real return after adjusting for inflation. Individuals and businesses therefore seek other financial assets – for instance, corporate bonds and equity shares – that yield adequate returns over time even if there are risks from asset price volatility and default.

Another asset class that agents accumulate are physical assets comprising of mainly real estate and precious metals, the latter primarily being gold and to a lesser extent, silver. Given the hassles in dealing with land and property and their poor liquidity, gold is an important physical asset that people continue to trust as a safe mode of holding wealth. The question is: why? Physical assets like gold are no one's liabilities and are therefore free from counterparty risks. It is also highly liquid and while there has been a great amount of volatility in its price, it has appreciated over a longer period of time, thereby providing a hedge against inflation.

Nonetheless, gold is no longer money. So, where does it derive its intrinsic value from? Is it only because agents believe that others demand it too and a market for it will always exist? While this may partly be the answer, there is another reason that gives people the confidence to accumulate gold, perhaps unknowingly. Massive quantities are still held by central banks across the world.

Out of the total quantity of approximately 200,000 tons of gold that has ever been mined, some 30,000 tons is held by central banks across the world. Among the largest holders of gold reserves are the US Federal Reserve (8,000 tons), followed by the most advanced countries in Europe (each holding between 3500 and 2000 tons), Russia, China, Japan, and India (700 tons). Interestingly, many central banks continue to add gold as an asset to their reserves. Out of the total production of 3200 tons in 2019, central banks alone purchased some 650 tons, although there was a sharp dip in purchases in 2020.

But why do central banks hold gold when they issue fiat money that is no longer convertible into precious metals? The only reason must be that the lessons of history cannot be erased from memory: if there ever is a global crisis that completely wrecks monetary systems worldwide, the only recourse may be for governments to revert back to some form of a gold-based monetary system, at least in the sphere of international exchanges of goods and services. In other words, gold could stage a comeback as the only generally acceptable international medium of exchange.

Will central banks diversify their reserves portfolio to include cryptocurrencies like Bitcoin or Ethereum? Before addressing this question, it is important to distinguish between central bank digital currencies (CBDCs) and Bitcoin. While the former is fiat money and the financial liabilities of a central bank, Bitcoin and other similar cryptocurrencies are akin to gold: they are digital assets that are no one's liabilities and therefore do not entail counterparty risks. Importantly, they operate with "no central authority or banks … nobody owns or controls Bitcoin." These are exactly the features that central banks might seek in an international medium of exchange during a global crisis, especially one in which there is intense hostility among the largest countries. Governments today are, however, apprehensive about and oppose cryptocurrencies. Nonetheless, there is increasing acceptability of Bitcoin (and other similar cryptocurrencies) among private sector agents including individuals, businesses, banks and financial institutions as not only a convenient, cheap and reliable instrument to settle payments but also as an asset to hedge against inflation. Even the largest global wealth managers like Blackrock, J.P. Morgan and Goldman Sachs believe that Bitcoin

[1] *Moneycontrol.com, 25.10.2021*

is emerging as an asset class that can no longer be ignored. The market cap of above-the-ground gold stands at US$ 11 trillion while Bitcoin alone stands at US$ 1 trillion and cryptocurrencies in all amount to US$ 2.7 trillion. It should be kept in mind that gold has been in use for thousands of years whereas cryptocurrencies are just about a decade and a half old. And like gold (but unlike fiat money) they derive their value from the fact that there will always be a demand for it. While this may sound like the perfect Ponzi scheme, it is essentially no different with gold.

If the recent trend in Bitcoin and other cryptocurrency prices continue, it may only be a matter of time before some central banks are tempted to hold and exchange them for (a larger quantum of) dollars whenever necessary in order to counter volatility in their domestic currency's exchange rates. However, until major central banks continue to hold gold and do not accumulate digital assets, gold will continue to remain a dependable asset even if Bitcoin and other cryptos bite into its share among private sector agents.

Why is everyone chasing gold? [1]

The demand for gold may turn into a run on gold as the paper gold market is many times the physical gold stock.

On February 18, 2025, Elon Musk's provocative comment on X (formerly known as Twitter) about the possibility of gold being "stolen" from Fort Knox has sent shockwaves around the globe. Musk's remark was in response to Senator Mike Lee's announcement that Fort Knox had denied his request to inspect their gold reserves without giving a specific reason, simply stating, "You can't come… because, you can't!"

In the wake of Musk's comment, gold prices have skyrocketed, almost doubling from $52 per gram in October 2022 to a staggering $94 currently, with the surge becoming even more pronounced since the start of this year. A similar phenomenon occurred during the Great Recession of 2008 when gold prices more than doubled from $23 in October 2008 to $57 by September 2012. However, the subsequent three years saw gold prices plummet to just $33 by November 2015. This raises the question: Are we on the brink of a similar decline, or is this time fundamentally different?

The dramatic rise in gold prices is commonly attributed to several factors such as global economic uncertainty, particularly involving the US, arising from geopolitical or economic tensions. Additionally, central banks' purchase of gold due to doubts over the US dollar's stability as a reliable reserve currency, as well as inflation and inflation expectations, play a significant role. The Russia-Ukraine war, which began in February 2022, and the subsequent freezing of Russia's dollar assets triggered an initial spike in gold prices. However, prices saw a steep 20 percent drop between March and October 2022.

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[1] *Moneycontrol.com, 25.02.2025*

Many experts and commentators in the market attribute the sudden fall in gold prices in 2022 to manipulation, a historically recurring theme, especially in the paper gold market. Although gold holds no intrinsic function in the modern fiat monetary system, it continues to be viewed as a potential global alternative to fiat currencies, particularly during periods of extreme economic and geopolitical uncertainty. This perception is reinforced by the fact that many central banks persist in holding and accumulating gold reserves, even though their currencies are no longer backed by gold (or silver).

To mitigate the relentless surge in gold prices, often driven by a self-fulfilling prophecy, interventions are frequently undertaken. These increasing gold prices can lead to a preference for holding gold over financial assets, including government and private-sector securities, and can spell massive losses for significant participants in the paper gold market. Interventions aim to dampen gold prices by increasing the supply of paper gold through methods such as hypothecation and short-selling. This can be executed by financial institutions (e.g., J.P. Morgan Chase, Deutsche Bank), bullion banks (e.g., Mocatta & Goldsmid, Barclays, Goldman Sachs), as well as central banks (e.g., the Federal Reserve, the Bank of England, the Bank of Japan).

In the paper gold market—encompassing exchange traded funds, futures and option contracts, gold certificates, and more—actual delivery of gold is rarely executed by most participants. This market has expanded so significantly that some commentators estimate a ratio of anywhere between 100x to 500x paper gold to physical gold. How does this phenomenon occur? Imagine starting with one gold coin that you lend to someone, who then lends it to another, and so forth. If ten people lend the same coin, each of them is "owed" the gold coin, though the actual physical gold coin is held by only one person. Should that person lose the coin, a problem arises when each lender demands the physical gold coin. This issue can be avoided if lenders accept a promissory note or a financial liability like currency notes or cheques. However, if all lenders insist on physical gold, the result is nothing short of a crisis.

This process in the paper gold market is known as hypothecation. A borrower pledges gold as collateral to secure a loan from a lender while retaining ownership of the gold. The lender, in turn, has the right to seize the gold if the borrower defaults. The lender may then re-hypothecate the same gold as collateral to secure its own loans or financial obligations. Consequently, the same gold is pledged multiple times to different parties. If the original borrower defaults, the lender will seize the gold. However, if the lender also defaults, multiple parties will have legal claims on the same asset, creating a complex web of claims and potential crises.

The paper gold market enables traders and speculators to capitalize on price movements in the underlying asset, gold, without taking delivery of the physical metal. To prevent a potential crisis stemming from claims to take delivery of physical gold, participants in the paper gold market are generally dissuaded from doing so at the expiry of futures or option contracts. This disincentive comes in the form of fees, insurance, transport, and warehousing costs, as well as minimum quantum and lot sizes.

During typical market conditions, most lenders may not demand physical gold. However, if there's even a suspicion that the last borrower has lost the gold or defaults, lenders may be tempted to request delivery. This scenario appeared to be unfolding in early February, when reports indicated a "humongous number of contracts are opting for physical delivery" on the US Commodity Exchange (COMEX). By February 5, 2025, eligible delivery requests amounted to 28 percent of the registered gold stocks available for delivery, prompting large shipments of nearly 400 tons of gold from London to New York between Trump's victory and early February. The spot delivery of physical gold on the Shanghai Gold Exchange (SGE) has also significantly increased demand, creating arbitrage opportunities for traders who claim physical gold in COMEX on futures contracts and sell it in Shanghai at a premium.

One international broker noted that "96 percent of the [paper] gold traded daily on the London and New York markets has no physical reality... [it] can never be delivered. Once the 4 percent of real physical gold has been delivered, what will happen?" With Elon Musk raising doubts about the gold stock available in Fort Knox, a run on gold could trigger an avalanche of claims, driving gold prices sky-high.

This raises the crucial question: what effects will the gold market crisis have on the financial and monetary system?

Utah Pays Vendors in Gold: Toward a Gold Standard? [1]

Amidst times of uncertainty—or perhaps chaos—marked by extreme volatility in currency values, a heated debate unfolds: could precious metals like gold and silver serve as more stable alternatives to fiat currencies? The Heritage Foundation's Project 2025, seemingly embraced by the Trump administration as a policy framework, unequivocally advocates for a return to the gold standard. In this context, Utah's recent decision to permit vendors to accept payments in gold (and silver) might appear to signal the beginning of such a shift. However, is that truly the case? Examining Utah's move unveils key differences between fiat money and commodity money, subtly and ironically questioning the push for reinstating the gold standard.

Utah first recognized gold and silver as legal tender in 2011, aligning with provisions in the U.S. Constitution that allow such measures. Several other states, including Wyoming, Arizona, and Texas, have enacted similar laws. A recent bill in Utah takes this further by authorizing the state to pay vendors in gold and silver.

At the heart of these legal changes is the classification of gold and silver as "legal tender," which eliminates sales and capital gains taxes when these metals are used as money or mediums of exchange. Additionally, the legislation outlines plans to establish an electronic payment system capable of facilitating and fractionating transactions backed by gold and silver in real-time. The system will also ensure that the metals are securely stored and properly audited.

