Money, Debt, and Deficit

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In my previous paper[1] I had explained in detail the functioning of fractional reserve banking. The essential truth of banking is that the banking system does not require prior deposit of money to be able to lend. Instead, the banking system creates the deposits it lends. Creation of deposit (money) is simultaneous with creation of fresh bank credit. It was observed that reserve ratios act as a circuit-breaker in the endlessly self-repeating cycle of money creation through bank credit. We also noted that reserve ratios directly impact the extent of savings intermediation banks perform. In a monetary system comprising fractional reserve banking and fiat currency, debt and money are two sides of the same coin. This paper is devoted to examining debt as the alter-ego of money.

Literature review

The nature of money as the flip side of debt has been commented upon by a large number of thinkers from diverse callings – economists and non-economists alike. Of these some prominent non-economist thinkers are G. Edward Griffin (The Creature From Jekyll Island (Westlake Village, CA: American Media, 2002, Rev. Denis Fahey (see: *Money Manipulation and Social Order*).

Austrian economists led by Ludwig von Mises are vocal critics of fractional reserve banking. *The Theory of Money and Credit*, by, Ludwig von Mises is a major work on this line of thought. Among the Austrian school economists, Murray N. Rothbard's work, *The Mystery of Banking (2008)* is significant. Robert P Murphy has also posted his views on website of Ludwig von Mises Institute on the subject. Works of Richard Werner and Thomas Palley also presuppose the debt-money connection. Prof Ivan Lovrinović (*Primary Money Creation Channels under Instability*); Cullen O. Roche (*Understanding the Modern Monetary System*), are significant works in this area. There are also numerous discussions on the subject posted in blogs scattered all over the internet. However, probably the only work that comprehensively addresses the issue from the classical angle is the monumental *Money Bank Credit and Economic Cycles* by Jesus Huerta de Soto.

A recent paper titled *Money creation in the modern economy* by Michael McLeay, Amar Radia and Ryland Thomas, published in the Quarterly Bulletin 2014 (Q1) of Bank of England has explicitly admitted the fact that money creation in practice differs from some popular misconceptions and that majority of money in the modern economy is created by commercial banks making loans.

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[1] "*Loans First, Explaining Money Creation by Banks*", www.macroscan.com, (Sep 30, 2013). A revised version of the paper was published in Drishtikon, Vol 5, No. 2 as "From Loan to Deposit: Deposit Creation by Banks and the Significance of Cash Reserves.

In, addition the following articles on www.fractionalreserve.com can also be referred to as lighter literature on the subject addressed to lay readers.

i. Our monetary system ii. Why money disappears when loans are repaid. iii. How Fractional Reserve Banking Leads to Booms and Busts, iv. Is interest repayable? v. Contagion?... Armageddon?... Why?. vi. Banks behaving better shrinks the money supply! vii. Central banks are attempting to stop the money supply falling.

However, none of these works, including Soto's, directly addresses the inevitability of refinancing debts, the link between interest and such inevitability and between economic inequality and the monetary system, which this paper attempts to highlight. The manner in which monetary system influences economic inequalities is an open space for research. The author therefore has not cited any work in this article.

Section 1: Debt as money – two sides of the same coin

The debt aspect of money is best described by its components and sources[2].

Table A: Components and Sources of Money Supply	
Components	**Sources**
1. Currency with public 2. Deposit money of the public	1. Net RBI Credit to Government 2. Net Other Bank Credit to Government 3. Net RBI Credit to Commercial Sector 4. Other banks credit to commercial sector 5. RBIs net foreign exchange assets 6. Other banks net foreign exchange assets 7. Governments Currency Liabilities to the Public 8. *Less:* Banking Sectors Net Non-monetary Liabilities

Essentially, money consists of currency or legal tender and bank deposit[3] denominated in a currency unit. Both are creations of debt – a fact obvious from the sources, all of which are forms of borrowing from banks or the central bank. Banks and the central bank are institutions that create money (which together we refer to as monetary institutions). Debtors of monetary institutions (we refer to them as primary debtors) create money by borrowing the same. It is obvious that for money stock to increase, sources or 'debt' must also rise by an equal extent. Foreign exchange assets are bank deposits or financial claims denominated in foreign currency units, which in turn represents borrowings by foreigners. It is impossible to create money without someone borrowing it.