To illustrate, consider a payment scenario in which the state government owes a vendor $3,000, and the vendor opts to receive payment in gold. Based on the prevailing market rate, an equivalent amount of gold would be credited to the vendor's account. If gold is priced at $3,000 per ounce, one ounce of gold would be credited. Alternatively, if the price of gold is $2,000 per ounce, 1.5 ounces would be credited instead. This approach can also extend to transactions within the private sector. Given that these transactions are tax-free, conducted on legal and secure platforms, and reference accurate gold pricing from exchanges such as COMEX and LBMA, the legislation offers both individuals and businesses enhanced flexibility in selecting their preferred method of payment.

These legislations, in essence, create a streamlined and seamless two-step process. Initially, payments are made in dollars, which are immediately and securely converted into gold or silver at the current market rates, exempt from any taxes. Once credited, the metals can seamlessly facilitate future transactions. If needed, they can be exchanged back into dollars, based on the prevailing market price, ensuring both flexibility and fluidity in the system. It is quite conceivable that the legislation may be extended to physical or digital assets like cryptocurrencies like Bitcoin, especially after the Trump administration's decision to create "crypto strategic reserves."

However, key differences remain between commodities like gold or cryptocurrencies as mediums of exchange and fiat currencies like the dollar or the rupee. The definition of "legal tender" in these legislations is rather limited. For instance, gold is not accepted by the Utah state government for settling obligations owed to it; even payments to vendors are made in dollars and then converted into gold. Strictly speaking, from an economic standpoint, legal tender signifies that the state must accept a specific form of money to settle tax obligations. In the case of the United States, dollars – financial liabilities of the state – serve as the sole legal tender and are uniquely accepted for paying taxes to the government.

Furthermore, in Utah, the dollar continues to serve as the unit of account, with prices typically expressed in dollars, as is customary across the United States. Taxes owed to the government are calculated in dollars and must be paid exclusively in this currency. While it is theoretically possible for gold to be established as legal tender that is acceptable to settle tax obligations, this would necessitate computing taxes in dollar terms—since the dollar remains the standard unit of account—and subsequently converting the amount into gold at the current market price, with the gold then deposited into the government's vaults. However, such a system would introduce significant uncertainty for government finances in dollar terms due to the inherent

[1] *Moneycontrol.com, 30.04.2025*

fluctuations in gold prices. This is a key reason why Utah refrains from accepting gold for tax payments or other obligations.

Although Utah's current legislation might appear to signal a move toward the gold standard, it is fundamentally different. Under a gold standard, the dollar would be convertible into gold at a fixed rate. Such a system would result in prices of goods and services fluctuating dramatically with changes in the price of gold. For example, if a product is priced at $2,000 and the dollar is pegged to a fixed rate of $2,000 per ounce of gold, the product would cost $1. However, if the price of gold rises to $3,000 per ounce while the dollar remains fixed at $2,000 per ounce, the product's price would drop to $0.667. This continuous adjustment to prices based on gold value would create significant and unpredictable volatility in the cost of goods and services.

Historically, gold and silver standards were relatively effective until the late 19th century, largely due to "international bimetallism." The distribution of gold and silver standards among major nations, though not by design, played a significant role in stabilizing the relative price of the two metals. However, the collapse of international bimetallism, marked by many major economies abandoning the silver standard by the late 1800s, resulted in substantial economic and political upheaval under the gold standard, possibly contributing to the conditions that led to World War I.

Fiat currencies are often criticized for their vulnerability to inflation-induced depreciation, yet a return to the gold standard could bring about even greater instability and economic turbulence.

Digital Rupee: Will people still deposit money in commercial banks? [1]

While the consequences of CBDCs on cryptocurrencies like Bitcoin and Ethereum are attracting widespread attention, it is the possible repercussions of CBDCs on the commercial banking system that could be far more disruptive.

FM Nirmala Sitharaman in her Budget speech on February 1 announced the launch of a digital rupee in 2022-23. The digital rupee — more generally referred to as Central Bank Digital Currency (CBDC) — will be issued by the Reserve Bank of India (RBI).

China was the first country to launch its own CBDC called the Digital Currency Electronic Payment (DCEP). The soft launch of the digital yuan, eCNY, took place in August 2020. By the end of October 2021, some 140 million people had opened eCNY accounts at the People's Bank of China and transactions amounting to $ 5.4 billion had been settled using digital currency.

More recently, in October 2021, the Central Bank of Nigeria launched the eNAIRA, complemented by an official mobile wallet app. While many other countries are expected to announce their CBDCs soon, India is all set for its own launch this financial year.

In any modern economy, obligations that arise in market exchanges between entities are settled using either the financial liabilities of the state (currency or cash issued by a country's central bank) and/or the financial liabilities of commercial banks (deposit accounts – current or savings). The general acceptability of cash and deposit accounts in settlement of claims arises from their being legal tender or in other words, financial liabilities that are accepted (and nothing else) as final settlement owed to the state

[1] *Moneycontrol.com, 22.02.2022*

including taxes, fines and penalties.

Settlements between private agents and to the state must be affected across space, quickly, at minimal costs and for transactions ranging from very small to very large values. This has become possible with digital payments like UPI, IMPS, NEFT and RTGS wherein deposits at commercial banks can be transferred between economic agents instantaneously. However, interbank settlements using reserve accounts at (that are financial liabilities of) the central bank are still required.

CBDCs could potentially disrupt the commercial banking system as we know it by making it possible for settlements to take place using digital currency (cash in an electronic form), which are the financial liabilities of the state, i.e., the central bank itself.

The impact on commercial banks as the main intermediaries in payments settlement depends on the proposed design of digital rupee system. Will individuals and businesses be allowed to open accounts directly at the RBI?

Presently, the monetary system allows only commercial banks but not individuals and businesses to have accounts at the RBI. Deposits at commercial banks are not risk-free. A commercial bank's net worth can turn negative with increasing non-performing assets (NPAs), or in other words, a bank can go bankrupt. Deposit insurance provides cover only up to Rs. 5 lakhs. In contrast, a deposit account at the central bank would be risk-free.

Could the opportunity to open accounts at the RBI then potentially cause bank runs when people move their deposits from commercial banks to their CBDC-accounts at the RBI?

This will depend on whether the RBI enforces a cap on the amount that can be held in or other restrictions on CBDC accounts.

There are strong advocates of CBDCs who argue that commercial banks and associated card companies extract large rents given that private agents are almost entirely dependent on them at present for settlements. Payment settlement using CBDCs also raises issues related to data privacy and concerns over the state monitoring transactions

of its citizens. Once again, proponents of CBDCs argue that even currently, surveillance is possible: state agencies can access data from banks upon request. At the same time, it is important to realize that CBDCs could actually ensure higher standards of data protection given that information is currently being exploited for profits by private players.

Nonetheless, there are calls by these proponents for some form of anonymous CBDCs, at least for small value transactions that would replicate the anonymity afforded by physical cash.

While the consequences of CBDCs on cryptocurrencies like Bitcoin and Ethereum is attracting widespread attention, it is the possible repercussions of CBDCs on the commercial banking system that could be far more disruptive.

Moreover, as we discuss in part two of this article, CBDCs could not only unsettle the deposit-taking of commercial banks but also dissipate their role in credit-creation.

What seems like the introduction of a simple service by the central bank may well transform the deposit and payments settlement system and the role of commercial banks as we know it.

In response to a query on this issue, Mark Carney, former Governor of the Bank of England, said, *"Banks are a means to an end, not ends in themselves, and they will have to adapt to a much more competitive environment."*

Digital Rupee: Will commercial banks still be needed for credit creation? [1]

With the digital rupee, the RBI would be able to the increase the effectiveness of monetary policy by directly changing interest rates on deposits and/or lending.

The naïve articulation of commercial banks as intermediaries that lend deposits has long been dispelled with. Instead, banks must be understood as creators of credit money. A deposit (money) is created when a bank gives a loan. In other words, loans create deposits. However, a bank must have positive balances in its reserve account at the central bank for interbank settlements. Theoretically speaking, central banks will always provide commercial banks with reserves. It is the price at which these reserves are provided, the repo rate being the benchmark, that central banks control. To further ensure prudential lending norms by commercial banks, additional requirements on capital adequacy and reserve balances are imposed on them by central banks.

The digital rupee, a central bank digital currency (CBDC), would allow individuals and perhaps businesses too to hold CBDC-accounts at the RBI. If so, as discussed in our earlier article, private agents may prefer to hold risk-free deposit accounts at the central bank rather than a deposit account at a commercial bank which cannot be absolutely risk-free. How could this affect the commercial bank's role in credit money creation?

Although commercial banks may still be allowed to create credit, without corresponding deposits they would have to rely predominantly on capital in order to have positive reserve balances at the central bank, which are necessary for interbank settlements or settlements between them and the central bank. CBDCs therefore have the potential to reduce commercial banks from creators of credit-money to essentially financial intermediaries that lend their own capital. Their ability to leverage capital would diminish drastically.

It must be understood that commercial banks are strictly regulated within the present monetary system. The power to create credit-money has been devolved to them so that the process is decentralized. Commercial banks can be 'closer' to borrowers, obtaining and accumulating knowledge on the borrower's risk profile. Modern banking since the 19th century has essentially relied on commercial banks to provide credit-money to the economy. Over decades, however, commercial banking itself has become more centralized given the benefits that accrue from economies of scale in larger operations. For instance, in the United States, the assets of five largest banks as a share of total commercial banking assets has increased from less than 30 percent to more than 45 percent in the last two decades. Even in Germany, which has one of the most decentralised banking systems in the world, has seen a gradual in concentration ratios.

As the major creators of money in an economy — in the UK, for instance, commercial bank money (deposits) account for almost 97 percent of M1 — commercial banks effectively control the quantum of credit creation as well as who gets it. To put it tersely, commercial banks significantly influence if not control the nature of growth and development of an economy. Greater concentration further consigns this power in the hands of just a few banks and their leaders. At the same time, concentration at the extreme would mean just one bank — a monopoly — which could essentially be the central bank itself.

A centralized system could mean an impersonalized credit evaluation system. This may well be possible given the growth of fintech wherein risk-profiling of borrowers is available cost-effectively, on a real-time basis. Moreover, if settlements are carried out with digital rupees, the RBI would have granular data on customer spending habits. While this may raise concerns over privacy, the advantage in terms of financial inclusion and access to formal credit by presently underserviced sectors and entities also becomes feasible.