The process of money creation can be summed up as following:

[2] See RBI data on Money Stock Components and Sources.

[3] Deposits of the public with banks constitute almost the entire deposit money with public, with post office deposits and other deposits constituting a negligible (0.30% as on December 27, 2013) fraction.

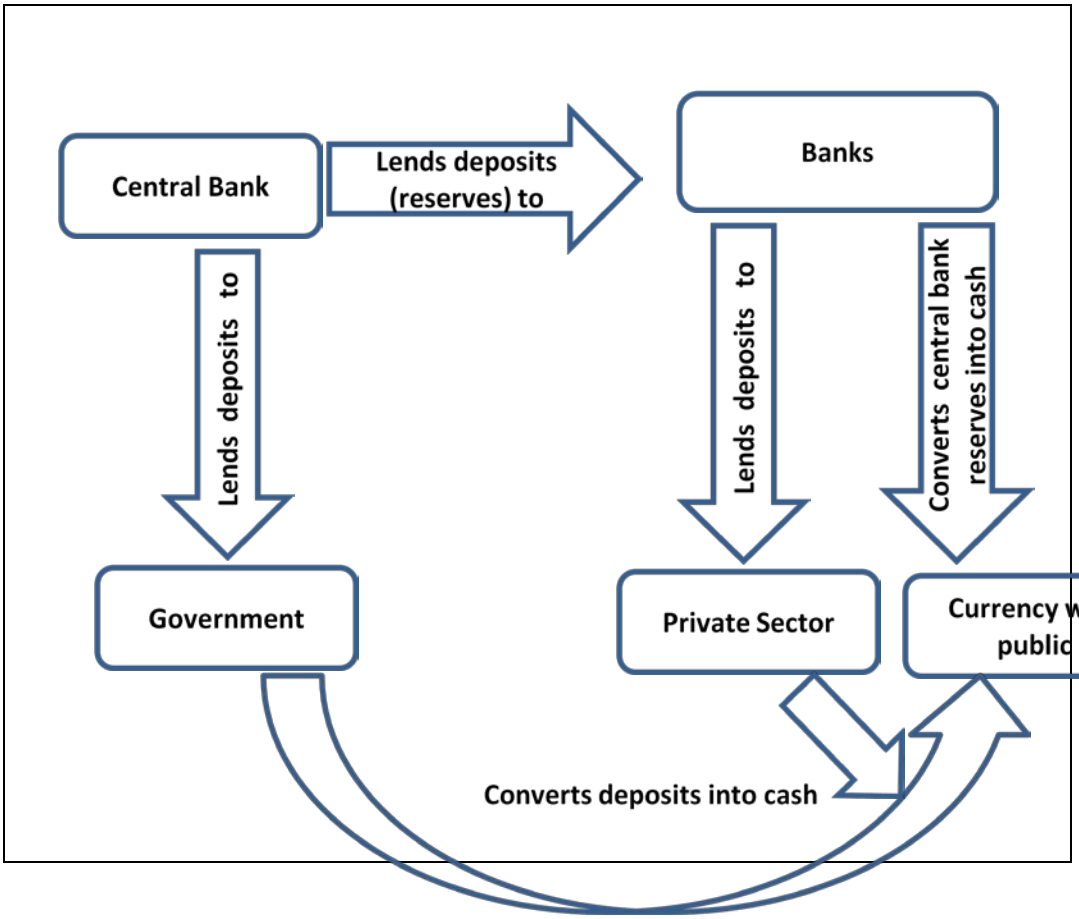
(i) Banks create deposits by lending. Part of these deposits may be converted in to currency by those who own the deposits.

(ii) Central Bank creates 'central bank deposits' by lending these to banks or to Government. In this process accounts of bank/Government maintained with central bank get funded with deposits created by central bank. Central bank deposits held in the accounts of banks are also called bank reserves.

(iii) Banks may directly convert central bank deposits into currency, if they require, by withdrawing cash from central bank.