Monetary policy through the setting of interest rates (benchmark repo rate) by the RBI essentially influences the price of credit available from commercial banks. However, the transmission of interest rates to final borrowers and depositors is weak given that commercial banks are driven by profitability rather than the overall condition of the economy. With the digital rupee, the RBI would be able to the increase the effectiveness

[1] *Moneycontrol.com, 22.02.2022*

of monetary policy by directly changing interest rates on deposits and/or lending.

Moreover, if the digital rupee also hastens the transition to a cashless economy, it will give the RBI an additional degree of freedom in implementing negative interest rate policy (NIRP) if and when required.

While it is necessary to wait and see the design and scope of the digital rupee, it is imperative to ponder over the remarks of Mark Carney, former Governor of the Bank of England:

"There will be a change, measured over decades. It is very hard to predict. That which is unsustainable tends to go on for longer than you think and then happen more quickly than you expect, to paraphrase Rudi Dornbusch, but these structural flaws, in the end, in the system will ultimately result in a change."

CBDCs: The fate of commercial banking rests with the State [1]

The RBI's concept note makes it clear that CBDCs can disrupt commercial banking and the choice of CBDC-type will determine the future of commercial banks, their role and even their existence.

In two articles written earlier this year, I had raised concerns over the impact of central bank digital currencies (CBDCs) on commercial banking. Interestingly and pertinently, this aspect, largely overlooked by economists and commentators, has been extensively raised by the Reserve Bank of India (RBI) in a concept note released on October 7, 2022.

The concept note has unequivocally acknowledged that CBDCs like the e-Rupee (e₹), in particular, retail-remunerated (interest bearing) CBDCs, which essentially allow opening of deposit accounts by the non-bank private sector (NBPS) directly with the RBI, can potentially 'lead to a massive disintermediation in the financial system resulting from loss of deposits by commercial banks.'

Given the fact that any deposit held by the NBPS at the RBI is risk-free while those at a commercial bank are insured only up to Rs.5 lakhs, there would be a substantial outflow of deposits from commercial banks to the RBI. Large volumes of money held in current accounts at commercial banks are likely to move to the RBI even if the deposits held at the RBI are non-remunerative. The RBI, therefore, has even raised a concern over possible bank-runs.

In spite of the risks involved in holding deposit accounts in a commercial bank people do so presently because first, they are legal tender, i.e., they can be used to settle

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[1] *Moneycontrol.com, 11.10.2022*

obligations owed to the state by the NBPS and second, the NBPS cannot open accounts at the RBI. With CBDC deposits, these reasons to hold deposits at commercial banks become redundant. Consequently, deposits at commercial banks that are widely used as money (M1) can be replaced by deposits held at the RBI.

What then will be the implications of CBDCs on commercial banks? Without deposits, commercial banks will be drained of a major source of reserve money or balances in their account held at the central bank, commonly referred to as liquidity. And without adequate financial liabilities of the RBI to settle inter-bank transactions, commercial banks will have to source liquidity from the RBI or borrow/loan money from the NBPS. The latter — market funding — could result in the payment of substantially higher rates by commercial banks as opposed to present deposit rates thereby increasing the cost of bank credit as well as its availability, the latter constrained by how much funds a commercial bank can raise in the market. In effect, banks would essentially be reduced to the status of non-banking financial companies (NBFCs). This may have an adverse effect on credit creation by commercial banks and consequently on economic growth.

These impacts have been discussed in the RBI's concept note. The potential disruptions to commercial banking will, however, depend on the final design of the e₹. Retail CBDCs (CBDC-R) that are non-remunerated with further caps on transaction amounts can inhibit the likely disruption to commercial banking. The RBI is therefore considering the possibility of introducing CBDCs only at the wholesale level — CBDC-W — as, for instance, in the case of reserve money transactions between commercial banks and the RBI.

Another alternative articulated by the RBI to prevent a major disruption in commercial banking is to introduce e₹ as 'tokens' wherein the bearer of a token is considered its owner. The transactions between agents are not recorded by the RBI and responsibility to verify the authenticity of the token rests with the receiver. This is closer to replacement of physical cash or currency notes by e₹. At the same time, CBDCs as deposits can be restricted to the wholesale level.

While the deposit-taking role of the commercial banking system has been elaborately deliberated upon in the concept note, the RBI has not delved into an essential function of commercial banking — as the creator of money. Commercial banks, as it is now widely acknowledged, are not mere financial intermediaries: they are, by design, the creators of credit or money. The decentralization of credit creation through commercial banks was 'allowed' in the nineteenth century because credit-risks could be better assessed in a competitive environment (amongst commercial banks) and at the same time, when banks had closer relationships with their clients or borrowers.

The introduction of CBDCs as deposits could effectively mean the direct disbursement of credit by the central bank. The more fundamental question is not the ability of the central bank to do so but whether a centralized and monopolistic institution will be able to assess credit risk as well or as soundly as a decentralized, competitive commercial banking system. The advancement of technology or fintech — data analytics and artificial intelligence — could, however, mean the of displacement personal relationships in credit-risk assessment in the near future, thereby overcoming a major limitation of centralization in credit disbursement.

While some economists believe that further decentralization in commercial banking is more appropriate — as for instance, in Germany — there are others who think that it is the state which should direct the flow of credit in an economy to achieve its developmental goals rather than by commercial banks who are motivated by profitability in taking decisions on who gets credit and how much.

All-in-all, the RBI's concept note makes it clear that CBDCs can disrupt commercial banking and the choice of CBDC-type will determine the future of commercial banks, their role and even their existence. The technology for such a disruption is advancing rapidly and just as the state legitimised the development of commercial banking the way we know it, it can also, if it so desires, disrupt it.

It is ultimately a matter of political choice.

Central Bank Digital Currencies have a role to play in commercial banking, and how! [1]

Governments and central banks may work symbiotically with commercial banks to challenge large tech, e-commerce and fintech companies as well as cryptocurrencies from dominating the payments settlement space.

Commercial banks, public and private, form the bedrock of modern financial architecture. In most countries of the world, a substantial portion of payment settlements take place using deposit accounts held by the non-bank private sector (NBPS) at commercial banks. In the UK, for instance, 97% of broad money consists of bank deposits and only a small fraction of the total is currency in circulation.

Within the present financial system, state legal tender – cash or currency – is available to the NBPS only through commercial banks, which are authorised to swap deposits (its own financial liabilities) for cash (the financial liabilities of the state) at par. With the share of cash used for payment settlements showing a gradual decline in many countries, and more so since the ongoing pandemic began, there is a fear that state money – cash – may lose its significance in settlement of liabilities that arise from trade and exchange.

A new set of financial institutions that enable convenient and fast transfers between deposit accounts have arisen. Monopolization of information using fintech by these institutions is enabling them to gain control over financial decision-making. The only challenge to them perhaps comes from cryptocurrencies that allow settlements without intermediaries. The introduction of central bank digital currencies (CBDCs) could, however, not only challenge payment intermediaries but also cryptocurrencies, particularly if CBDCs utilize some form of cryptography. In this process, the commercial banking system may be impacted and its nature and role in the evolving financial architecture transformed.

The implications of CBDCs for commercial banking will to a large extent depend on the objective of a government and its central bank. If they choose to view commercial banking as an institution that allows for more decentralized financial decision-making then CBDCs could work symbiotically with them to challenge large tech, e-commerce and fintech companies as well as cryptocurrencies from dominating the payments settlement space. In such a framework, CBDCs may be issued through commercial banks just like cash. While the central bank can allow the NBPS to have accounts with it, which in the present system is not possible, the maximum amount held in such accounts will be capped. This would not only ensure that state money – cash or currency – remains a small portion of the total money supply but also makes it more viable for adopting crypto-technology-based CBDCs as most financial transactions will continue to take place using commercial bank deposits, ensuring traceability.

The other reason for adoption of a symbiotic model is because central banks recognize the importance of the knowledge commercial banks possess on the creditworthiness of borrowers, acquired from long-term relationships developed between both parties. Moreover, commercial banks are discerning and responsive to the specific needs of individuals and businesses for credit, which is often the starting point of the production process. The importance of this decentralized credit function of commercial banks in an economy can only be understood when their role is not reduced to that of an intermediary, which naively supposes that they take deposits and lend them out for consumption and/or investment spending. Instead, as contested by endogenous money theory (EMT), acknowledged by even the Bank of England, banks actually create money when they make loans. While it may be easier to replace the payments settlement function of deposit accounts, it is the loan function of commercial banks that will pose a bigger challenge to a centralized architecture.

In spite of these advantages, there exists a contrasting view over CBDCs, which asserts the foreseeable emergence of a more centralized financial system. This will happen because non-crypto CBDCs give central banks access to information about consumer spending, which in any case is already becoming increasingly available to private sector financial institutions using fintech and unsettling traditional insurance and banking services. Furthermore, greater centralization of banking functions will

[1] *Moneycontrol.com, 2.06.2021*

provide governments the ability to not only control the direction and flow of credit and investments in the economy but also facilitate closer surveillance over its people.

For CBDCs to become a primary means of payment settlements over commercial bank deposit accounts, the NBPS must be given the option to open accounts at the central bank without limit. As we know, in the present system, government spending passes through the central bank and commercial banking system until it finally reaches the account of the NBPS. In the process, commercial banks are credited with reserve money in their accounts held at the central bank. If, however, the NBPS has accounts at the central bank, this primary source of reserve money for interbank settlements is eliminated. More importantly, any excess reserves that are usually swapped for government bonds by commercial banks and later used as collateral for repo transactions will also become scarce. Without adequate reserves and bonds to access reserves from the central bank, expansion of credit to the economy by the commercial banking sector is constrained, striking at the very root of endogenous money creation and the essence of modern banking itself.

The question, however, is why would the NBPS prefer to hold accounts at the central bank rather than commercial banks. Risk is obviously the primary reason. Not only is deposit insurance limited but the possible implementation of 'bail-in' laws wherein a bank's losses could be adjusted against deposit accounts further elevates risk. A risk premium will, therefore, have to be offered by commercial banks to attract deposits that would otherwise be held at the central bank. With the central bank bypassing commercial banks in the government spending process and the simultaneous scarcity of bonds, commercial banks will be almost fully dependent on deposit accounts as their source of reserves, reducing them to the position of non-banking financial companies (NBFCs), which in the present financial architecture seek finances before lending, rather than being creators of money.