(iv) Government may channelize deposits held in its account with central bank into bank accounts of private or public persons, which results in creation of bank deposits. In the books of the central bank, deposits flow from the account of the government to the accounts of banks. For example, government may transfer mission funds to their respective bank accounts or public health departments of government may purchase medical supplies from private pharmaceutical corporations, by transferring funds in central bank's account to the accounts of the suppliers.

(v) The bank deposits created as above may be converted, at least partly, into cash



Thus the creation of money begins with either the central bank or the banks by lending deposits they create in this process. It is important to be note that a deposit is a promise to redeem the deposit in currency and currency is a promise to give something of equivalent value in exchange. In public perception nominal value of the currency is almost never

questioned as currency is the legal tender. However, bank deposit owes its acceptability to its convertibility into currency. Banks therefore not only create money by lending it, what they lend is itself a promise to pay cash.

Net non-monetary liabilities (NNML) of the monetary institutions comprise net non-monetary liabilities of the central bank[4] and that of banks[5]. Essentially, NNML are liabilities which do not have any monetary impact. The most significant components of NNML are banking system's equity (capital and reserves) and staff superannuation funds. NNML is a negative entry on the sources side.

We get the balance sheet of the monetary system simply by transferring NNML to components side as a positive entry as below.

Table B: A Balance sheet of the monetary system	
Liabilities	**Assets**
1. Money a. Currency with public b. Deposit money of the public **2.** Banking Sectors' Net Non-monetary Liabilities	**1. Debt** a. Net RBI Credit to Government b. Net Other Bank Credit to Government c. Net RBI Credit to Commercial Sector d. Other banks credit to commercial sector **2. Foreign exchange assets** e. RBIs net foreign exchange assets f. Other banks net foreign exchange assets **3.** Governments Currency Liabilities to the Public

[4] ' These comprise items such as the Reserve Bank's paid-up capital and reserves, contribution to National Funds (NICLTO Fund and NHC-LTO Fund), RBI employees' PF and superannuation funds, bills payable, compulsory deposits with the RBI, RBI's profit held temporarily under other deposits.
[5] NNML of the banks comprise mainly capital, reserves, PF and superannuation funds.

Section 2: Effect repayment of debt (principal) on money and debt[6]

When principal of debt is repaid, it involves extinguishment of both debt and deposit. Debt repayment shrinks monetary system's balance sheet on the one hand, on the other it also shrinks the balance sheet of primary debtors. If all debts were to be repaid in this fashion sooner or later monetary collapse will ensue because of the following. A large part of assets of the primary debtors (including plant and machinery, land) will need to be liquidated to repay the debt. Working capital loans, which are needed on a permanent basis to sustain productive activity, will have to be repaid by sale of inventories. This means the economy itself will have to be partly un-wound. The logical fallout of shrinkage of monetary sector is shrinkage of the real sector. Moreover, as money stock in the system is limited, liquidation of assets means that money must flow into the account of the debtors (wanting to repay their debt) from others. This is almost an impossible condition to fulfil as money from the large sections of the population must be made to flow into the accounts of the primary debtors in exchange of assets that the former may not want to possess. The way out of debt for primary debtors is to sell their assets to foreigners or sell goods and services to foreigners and repay the debts with foreign currency obtained. In this case debts in the monetary system's balance sheet will be replaced by foreign exchange assets[7]. At a practical level therefore most of the old debt of primary debtors is discharged by refinancing with fresh debt. Refinancing[8] of debts is not only fundamental to the survival of the monetary system, in fact, the survival of the economy is predicated upon it.

Section 3: Borrowings by economic agents

When primary debtors borrow from the monetary institutions, they do not necessarily borrow exactly the sum needed to pay interest or repay principal. Fresh borrowings need not even be made in some fixed proportion of existing outstanding borrowings. Certain primary debtors may borrow much larger quantum of money from the monetary institutions than others. The money then gets redistributed among other economic agents through economic processes. These economic processes involve three types of transactions: lending-borrowing transactions, asset sale-purchase transactions, and cost-income transactions. In the first type of transactions money is redistributed through debt contracts. These debts lie outside the monetary system. In the second type of transactions, one economic agent sells her assets to another. Asset sale-purchase type of transactions includes investment of capital (equity) by one agent in the venture of another, since such investment leads to dilution of equity of the investee (equivalent to sale of economic interest). The third type of transactions involves sale of goods and services, in which one economic agent's cost constitutes another economic

[6] This and the following sections focus mainly on banks, though observations made apply to central banks as well.

[7] It is not atypical that monetary collapse leads to large scale transfer of ownership of domestic assets to foreigners.

[8] The term "refinancing" does not refer to a refinancing contract in a legal sense but to the financial inevitability of borrowing fresh deposits in order to repay an existing debt.

agent's income. Through these transactions large sums of money borrowed by relatively small number of primary debtors are redistributed in ways that, by and large, nearly all have enough to pay interest or repay principal[9]. These economic processes create a veil that conceals the debt nature of the monetary system by making it impossible for individual economic agents to see that his or her ability to repay debt is made possible only because some other economic agents have borrowed that money.

Section 4: Effect payment of interest on money and debt

4.1 While the refinancing feature of monetary system can be inferred from monetary system's balance sheet in straightforward way, implication of interest is a little complex. For explaining the process, we denote aggregate deposits as D and currency stock as C, whereas on the sources side we denote aggregate sources excluding NNML as S and NNML as N. We assume no foreign exchange assets and no expenses other than interest.

4.2 From the banking system's point of view, deposits have interest cost (average interest cost: r_C) and debts (assets) generate interest income (average interest earning: r_Y). The total interest earned is given by $i_Y = r_Y*S$. Likewise aggregate interest cost is be given by $i_C = r_C*D$. The net interest income is given by: $NII = i_Y - i_C$. Hence net interest margin is given by: $i = (i_Y - i_C)/S$.

Therefore on a net basis, interest rate on the debts is 'i'. For simplicity, we use net interest margin 'i' in the following analysis, though using separate interest rates for D and S would yield identical results[10].

4.3 We first visualise the effect of interest application and realisation (in that order) on an individual bank's balance sheet and then map the same to the balance sheet of the monetary system. When a bank charges (applies) interest on a loan, it capitalises the interest by debiting (adding) it to the loan principal and accrues income by crediting to profit and loss account (P&L). The effect of this entry on the bank's balance sheet is to increment the outstanding loans on the asset side and reserves on the liability side by the amount of interest. The corresponding effect on monetary system's balance sheet is to increase both the sources (debt) and NNML by an equal amount. It will be observed that though there is an increase in sources there is no increase in money supply, as profit of the banking system (included in NNML) increase. However, interest earned is unrealised, at this stage.

4.5 The monetary institutions realises its debts (both principal and interest) by offsetting the loans with deposits. They arrogate their dues by cancellation of their deposit liability. In order to realise interest the deposits account of the primary debtors will be debited with credit to the loan account for the amount of interest. This means that on monetary system's balance sheet components (deposits) contract. The sources (loans) reset to their outstanding principal

[9] Those who are unable to acquire the money needed to pay the dues on their debt will default.

[10] If payment of interest on deposits is considered separately, the process explained in the following section involve a much larger number of economic agents, which include depositors. The likelihood of money equal to the amount of interest collected from primary debtors coming back to their accounts becomes all the more remote.

values. It will be noted that realisation of interest on debt results in transmutation of deposits into profit for the banking system. *The effect of realising interest, therefore, is reduction of money without reduction in debt.* At this stage the primary debtors do not have enough money to extinguish their entire debt. Though the principal of debt may not become repayable all at once, monetary system will always be short of the money needed to extinguish the debts if no fresh money is created. Moreover, with successive interest cycles, money stock would keep reducing with accumulated profits of the banking system increasing (NNML). The following exhibits demonstrate the effect of interest.

Exhibit-1 Effect of applying (accruing) interest (↑ shows increase, ↓ shows decrease, ↔ shows no change)	
Liabilities	**Assets**
Money ↔	Debt ↑
NNML ↑	

Exhibit-2 Effect of realising accrued interest (↑ shows increase, ↓ shows decrease, ↔ shows no change)	
Liabilities	**Assets**
Money ↓	Debt ↓
NNML ↔	

Exhibit-3 Eventual effect interest (combining the above effects) (↑ shows increase, ↓ shows decrease, ↔ shows no change)	
Liabilities	**Assets**
Money ↓	Debt ↔
NNML↑	

However, when banks distribute profits to shareholders, net interest income is released as deposits.