Commercial banks also play an important role in the implementation of monetary policy, wherein the central bank seeks to incentivize the expansion or reining-in of credit by altering the cost of reserves through the setting of repo and reverse repo rates, which are then supposedly passed on to borrowers. A centralized CBDC model will, however, shorten the transmission mechanism as central banks would be in a position to influence the interest payable by commercial banks and consequently on loans made by them through changes in the interest paid on their own risk-free deposits.

Except for the Chinese DCEP (Digital Currency Electronic Payment) – although it is not a cryptocurrency – no other major country has made significant strides in the introduction of CBDCs and the discussion presently is, therefore, general and conjectural. The coming years are nevertheless likely to witness disruptive changes in the present financial architecture and monetary system with different countries choosing different paths in the introduction of CBDCs.

Central bank digital currency has its uses, but can it replace cryptocurrency? [1]

CBDCs can provide an alternative to digital wallets and cryptocurrencies, but there are trade-offs to be considered.

In an earlier article, I delineated some key differences between modern money and cryptocurrencies. Accompanying the headline-capturing rise and fall in price of cryptocurrencies like Bitcoin, there has been increasing discussion over another form of money: central bank digital currencies (CBDCs), which are sometimes naively seen as analogous to cryptocurrencies. CBDCs are essentially modern state money – cash – in a digital form and their relationship to cryptocurrencies as a payment instrument is primarily whether or not they utilize cryptography and blockchain technology to ensure privacy. What makes CBDCs even more important to macroeconomists are their implications for monetary policy, financial institutions utilizing financial technologies (fintech), and commercial banking.

Our story begins with the creation of cash or currency notes in a modern economy. The use of terms like 'helicopter money' or 'printing money' gives an impression that it something dropped from the sky or handed out by the government or the central bank. This is misleading. Modern money is in fact spent into existence by the state (the government and its central bank) electronically or digitally through the commercial banking system, and finally as credit of net financial assets in the deposit account of the non-banking private sector (NBPS) held in commercial banks.

At the same time, the increase in financial liabilities (deposit accounts of the NBPS) of commercial banks are matched with a credit in reserve accounts held at the central bank. Commercial banks also implicitly promise to convert the deposit accounts of the NBPS into tangible cash or currency notes – the financial liabilities of the state – at par and on demand. This happens when the NBPS 'withdraws' cash from their deposit accounts held at commercial banks, swapping one form of modern money or financial liabilities (the deposit account) into another form (cash). The reasons to hold and use cash are privacy, general acceptability and convenience for small transactions and emergencies. Interestingly, and as an aside, the etymology of the term cash is said to be kasu or small value copper coins used as loose change in medieval southern India.

In recent years, particularly after the global financial crisis of 2008, countries have struggled to overcome recession. Hesitancy to adopt expansionary fiscal policy led them to rely more on monetary policy, especially unconventional instruments like quantitative easing and negative interest rate policy (NIRP). The existence of cash particularly inhibits implementation of the latter. The logic of NIRP is that a central bank by charging commercial banks an interest on reserve account balances, could incentivize them to reduce these balances by making it very cheap for investors to borrow. At the same time, deposit-holders can be incentivized to spend rather than paying banks an interest on deposits. However, this can happen only if the option to convert their deposit accounts into cash is blocked. Sweden, which had made a big push for a cashless economy since 2007, was in a better position to implement NIRP post-crisis, which it did in 2009. Other countries including Denmark, Japan and the UK too experimented with NIRP but with limited success. Nonetheless, the push towards a cashless economy for implementation of NIRP as well as other reasons like curbing the black economy has prompted many governments to advocate the use of digital means of payment.

Any trade leads to the necessity of the settlement of an obligation by the purchaser of a good or service. Final settlement is possible either through cash or the transfer of a deposit account, which are financial liabilities of the central bank or a commercial bank, respectively. The latter has seen an evolution of instruments to carry out such transfers including cheques, bank transfers, credit and debit cards, payment gateways and increasingly digital mobile wallets. Among these, and along with the growth of smartphone usage, e-commerce and online bill payments over the last decade, digital mobile wallets and internet-based payment platforms have experienced phenomenal growth. For instance, in China, the share of cash in total retail payments came down from 60% to 30%, replaced entirely by the growth of digital instruments. The share of cards has remained at about 40% between 2013 and 2020. Although the trend in

[1] *Moneycontrol.com, 27.05.2021*

other countries is not as stark as in China, it seems inevitable that digital instruments will replace widespread use of cash.

While this development is a step towards a cashless economy and opens up the possibility to pursue NIRP during a crisis, it is nonetheless becoming a cause of concern for governments. As large tech companies and e-commerce giants introduce their own digital wallets, they begin to bring a whole set of smaller businesses under their patronage. Just as e-commerce companies like Amazon have come to dominate the retail industry, it is now becoming apparent how digital payment companies may begin to exert their influence over e-commerce businesses. But there is an even greater fear: given their access to information on monetary transaction of consumers, these institutions will be in a position to disrupt the financial system as it exists today. A large mobile wallet provider, for instance, could know the medicines purchased by individuals and thereby be in a better position than an insurance company to decide the premium payable on a health insurance policy.

This emergence of 'technological innovations in the financial services sector, with ever increasing reliance on information technology' (RBI) or 'fintech' is likely to result in systemic disruptions and simultaneously a greater degree of centralization over financial decision-making. It may be futuristic but not inconceivable that these new generation of financial institutions actually come to dominate the economy by deciding which businesses to finance, which individuals and households get access to loans, and so on, based on an ocean of micro-level data.

Meanwhile, the payments system has also been witnessing another disruption with the rise of cryptocurrencies. As examined in my previous article, these cryptocurrencies completely eliminate the need for an intermediary or a centralized authority be it a bank or even digital wallets using cryptography and blockchain technology. Any transfer of money is then fully out of the radar of the authorities thereby providing the privacy that cash does.

An ideal CBDC as an alternate to digital wallets and cryptocurrencies aims to combine their best features. However, there are trade-offs. CBDCs, to reiterate, are cash – the financial liability of the central bank – in a digital form, which can then be transferred to another entity. However, if complete privacy that cash offers have to be preserved then some form of cryptography is required. Unfortunately, as things stand presently, the energy required to operate computers that run such technologies is massive, making it an expensive proposition as compared to paper currency. Moreover, crypto-technology assumes the availability of the Internet. In a country like India this limitation will mean the continued need for cash. Instead of going the cryptocurrency way, CBDCs could instead be introduced using traditional database architectures like the United Payments Interface (UPI). While the privacy of cash is foregone, they will compete with and give central banks access to information that is now captured by private institutions.

Even as governments continue to design appropriate CBDCs that reconcile these trade-offs as well as tackle issues pertaining to scale, security and control over their creation, their introduction will have implications not only for the future of private fintech companies but also for another key pillar in the existing financial architecture: commercial banks, an aspect that I have discussed elsewhere.

Will the rising wave of nationalist leaders sweep away central bank independence? [1]

Given the imperious attitude of new leaders to institutions of the old order, the questioning of central bank independence is a given.

Even as the question of central bank autonomy over the issue of demonetisation is being hotly debated in the Indian media, many would be aware that the term primarily arises in the context of the formulation and conduct of monetary policy. The fear over the decline of central bank autonomy or independence is in this sense, therefore, not an issue specific to India; with the decline of neoliberalism and the emergence of a new political order that has propelled populist leaders like Donald Trump and Theresa May to power, it is now a topic of discussion around the world. Just a couple of months ago in November 2016, while The Economist called for a "Rethinking of Central Bank Independence", the Financial Times was more categorical in proclaiming the "End of the Era of Central Bank Independence". And it is in the context of monetary policy, rather than demonetisation, that I examine the issue of central bank autonomy both generally and with reference to India and the Reserve Bank of India (RBI).

The final quarter of the 20th century witnessed a structural break in macroeconomics with a shift in focus from stabilisation of output and employment to stabilisation of price level and inflation. The Vietnam War and the oil shocks on account of the war in the Middle East in the 1970s triggered off a crisis that had hitherto not been anticipated by Keynesians: stagflation, a situation where falling output was accompanied by rising rates of unemployment and inflation, simultaneously. An expansionary fiscal policy to tackle the unemployment problem would then lead to accelerating inflation. Although inflation rates barely went beyond 15% in the West, the fear of inflation spiralling into unmanageable levels was enough reason to begin dismantling the post-war neo-

[1] *The Wire, 6.02.2017*

Keynesian paradigm along with its accompanying institutional apparatus.

A new path

The alternative? A new wave of economists began scripting a return to free-market capitalism, where proactive state intervention in management of the economy was considered more a hindrance to stable growth than a necessity. Inflation was the dreaded bogey in the emerging free market neoliberal narrative that could potentially distort the functioning of the price mechanism in many ways, including making it difficult for firms to distinguish changes in relative prices from changes in the general price levels so that use of lower priced inputs may not take place, rising interest rates as lenders incur losses on capital lent and eroding purchasing power of fixed-income earners that would impact consumption spending.

Left-of-centre and some heterodox economists, however, viewed this as a paradigm to dismantle Keynesianism and with it the growing share of labour in domestic output vis-à-vis the private sector capitalist class. Free trade and flow of capital, embodied in the notion of globalisation, were important instruments to tame domestic labour and check rising real wages. Stability in exchange rates was, however, a necessary condition for such global movement in goods, services and capital. With the era of fixed exchange abandoned in the early 1970s, volatility under a floating exchange rate regime had to be curbed, which in turn necessitated stable domestic inflation rates. Strong government involvement in the economy and its corollary – the welfare state – could potentially disrupt the process of globalisation and prevent the capitalist class from extracting a larger portion of the GDP pie. Pro-market forces, not always conducive to domestic businesses, were unleashed across countries supported by international institutions, particularly the IMF, the World Bank and the WTO.

The attack on Keynesianism was theoretically intense and, in a race, to annihilate it the baton was passed from one "great" (mostly Chicago School) economist to another: Milton Friedman, Robert Lucas, Thomas Sargent, Neil Wallace, John Muth, Eugene Fama, Finn Kydland and Edward Prescott. This new macroeconomics effectively relegated Keynes and Keynesianism to history, and in doing so altered not only the goal of macroeconomic policy but also the role of the state in managing the economy. First, activist fiscal policy was "proven" incapable of affecting output and employment not just in the longer-term but even in the short-term and second, attempts to use

fiscal policy to achieve full employment only led to inflation. The solution for growth (and even development) was supply-side structural reform that called for liberalisation, privatisation and globalisation. The first point on the list of ten policy prescriptions in the Washington Consensus was fiscal discipline and adhering to it was seen as the key to both low inflation and avoiding a balance of payments crisis. The European Commission also articulated the three pillars of social and economic policy as fiscal responsibility, structural reforms and private investment, which together act as a virtuous cycle that can ensure growth and jobs. The government came to be treated as a household or private firm, with limited resources, facing an inter-temporal budget constraint. Moreover, government expenditure was considered to be funded by the private sector or taxpayers' money. The accumulated deficits of the government or public debt would have to be repaid at some point of time, imposing a burden on future generations. "Minimum government", a term that became a slogan in India's 2014 election campaign, articulates the essence of neoliberal macroeconomic policy.

While fiscal austerity was one pillar of neoliberal macroeconomics, monetary policy – under the control of an independent central bank – was to be the other. State control over setting interest rates was transferred to the central banks, which were in turn mandated to ensure a 'low and stable' inflation rate. This could act as an effective check against errant government behaviour of high deficits and low interest rates to boost the economy (but resulting in high inflation), especially prior to elections. An independent central bank could effectively counter the government's fiscal profligacy by raising interest rates to achieve the stipulated inflation target and furthermore, inflation expectations. In many advanced countries, in response to the Great Recession of 2008, monetary policy – low interest rates and quantitative easing – took centre stage while the use of fiscal stimulus was comparatively restrained. With inflation in check, an efficient market system would supposedly propel an economy onto a path of long-term growth in an environment of competition and innovation. Raghuram Rajan exemplified this view when he remarked, "our [RBI's] job is to give people confidence in the value of the rupee, in prospects of inflation and having established that confidence, create longer-term framework to take good decisions …"

The institutional transition to central bank independence was neither smooth nor accepted at the same time by all countries. It is interesting to note that Margaret Thatcher, an epitome of neoliberalism, had refused to grant autonomy to the Bank of England (BoE); it was as late as 1997, under Tony Blair, that the BoE was ultimately

given the power to set interest rates. The success of neoliberal macroeconomics was captured by the term "great moderation", which claimed a reduction in the volatility in business cycle fluctuations and in particular, wide oscillations in the rate of real GDP growth, unemployment and industrial production. Except for 1992, the US economy did not face an economic recession over a 25-year period, while standards of living (real GDP per capita) increased from about $30,000 to $50,000. But underneath this façade of growth and stability, there was growing discontent with the neoliberal order that came to a boil in the aftermath of the global financial crisis of 2008; real wages had stagnated, consumption was increasingly driven by the private sector (including household) debt, a shrinking middle class (as highlighted by Bernie Sanders in his presidential campaign), widespread unemployment and rising inequalities in income and wealth.

And these trends were not restricted to the US.

It is in this context of anger, insecurity, anxiety, distrust and even schadenfreude (as evident in India's demonetisation experiment) that a new economic and political order is now visibly unfolding. De-globalisation, post-truth, nationalist-populist, new or neo-nationalism – while the world has still not agreed to any single label for the phenomenon, there is general agreement of a rupture in the neoliberal order as evident in the rise of leaders like Trump, Vladimir Putin, May, Narendra Modi, Recep Tayyip Erdogan, Abdel Fattah el-Sisi and many others (see, for instance, League of Nationalists in The Economist of November 19, 2016). Given the imperious attitude of these leaders to institutions of the old order, questioning central bank independence should come as no surprise. But how is this changing relationship between governments and central banks being manifested or likely to manifest itself?

Generalisations are always questionable but we, nonetheless, attempt a few. Fiscal austerity may soon be passé or as the Financial Times already believes, "the era of fiscal restraint is over." Signs of this are already visible in Trump's plan for massive infrastructure building. Nationalist governments will actively intervene to protect and support domestic business and jobs through fiscal spending and lower taxes, relaxing adherence to fiscal deficit targets in the short-term but hoping that buoyant revenues will bridge the deficit in the longer-term. The low interest policy followed by the central banks as a way of reviving growth, especially in the Western world, is now coming under scrutiny for its "bad side effects", as May put it. Small savers are being

unduly penalised while the affluent with a certain class of assets have benefitted from the low-interest rate regime. The ongoing war of words (with action yet to follow) between May and Mark Carney in the UK and Trump and Janet Yellen in the US is a clear pointer that the idea of central bank independence is under attack. Finally, protectionism of domestic industry from foreign competition, restricted capital flows and restriction to the movement of labour will deal a definitive blow to globalisation.

In India, neoliberal macroeconomics – as reflected in the centrality of inflation and adherence to fiscal deficit targets – took root post-1991. By institutionalising a cap on the fiscal deficit with the Fiscal Responsibility and Budget Management (FRBM) Act of 2003, governments have repeatedly signalled supply-side structural reforms as the key to stable growth in which the private sector would take the lead role. In his 2015 budget presentation, India's finance minister underscored the present government's commitment to reaching the 3% of GDP fiscal target by 2017-18 as per the FRBM Act. Every year, as the day of the Budget announcement draws near, the media is replete with warnings for the government on the need to adhere to its fiscal deficit target. Any failure to live up to its deficit commitments can unleash the wrath of international rating agencies.

Simmering tensions

It was the proposed revised draft of the Indian Financial Code (IFC) in July 2015, which set off debate on the simmering tensions between the government and the RBI over the setting of interest rates. The reformed code proposed to vest the decision on rates from the sole purview of the central bank with a seven-member monetary policy committee (MPC), four of whom were to be appointees of the central government, while three would be from the RBI. This legislation would have not only taken away veto power of the RBI governor in setting key interest rates but in effect, with the majority of appointees being of the central government, neither would the RBI governor nor even the RBI be the final authority over the primary instrument of monetary policy. Even though the proposal was amended to a six-member panel with an equal number of members elected by the government and the RBI, and the veto power of the governor restored in case of a tie, the majority of opinion in the press and media reacted adversely on the proposed MPC that seemed to be an assault on central bank autonomy. However, with Rajan, the then RBI governor, supporting the MPC and reiterating confidence that the RBI would continue to wield de facto power over monetary policy, resentment towards the MPC gradually receded.

The underlying implications of the revised IFC can only be understood when seen in conjunction with the inflation targeting agreement reached between the Ministry of Finance and the RBI in early 2015, wherein it was decided that the inflation target would be pegged at less than 6% by January 2016 and further reduced to 4% plus or minus 2% for subsequent financial years. At the time of this agreement, control over interest rates was unequivocally with the RBI governor. This after all was the instrument that he could use to achieve the inflation target agreed upon. In case of failure to reach the target over three successive quarters, he had to explain to the government reasons for failure and corrective action proposed. The government accepted the validity of the RBI's (Urjit Patel Committee) recommendations in favour of a "low and stable" inflation target. The essence of neoliberal macroeconomics – inflation targeting – was actually institutionalised in India at the eve of its decay in the West.

By accepting the inflation target, the Indian government had imposed a constraint on itself in leveraging its fiscal space for broader growth and developmental objectives including infrastructure building, social sector spending and employment generation. As long as its commitment to a low and stable inflation target remains intact, interest rate per se is not critical; in case it turns out inadequate in achieving the inflation target, the onus would instead fall on fiscal policy. Consider, for argument's sake, what happens when the inflation target remains in place but the government appointees the MPC decides to cut rates sharply? How can the RBI be then held answerable for its failure to achieve the inflation target? I see only one way out of this dilemma and perhaps the one that neoliberal economists anticipate: the government will have to ensure fiscal policy, in particular the fiscal deficit, is in sync with its inflation target.

Unlike Western economies, where low interest rates are now being viewed unfavourably by the government, the Indian government was not happy with the RBI over high interest rates and its unwillingness to cut rates and kick start private investment. This may have been one reason why Rajan's term may not have been extended; however, by getting the government to agree upon a low and stable inflation target, Rajan had won the war (for neoliberalism) even if he lost the battle (an extension of his terms as RBI governor). If the recent demonetisation is reflective of the RBI loss of autonomy, we may soon find the RBI obliging the government with interest rate cuts. But will "pushing on a string" be sufficient to put the economy on a higher growth trajectory?

This is far from certain. Ultimately, the government may have to break out of its self-imposed fiscal constraint of 3% of GDP with more proactive fiscal policy. This is not unlikely as there are indications that the idea of "minimum government" is already fraying, while a tilt in favour of more populist schemes is on the cards.

At first the disagreement between central banks and governments seems to be over (low or high) interest rates but it will soon become obvious that the actual contention is over a low and unmalleable inflation target. And it is not the actual rate but just the possibility of higher inflation which severely constrains the fiscal deficit. Relegating their commitment to a specific inflation target could give governments a degree of freedom to not only increase spending and the fiscal deficit, but also set interest rates at a level they consider appropriate. Greater discretion on inflation rate will, however, mean the abrogation of neoliberal macroeconomics and with it, of central bank autonomy as well.

Implications of a more accommodative inflation target

Questions then arise as to the implications of a more accommodative inflation target; first, with regards to growth and second, on who decides the acceptable inflation target.

On the relationship between growth and inflation, the empirical evidence remains tentative. While several studies have shown that inflation targeting does enhance growth, there are others which claim that no such generalised conclusion can be drawn, especially for developing countries. It also wouldn't be out of place to mention, though not as proof, that a study done by the IMF in 2010 found that inflation up to a threshold of 10% brought positive increases in GDP, although this threshold may be even higher for emerging markets. Another paper published by the International Labor Organisation in 2011 computed that the threshold limit of inflation for positive or zero increments in real GDP growth in developing countries could be as high as 17%.