Exhibit 4 Effect of distribution of profit (↑ shows increase, ↓ shows decrease, ↔ shows no change)	
Liabilities	**Assets**
Money↑	Debt ↔
NNML↓	

4.6 Exhibit 4 is appears to offset the effect shown in Exhibit 3. In reality, however, ownership of money has undergone a change. A part of the money equal to net interest on debt has moved from the accounts of the primary debtors to the accounts of the banks' shareholders. Still, the primary debtors are short of money as they have more debt than deposits. If all the debts were to be called up at this stage, some debtors will default. In fact, if no additional money is created default is guaranteed sooner or later.

4.7 The deposit deficit can be made up if deposit equal to interest somehow travels back from the accounts of shareholders to the account of primary debtors. This travel can take three possible modes. *First*, the shareholders agree to lend their deposits (representing net interest) to primary debtors. These debts will lie outside the monetary system. *Second*, the deposits from accounts of shareholders move to the account of primary debtors as shareholders buy out their assets. *Third*, deposits move to the account of primary debtors through cost-income transactions (sale of goods and services) between primary debtors and shareholders of monetary institutions in which latter makes profit *at least* equal to the amount of interest.

4.8 The implication of the first mode is that debtors create fresh debt equal to interest, albeit outside the monetary system. The second mode implies impoverishment of primary debtors by successive liquidation of assets (which will be the last option from the point of view of the debtor). The third mode implies that both, shareholders and primary debtors, make equal gain from each other through separate sets of transactions: first shareholders gain from debtors by application of interest, and then debtors regain the same amount of money through sale of goods or services. This results in nullification of interest itself. There is no economic justification for the system to engage in transactions that eventually turn out a zero sum game. It is much easier not to apply interest in the first place.

Relaxing the assumptions– effect of non-interest expenses and foreign exchange assets

4.9 We had assumed that: first, monetary institutions have no expenses other than interest, so that their profits would be equal to net interest earned. Second, we had also assumed absence of foreign exchange assets. We now examine the implications of these two items in the monetary system's balance sheet.

4.10 Firstly, monetary institutions have considerable non-interest expenses – mainly administrative and establishment cost (operating cost) and losses on bad-debts. Operating cost involves making payments to large number of economic agents. Thus deposits that were cancelled in process of realising interest from debtors get reintroduced into the monetary system. The effect of payment of operating cost by banks/central bank is similar to distribution of profits, as shown in the exhibit below[11].

Exhibit 5 Effect of operating cost of monetary system (↑ shows increase, ↓ shows decrease, ↔ shows no change)	
Liabilities	**Assets**
Money↑	Debt ↔
NNML↓	

It important to note that when monetary institutions create money to pay for their expenses, they create no debt. So long as their expenses do not exceed income earned, expenses are

[11] Operating cost also redistributes deposits from the accounts of debtors to the accounts to a large number of economic agents, such as employees, service providers etc.

paid for by deposits arrogated in the process of realising interest and other fees from their debtors. Thus a profit making bank do not add fresh deposits when it pay for its expenses. A loss making bank, however, creates more deposits by way of expenditure than what it cancels by way of realising its income – which results in reduction of the banks' NNML. Sustained losses can result in negative NNML for a bank. In a monetary system negative NNML indicates creation of money without creation of debt. This sole exception to the 'money=debt' rule highlights the importance banks and central banks having positive equity.

4.11 Secondly, Foreign exchange assets impact the balance sheet of the monetary system in following ways.

(i) When banks acquired foreign exchange assets by way of realisation of bank credit, increase in foreign exchange assets is matched by decrease in bank credit, which results in debt extinguishment without any effect on the level of deposits. In case of exports, where the costs of exports are funded by banks credit, receipt of export proceeds substitutes foreign exchange assets for debt.