On the second question – are people willing to settle for higher growth of output and employment opportunities with more flexibility on inflation – it is legitimate to argue that the growth-inflation trade-off is ultimately a challenge that must be confronted by political parties and not "unaccountable technocrats" (central bankers as referred to by The Economist). Moody's Analytics commented on the revised IFC that "politics would drive decisions", but is this necessarily wrong? The standard argument in favour of central bank autonomy is that governments will be irresponsible in containing expenditure. Is this generalisable and valid, say for instance, in the Indian context? Corruption and inflation are after all two issues which can bring down governments. Political parties may therefore be extremely cautious in taking chances with just a higher inflation rate, let alone an accelerating one. The government is also in a better position than a professional economist to judge the aspirations and perhaps desperation of people at the grassroots for jobs and economic opportunities. On the other hand, the concern that elected representatives may act irresponsibly, taking the country into a scenario of spiralling inflation and instability, is a serious one and cannot be dismissed lightly.

In the days ahead we are likely to see heightened arguments and conflict over these questions. Meanwhile, let me conclude by saying that with its short-term success, neoliberal macroeconomics has lost sight of what was the raison d'être of macroeconomic policy – full employment. Not only has this objective been left to the private sector but more importantly, unemployment has been transformed into a "buffer stock" (the non-accelerating inflation rate of unemployment or NAIRU) to meet the inflation target. Under the emerging regime across the world, it may well be the turn of (low and stable) inflation targeting to take a back seat (and with-it central banks too), while populist-nationalist governments utilise their fiscal policy space and exert greater control over interest rates and trade policy to address the restlessness of their citizens. The process has already begun even as the outcome is awaited with uncertainty and, for some, with fear.

Will Sri Lanka's new President be able to turn around its beleaguered economy? [1]

At the core of the crisis is a dollar shortage caused by the island's high reliance on imports and the lack of the economic complexity to diversify exports into high value-added products or bring in sufficient dollar inflows.

Sri Lanka is in a state of political flux, with both the President and Prime Minister being forced to quit. It is still open to question whether the new president will be acceptable to the masses, given his close ties with the earlier regime. Moreover, will he be able to turn around the beleaguered economy?

Sri Lanka's political turmoil has clearly emerged from Sri Lanka's economic crisis that pushed its people to the edge, survival becoming a day-to-day struggle. The shortage of fuel for essentials that was being reported in the recent past was driving people to desperation: from children being unable to get to school to people using firewood to cook. This is something that no one would have expected to happen so quickly and so severely to a 'higher middle-income' country, a status that Sri Lanka reached in 2019, although it was demoted back to the 'lower middle-income category' in 2020. Even as the political crisis is yet to play out fully, it is important to ponder over the economic origins of the crisis.

The reason for Sri Lanka's predicament is rather unequivocal. As the former Sri Lankan Prime Minster and now President Ranil Wickremesinghe put it, 'the shortage of dollars actually contributed to this situation.' However, it is important to dig a little below the surface to understand what this 'shortage of dollars" actually implies and the policy options available to a new government in the short, medium and longer term.

The fundamental reason for Sri Lanka's dollar shortage arises from a situation where

[1] *Moneycontrol.com, 21.07.2022*

a country has a high standard of living but lacks economic complexity. The high standard of living, supported by government social sector initiatives, induces the country to import goods and services to sustain their desire to consume while the lack of economic complexity means that the country is neither able to diversify exports into high value-added products nor bring in sufficient foreign exchange (dollar) inflows through workers' remittances, borrowings by the domestic companies or foreign direct investment by international firms. The insufficiency of autonomous dollar inflows forces the government to fill the gap either by attracting development aid, foreign investments in or borrowings to fund infrastructure, or external sovereign borrowings in global forex markets. Inability or unwillingness to do so can lead to a depreciation of domestic currency, lowering imports and adversely impacting standards of living.

Even a cursory look at Sri Lanka's vital economic parameters reveals this narrative. Imports of goods and services account for more than 30% of its $ 84 billion GDP with the most important items being food and beverages, medical and pharmaceutical products, fuels (crude and refined oil, coal), textiles, and machinery and equipment. Its exports, which account for 22% of GDP, are also limited in range with almost 70% of them coming from just a few low value-added products: articles of apparel, coffee, tea, spices, as well as rubber.

The deficiency in trade balances is somewhat cushioned by Sri Lanka's foreign exchange earnings from tourism and workers' remittances. However, both these took a severe beating during the pandemic and are still struggling to recover, putting the country through a balance of payments crisis. Earnings from tourism declined from $ 4.3 billion in 2018 to just $ 261 million in 2021. Workers' remittances, which were at $ 7.1 billion in 2018 declined to $ 5.5 billion in 2021.

On the capital account, the domestic private sector has been weak in leveraging foreign borrowings for investment. Although some $ 21 billion of the $ 56 billion or about 35% of total outstanding external debt has been contracted by the private sector in Sri Lanka [2], it is significantly dissimilar from, say, India [3] or Turkey [4] where 80% and 65%,

[2] *https://www.colombotelegraph.com/index.php/sri-lankas-debt-sustainability-way-out-is-not-by-patchwork-but-by-long-lasting-strategies/*

[3] *https://dea.gov.in/sites/default/files/India%20External%20Debt%20-%20A%20Status%20Report%202019-20.pdf*

[4] *https://www.turkishminute.com/2020/07/20/turkeys-external-debt-up-to-one-year-maturity-at-169-5-bln-at-end-of-may-central-bank/#:~:text=Turkey%E2%80%99s%20central%20bank%20said%20on%20Monday%20the%20country%E2%80%99s,sector%20made%20up%2065.4%20percent%2C%20the%20bank%20said.*

respectively, of total external debt is contracted by the private sector. Foreign direct investment (FDI) inflows into Sri Lanka have been tepid too, peaking at about $ 1.6 billion in 2018, but declining to just about $ 433 million in 2020. Overall, private sector investment spending has been around 20% of GDP since 2019.

The gap in dollar inflows to maintain the current account deficit has pushed Sri Lanka into relying on sovereign external debt as a significant source of foreign exchange. While development aid and low-cost borrowing from multilateral agencies were possible until the early 2000s when Sri Lanka moved into the 'middle income country' category, it has been compelled since then to depend on raising dollars through floating of International Sovereign Bonds (ISBs) in foreign exchange markets. By October 2021, Sri Lanka's ISBs reached $11.82 billion, accounting for 34.1 percent of total external debt. With regular sources of dollars drying up during the pandemic, Sri Lanka sank into a debt trap with yields on sovereign debt rising to almost 20%. Ultimately, in April 2022, it defaulted on its external debt. This has plunged the country into a balance of payments crisis, resulting in a complete dearth of foreign exchange and subsequently the inability to import even essential goods.

So, what is the way out of this dire situation for Sri Lanka? In the short-run, immediate relief will probably come with an International Monetary Fund (IMF) bail-out. However, as is usually the case, the IMF is likely to impose austerity measures on the government, forcing the economy to contract. Along with letting the Sri Lankan rupee depreciate, this will curb imports. In the medium-term, the best Sri Lanka can hope is for tourism to return to its glory days. The abating of the pandemic is a positive event although domestic political instability as well as power and food shortages may dissuade tourist inflows into Sri Lanka. Vulnerability to external shocks will remain high in the medium-term. In the longer term, the country will need to increase the complexity of both its export sector as well as its internal economy. This is an arduous process with no standard methods to ensure success.

The Sri Lankan crisis provides an important lesson that many countries have to learn, such as Saudi Arabia, Argentina, and Venezuela. Some have already embarked on their journeys to reduce their reliance on imports while increasing exports of value-added products. Sri Lanka must embark on its own path if it wishes to ensure long-term macroeconomic stability and sustained growth.

The root cause of Pakistan's crisis: Macroeconomics or geopolitics? [1]

While the mainstream framing of Pakistan's crisis is a lack of fiscal prudence, what the country really suffers from is a resource curse, not in energy or minerals, but from its position in geopolitics.

Pakistan is in the throes of a severe macroeconomic crisis. Its GDP has not returned to pre-pandemic levels, growth rates are falling, inflation is raging, interest rates soaring, and foreign currency reserves plummeting. It is once again forced to stand helpless with its arms stretched out to the IMF for a fistful of dollars, pleading to unlock stalled funds from a 2019 bailout package of $7 billion.

On the face of it, this may seem like a business-as-usual economic crisis essentially caused by fiscal profligacy of the Pakistan government reflected by large fiscal deficits since 2010 as well as, to an extent, supply-side shocks of the pandemic and the 2022 floods that wrecked several provinces of the country. Excessive government spending has led to a widening in its current account deficit, which must be funded by foreign currency borrowings – particularly by way of increased sovereign external debt – given Pakistan's poor inflows from leveraging by domestic industry abroad and portfolio investment. The current account deficit trend has, however, been turning chronic since 2018 except for the sharp anomalous contraction in 2020 on account of the pandemic that makes it possible to point fingers at the fiscal deficit rather than supply-side shocks.

The IMF is once again considering bailing out Pakistan with it's not unusual set of harsh conditions including letting the Pakistan rupee depreciate and at the same time, privatisation of loss-making public sector units and most importantly, immediate and

[1] *Moneycontrol.com, 10.02.2023*

unsympathetic fiscal consolidation through increasing taxes on and cutting subsidies to all sections of the population. With few remaining options, the Pakistan government may agree to the IMF terms and conditions for fiscal reform.

The Pakistan crisis clearly identifies the core of its problem to be the lack of fiscal prudence, resulting in the widening fiscal deficit and consequently, current account deficit too, making Pakistan more reliant on foreign currency loans from China, Saudi Arabia, UAE, the US and the IMF. The solution to the problem is, in a nutshell, fiscal prudence.

The framing in the flow of causation underlying Pakistan's recurring crisis in this way may, however, be flawed.

An alternative viewpoint is to identify Pakistan's problem to be the 'resource curse', the resource here not the usual abundance of mineral or non-renewable natural resources but rather, geopolitics. Its 'allies' have been investing in and loaning tens of billions of dollars to Pakistan. These are not simply economic transactions but deeply rooted in geopolitics.

China sees Pakistan as an important partner to counterbalance the rising military power of India, as a strategic trade and energy corridor that would connect Shanghai to the Arabian Sea, and to sever ties between Chinese Uighur separatists and their Pakistani supporters. For Saudi Arabia, Pakistan is a crucial ally stemming from their Islamic identities, Pakistan's nuclear capability and ensuring that there is no incentive for Pakistan to reassert ties with Iran. Pakistan and UAE have also shared close ties since 1971 with UAE making major investments, providing assistance in health, education and water to Pakistan as well as strong military cooperation including their respective air forces. However, there were tensions in 2015 with UAE over the war in Yemen but this only highlighted the strategic room available to Pakistan to manoeuvre and bargain with its allies. US-Pakistan ties have historically been a function of geopolitics and global security. In spite of Pakistan's closer relations with China and USA's favouring India as its strategic partner, the US still cannot afford to see Pakistan slip out of its radar of influence.

Flush with inflows of foreign investments and loans, former Prime Minister Imran Khan accused the so-called 'three rats' of Pakistan, namely, its military, government and opposition of having 'jointly sucked the blood of the country … accumulating

millions of dollars' worth of property outside the country.' At the same time, political interventions by the army, decline in democratic institutions and weak and corrupt political administration has kept large masses of Pakistan's widely heterogeneous population in poverty amidst widening inequalities in wealth and income.

Misgovernance by the state has also manifested itself in the decline of manufacturing in Pakistan, its share being just 11.5% of GDP in 2020. Gross fixed capital formation by the private sector has also witnessed a secular decline from around 20% of GDP in 1965 to an abysmal 11.5% of GDP in 2020. This has resulted in a stagnation in value added per worker in industry while that of India has almost doubled and China increased five-fold over the last 25 years. It is important to reiterate that these trends are in spite of the massive foreign investments that Pakistan has been receiving from overseas.

Pakistan's geopolitical resource curse when combined with chronic misgovernance has also caused stagnation of economic complexity. In 2020, it ranked 93 out of 127 countries while Vietnam stood at 61 and India at 40. Almost 70% of Pakistan's exports come from the clothing industry. The pandemic and global slowdown impacted this sector adversely, which has made Pakistan easily vulnerable to a balance of payments crisis.

Stagnation in economic development has over decades found an escape in ethnic mobilisations and violence that had then to be suppressed through sops in the form of economic subsidies on energy and food. This is sometimes incorrectly articulated as a model of the welfare state instead of being seen as a consequence of the state's misgovernance and corruption.

The IMF's characterisation of Pakistan's macroeconomic crisis is therefore not only naïve but also dangerous: it argues and pushes for fiscal austerity not just in Pakistan but in every country facing a crisis. As long as Pakistan's resource curse over its advantageous geopolitical levers continue, its allies cannot afford to witness its economic and political collapse. Bailouts will happen but to demonstrate recognition of the possibility of moral hazard, the costs of these bailouts will fall on the poorest and most vulnerable sections of the population through a contraction of GDP, unemployment and lower standards of living or the infamous IMF-induced 'internal devaluations.' This will inevitably draw Pakistan into a vicious spiral of poverty, conflict and economic ruin while the dollars end up in the fists of a few.

Is the Japanese miracle coming to an end? [1]

More than concerns over the fiscal deficit numbers per se, the challenges for Japan lie in the short-term international economic environment and more importantly, the chronic, long-term structural issues that Japan confronts.

With the yen depreciating by some 30 percent this year, from 116 ¥/$ in January to 150 ¥/$ on October 21, 2022, in spite of the Bank of Japan's (BoJ) reluctant interventions of some ¥6.35 trillion ($43 billion) in October alone, Japan faces challenging macroeconomic policy choices but, at the same time, not so dissimilar from the situation prevailing in many advanced and developing countries.

The reasons for such a large depreciation in the yen are not surprising: the sharp increases in interest rates by the US Federal Reserve (Fed), full convertibility of the yen which makes capital flight easy and most importantly, the low-interest rate policy that the BoJ continues to maintain. While the Fed's benchmark rate is now 3.25%, the Bank of Japan's (BoJ) key short-term rate is at negative 0.1%. The yield on a 10-year Japanese government bond is at just 0.244% (less than a quarter of a percent) while that on a US government bond of the same duration is presently at more than 4%.

The immediate consequence of the falling yen is imported inflation. Total (headline) inflation hit a 40-year high of 3.4% while narrow (core) inflation rose to 2.4%, above the BoJ's target of 2%. While this rise in the inflation rate might seem that Japan has finally got what it has desperately sought for a long time – having struggled with low inflation and deflation for decades – it isn't. The present bout of inflation does not come from a pick-up in aggregate demand but rather from depreciation of the yen, which has pushed up the domestic price of imported fuel and commodities.

[1] *Moneycontrol.com, 2.11.2022*

The BoJ has expressed concern that 'moves to increase wages will not strengthen' given the 'the behaviour and mindset … that prices and wages will not increase easily are deeply entrenched.' With imported inflation and no change in nominal wages, real wages are actually declining, driving down aggregate demand so that 'prices will deviate downward from the baseline scenario.' It is for this reason that the BoJ is steadfast on its low interest policy that may dampen demand even further and has instead chosen to let the yen slide with the hope that demand for higher wages will come from gradual tightening in labour markets.

This, however, seems unlikely. Earlier this year, The Economist reported that unemployment in Japan is at 5%, way above official records as many people have voluntarily stayed out of the labour market. Large-scale layoffs have also been reported across sectors ranging from electronics to construction and automobiles. Factory output fell 1.6% in September 2022 with a 12.4% decline in auto-related production.

Rising imported inflation and falling real wages resulted in widespread dissatisfaction with Prime Minister Fumio Kishida, reflected by a sharp drop in his approval ratings. In this context, how could Japan (and the BoJ) hope for a sustained revival in aggregate demand through real wage increases? The only remaining option was for the Japanese government to once again resort to aggressive expansionary fiscal policy. A fiscal package of about ¥29 trillion (approximately $200 billion or ₹17 lakh crore) was unveiled on October 28. Prime Minister Kishida categorically stated the objective of the package: 'overcoming rising prices and reviving the economy… to protect people's livelihoods and businesses.'

Inflation would be kept in check through subsidies on household electricity bills and gasoline prices, enabling the BoJ to maintain its low-interest rate policy. At the same time, the fiscal package hoped to stimulate aggregate demand and induce wage increases. While the package was seen as a positive step, some commentators argued that the stimulus was insufficient and should have included cuts in the 10% consumption tax.

As usual, alarmists have raised concerns over Japan's public debt levels which are now in excess of 250% of GDP. However, as witnessed in this instance too, there has been no volatile disruption in Japan's financial markets on account of the stimulus package, contrary to the mayhem that was seen in the UK last month. This is because unlike

the Bank of England, the BoJ accommodated the announcement of the government to keep yields stable through bond purchases. More than concerns over the fiscal deficit numbers per se, the challenges for Japan lie in the short-term international economic environment and more importantly, the chronic, long-term structural issues that Japan confronts.

Like many other countries, Japan must grapple with the Fed's decisions to hike US interest rates, and the rising energy and commodity prices on account of the Ukraine-Russia war. This will continue to exert pressure on the yen to depreciate and imported inflation too will continue in spite of the large fiscal subsidy package. Although GDP growth has improved, it still remains below 2019 pre-pandemic levels. The positive indicators in the short-term for Japan are growth in its exports which touched a record high of ¥8.8 trillion as well as an increase in service sector growth. Lifting of Covid restriction for tourists and the depreciated yen may result in a further uptick in this sector.

While Japan must endure short-term pressures and uncertainties until US inflation eases and the war in Ukraine ends, it is the long list of long-term factors, each adversely reinforcing the other, that are more worrisome: stagnation in GDP growth since the 1990s, deflationary pressures from the lack of aggregate demand, low levels of consumption spending, a secular decline in Japan's consumer confidence index, slow wage growth, declining levels of private sector investment spending, technological inertia, the rising levels of non-performing assets held by commercial banks and to top it all, Japan's demographic changes of a declining and ageing population.

A prolonged short-term recovery will only add to Japan's long-term woes.

Although Japan's problems must not be conflated with those of poverty, there is an ominous feeling that the Japanese miracle maybe reaching its end. If it weren't for its exports, the riposte would have been more definitive.

Lessons for India from the Turkish Lira crisis [1]

The Turkish experience illustrates the repercussions of capital account convertibility on exchange rate volatility and imported inflation that completely obliterates any independence over fiscal and monetary policies.

Within a span of just ten days, between August 3 and August 13, 2018, the Turkish lira (TRY) depreciated by almost 40% to an all-time low of 6.9 TRY/USD. In comparison, Turkey's present predicament seems worse; earlier this year, in February, the lira was below 7 TRY/USD but by December 3, 2021, it had depreciated by almost 100%. While the 2018 crisis was triggered by US sanctions and the expected impact on its exports, the situation is not the same currently. Riding on the recovery of tourism, Turkey reported a current account surplus of USD 1.7 billion in September 2021, as compared to a deficit of USD 2.3 in September 2020. What then ails the lira and what are the lessons for India?

The underlying cause of the crisis is considered to be President Recep Tayyip Erdogan's interest rate policy. Contrary to conventional economic wisdom, Erdogan has consistently batted for low interest rates as a way to tame Turkey's high inflation problem, which has accelerated to 21% (annually). The argument made by him is that low interest rates will lower aggregate demand by reducing government expenditure (on interest payments) and at the same time, encourage private sector investment and production, thereby raising higher aggregate supply. Higher interest rates would instead have the opposite effect on aggregate demand and supply, thereby accentuating Turkey's inflation problem.

In pursuit of this policy, Turkey's current phase of woes began when Erdogan

[1] *Moneycontrol.com, 13.12.2021*

abruptly sacked the hawkish central bank governor, Naci Agbal in March this year when he raised the one-week repo rate by 2% to 19%. The appointment of the more accommodative Sahap Kavcioglu led to a sharp reaction in foreign exchange markets, hammering the lira down by more than 15% on March 22, 2021. Although no immediate action was taken to cut rates at that time, the current account surplus in September 2021 possibly instigated Kavcioglu to lower interest rates. A sharp 2% cut in November brought the repo rate down to 15% but soon resulted in the lira tumbling down to its current level of 13.70 TRY/USD. With Erdogan unwilling to change his low-interest rate policy, the Turkish economy has repeatedly faced a forex crisis, in 2018, 2020 and again this year.

The answer to Turkey's perpetual crisis can be understood with the Fleming-Mundell theory of the policy trilemma wherein they argued that a fixed exchange rate regime, capital account convertibility and independent monetary policy are incompatible. Although the exchange rate of the Turkish lira is not fixed, it is evident that even a semblance of stability in exchange rates is difficult to achieve with full capital account convertibility and independent monetary policy. A slight assertion of independent monetary policy through a lowering of interest rates immediately draws several key economic parameters into a vicious worsening spiral of depreciating exchange rates, rising imported inflation and capital flight.

Since 1989, Turkey allowed the full convertibility of the lira wherein individuals can buy, sell or hold foreign exchange with banks in Turkey or abroad, and even use foreign currency banknotes in Turkey. The rules for export-oriented businesses were also liberalized, allowing them to retain earnings with foreign banks and without any necessity to convert foreign exchange earnings into lira. With this freedom, any anticipation of the depreciation and imported inflation prompts households to convert their savings into dollars and gold. In 2001, Turkey further integrated itself into global financial markets by letting the lira float freely in 2001, only to be followed by a severe recession that was induced by a steep increase in interest rates to stem the collapse of the lira.

Turkey's predicament has clear lessons for India, in particular, the repercussions of capital account convertibility on exchange rate volatility and imported inflation that completely obliterates any independence over fiscal and monetary policies. In spite of highlighting several concerns over full convertibility of the rupee, Rabi Shankar, Deputy Governor of the Reserve Bank of India [RBI] in a recent speech indicated India's inevitable progress towards capital account convertibility: 'the rate of change in capital convertibility will only increase with each of these and similar measures.' Demarcating the role of the RBI as a regulator, he cautions that 'market participants, particularly banks, will have to prepare themselves to manage the business process changes and the global risks associated with capital convertibility.'

Full convertibility puts enormous pressure on domestic companies which have borrowed internationally. Although public debt in Turkey is just about 40% of GDP, its corporate sector is highly leveraged with debt to GDP at about 170% with a substantial portion of this denominated in dollars or euro. European banks are particularly highly exposed to default risks by Turkish companies on account of a depreciating lira. In India, corporate debt stands at about 60% of GDP, while external corporate debt is about 19% of GDP. While this is significantly lower than Turkish levels, the impact on India companies on account of a depreciation of the rupee could be severe, given that a McKinsey Report of 2019 showed that Indian corporates (43%) were under the highest stress to service debt obligations across Asia. While capital convertibility allows greater access of the private sector to global finance, the risks can be cataclysmic not just for borrowers but also for the population-at-large from a depreciating currency and imported inflation.

A recent report from the Institute of International Finance (IIF), has warned that 'sudden stops' in international capital flows – 15.6 billion USD in November 2021 as compared to 115.5 billion USD in November 2020 – are putting enormous pressure on emerging markets to increase interest rates or face a depreciation in their currencies, which are still struggling to recover from the (ongoing) pandemic. India too has witnessed depreciation of the rupee from 73.8 INR/USD to 75.39 INR/USD between November 8 and December 3, 2021.

Global financial integration will mean India foregoing its monetary independence and adhere to the needs and expectations of international capital rather than leveraging it for domestic contingencies and national interests. As rightly pointed by Rabi Shankar, 'further public debate is warranted to continue along this process of capital account convertibility [in India].'

Remembering BR Ambedkar as a monetary economist [1]

This year also happens to be the 100th year since the publication of one of Ambedkar's most notable works in monetary economics, 'The Problem of the Rupee: Its Origin and Its Solution'. Ambedkar argued that the gold exchange standard during colonial India was flawed. While it did restrict private citizens from minting silver to coins, it did not prevent the Indian government from doing so.

Today, the 14th of April, is the 132nd birth anniversary of Dr. B.R. Ambedkar, whose role as a political leader and social reformer has been universally recognised. However, as an economist his contributions may perhaps be less familiar to many. This year also happens to be the 100th year since the publication of one of Ambedkar's most notable works in monetary economics, 'The Problem of the Rupee: Its Origin and Its Solution,' which, as he articulated in the Preface to his book, was an examination of the theoretical basis of the gold exchange standard.

This essay in remembrance of Ambedkar explores his critical economic analysis of, and more specifically, his decisive arguments against the gold exchange standard introduced in India by the British colonial government at the end of the nineteenth century.

A good starting point to comprehend India's modern monetary history is the year 1835 when the English East India Company introduced a common monometallic silver currency, the (new) rupee for the whole of British India. The rupee was essentially a minted piece of silver metal of 92 percent purity weighing approximately 11.66 grams, which would serve as the unit of account and legal tender.

Historically, when several major economies like France, Germany, and the United States were on a silver standard while Britain was on gold (sovereign), international bimetallism had ensured the stability in the price ratio of silver to gold at about 15.5:1 over centuries, tantamount to a fixed exchange rate between gold and silver currencies of the world during that period. However, when countries began abandoning silver in the decades following the mid-nineteenth century, the price of silver declined sharply from around 1870, which consequently led to the free fall in the value of the silver rupee vis-à-vis gold currencies.

A depreciating rupee was considered problematic – not to Indian exporters – but to some very powerful entities: the British Indian government and British officials in India. The former was concerned over the rising silver rupee costs of sovereign (British gold currency)-denominated 'home charges' to be repatriated from India while the latter were anxious that their savings in silver rupees would fetch fewer sovereigns on their return to Britain. In 1893, it was finally decided to put an end to the depreciation of the rupee, which had wholly arisen from the falling price of silver and not because of balance of payments deficits.

The first step in this process was to close the mints to the unlimited coinage of silver bullion into rupees. This essentially meant that the rupees in circulation were either paper or token coin (that had already been issued) passing above its intrinsic value (the bullion price of silver). In other words, the rupee was delinked from the price of silver bullion. The immediate question which then arose was what the rupee would be pegged to given that a fixed exchange rate system – which supported international trade and capital flows by eliminating the risks of fluctuating rates – had to be implemented. Two options were possible: the first, a gold standard or second, a gold exchange standard.

Ambedkar was in favour of the first; a rupee currency fixed in issue (supply) with gold as legal tender. Silver coins were to be gotten rid of. Further additions to the supply of money in India over time would arise from the minting of coins at a fixed rate when gold was imported by way of Indian exports. He was categorical in his criticism of the Fowler Committee report of 1898 – dismissing it as 'classical for its nonsense' – not because it had called for India moving on to a pure gold standard with the sovereign as standard coin, but because it recommended that the 'Government should coin rupees on its own account according to that most naive of currency principles, the requirements of the public.' Ambedkar asserted that any arbitrary expansion of

[1] *Moneycontrol.com, 14.04.2023*

money was destabilizing and by allowing such a possibility, the Fowler Committee had actually paved the way for the introduction of A.M. Lindsay's scheme or the gold exchange standard, which, interestingly, it had dismissed as inappropriate.

Lindsay, however, was confident that although the British desired that the rupee be pegged to gold so that a fixed exchange rate between the rupee and sovereign prevailed, they certainly did not want gold to physically circulate in India (or to leave Britain). The reason was simple: India was known as the sink of precious metals and the world feared that with a perpetual surplus in its balance of payments, gold entering India would be hoarded, causing shortages for coinage and deflationary pressures internationally. Lindsay had therefore conceitedly professed, 'they [Fowler Committee] must adopt my scheme despite themselves.'

Lindsay was proven right as his scheme was adopted in toto. The rupee-sterling exchange rate was fixed at Rs.15 = £1 or Re.1 = 1s.4d. (1 shilling and 4 pennies), which in turn was convertible into gold at a fixed rate of £1 to 7.32 grams of gold. The Indian government was bound to give Rs.15 for a sterling pound but the rupee was convertible into gold only at the discretion of the government. There was no gold coin in circulation in India. Since India usually had a balance of payments (excluding home charges), the rupee could appreciate so that British importers would have been tempted to export gold to India to claim Rs.15 for a sovereign. To overcome this, the Secretary of State for India, agreed to sell 'Council Bills on India' in London at the rate of 1s.4½d., the gold export point for Britain. The Council Bills were also used to enable Indian borrowings in Britain necessary for the railways and other large-scale projects. The lenders would buy Council Bills in London and send them to their Indian borrowers who could claim the amount from the Treasury in India. Moreover, after the payment of home charges, there was no significant imbalance in India's balance of payments so that the exchange rate was not expected to touch Britain's gold export point.

Ambedkar argued that the gold exchange standard was flawed. While it did restrict private citizens from minting silver to coins, it did not prevent the Indian government from doing so. Using the argument that it was being responsive to the needs of domestic industry and trade, the British-Indian government in the position of a monopolist was prone to over-issuing rupees given the difference between the gold price of the rupee and the gold price of silver (the silver rupee was overvalued vis-à-vis bullion). Between

1905 and 1907, the Government of India minted coins to the tune of some £42 million, one of heaviest coinages in world history (until then). Not surprisingly, allegations emerged against government officials and M/s. Samuel, Montagu & Co., merchant bankers and bullion dealers, for manipulating prices at which silver was purchased for coining. This 'fatal facility', Ambedkar argued, was what led to significantly higher rates of inflation of almost 30% in India as compared to Britain between 1900 and until the First World War in 1914, severely impacting India's poor who were already reeling from famines and deindustrialization.

Believing that Indians would hoard gold rather than use it as currency had also prompted John Maynard Keynes to favour Lindsay's gold exchange standard. At the same time, Keynes acknowledged that 'keeping Indian prices stable in relation to commodities rather than in relation to any particular metallic or particular foreign currency' was of paramount importance. Ambedkar opposed this inconsistency in Keynes' view given that gold exchange standard failed in this very aspect. To maintain the price level, Ambedkar unequivocally contended that this was possible only if there were limits to the expansion of money supply: the convertibility of the rupee into gold was necessary not as an end in itself but as a means to control supply of the rupee. The gold exchange standard did not restrict issue of the rupee and an inconvertible rupee had allowed this to happen, resulting in rising price levels in India at the turn of the twentieth century.

By 1917, the impact of the war on the British economy and its currency brought an end to the gold exchange standard.

Looking back, it seems that Ambedkar's views against any possible arbitrary increase in money supply are more akin to the Quantity Theory of Money, and those of Milton Friedman's monetarism. In other words, Ambedkar left little space for fiscal deficits and more generally, fiscal policy. For a follower of Modern Money Theory (MMT) and post-Keynesian thought, this is indeed disheartening. Ambedkar's argument must, however, be seen in its historical context: the world then was operating under a fixed exchange rate regime. The present-day floating exchange rate system provides a higher degree of monetary sovereignty and greater fiscal space; an essential element of 'modern money' and a basic tenet of MMT.

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