(ii) Where cost of export is not funded by bank credit, realisation of export proceeds is only an exchange transaction leading to creation of fresh money *without creating debt*.

(iii) Where foreign exchange assets are acquired through overseas borrowings by economic agents, there is simultaneous increase in deposits and foreign exchange assets. Though in this situation there is no increase in debt to the monetary system, domestic citizens become indebted to foreigners.

(iv) Where foreign exchange assets are acquired by way of deposits raised by banks overseas, there is simultaneous increase in deposits and foreign exchange assets. Where foreign exchange assets are acquired by way issue of capital by banks, there is simultaneous increase in NNML and foreign exchange assets.

(v) When the central banks purchase foreign exchange from banks, the banks' reserve accounts held with the central bank get funded with equivalent domestic currency. As such, foreign exchange acquired by banks is a source of exogenous deposits. When foreign exchange inflows result in substitution of exchange assets for debt in monetary system's balance sheet (see i above), endogenous deposits are replaced by exogenous deposits.

4.12 As explained above, foreign exchange is a source of exogenous deposit for the banking sector and as such does not generate *indebtedness to the domestic monetary institutions*. However, where economic agents borrow overseas to acquire foreign exchange, they become indebted to the foreigners. Money created by banking systems' acquisition of foreign exchange assets through non-debt contracts does not generate indebtedness within or outside the monetary system. Extinguishment of bank debt with foreign exchange acquired through sale of assets to foreigners or from export proceeds are the only ways to reduce indebtedness to the monetary institutions.

4.13 Now we consider non-interest costs of monetary institutions, which constitute considerable portion of their total costs. Monetary institutions meet their non-interest

expenses out of interest income. As such, when primary debtors pay interest, deposits from their accounts get transferred to the accounts of large number of economic agents (employees of banks, providers of goods and services to banks), including the shareholders of banks. These deposits get transferred to still larger number economic agents through economic processes involving successive payments by cheques or cash. The two ways in which interest can be collected from primary debtors without their being further indebted to them are:

First: moneys out of interest collected from the accounts of primary debtors, travel from the accounts of from innumerable economic agents back to the accounts of the same primary debtors through non-debt transactions. The only way primary debtors can completely avoid borrowing the money needed to pay interest (from the monetary institutions) is if the debtors can achieve the impossible feat of garnering this money (both deposit and cash) from innumerable economic agents through non-debt contracts. If indeed this money were to return to primary debtors, we have to assume an economy where money flows are structured in such a way that all money equal to interest released from the accounts of primary debtors ultimately flows back to their accounts. We believe that it is practically impossible to fulfil this condition.

Second: the primary debtors obtain the money needed to pay interest by acquiring foreign exchange entirely through non-debt creating contracts, namely, by exports or sale of assets to foreigners. The export condition means that *net* export proceeds received by primary debtors equal the amount of interest payable by them. If the primary debtors lend their money to export generating units, it is necessary that interest rate charged from export generating units is at least equal to the interest rate monetary institutions charge from their debtors and that interest is received in foreign exchange.

4.14 We use the notations used earlier and further denote exports by X, import by I and national income by Y. We know that (X-I) is a constituent of Y. We also assume for simplicity that only primary debtors are exporters or importers[12].

In order that primary debtors meet their interest liability entire from foreign exchange, it is necessary that $(X-I) \geq i*S$

Export condition requires a finely planned economy where primary debtors earn foreign exchange via exports equal to interest. Moreover, in an economy where all exporters and importers are funded by bank credit, this condition holds only in a situation of current account surplus. Furthermore, as interest on entire "sources" of money supply is met from export earnings, this condition also implies that a small portion, if any, of the GDP is consumed domestically.

4.15 The above analysis shows the absurdity of the proposition that primary debtors can pay their full interest liability to monetary institutions through non-debt creating foreign exchange flows. We conclude that application of interest creates a condition that the primary debtors, in

[12] This condition can be relaxed. In our analysis it is possible to account for an economy in which importers and exporters borrow from primary debtors, who in turn borrow from banks.

aggregate, must borrow again from the monetary institutions in order to ensure that they do not default on their interest payment[13]. Thus in the present monetary system, interest on debt, or at least a considerable part of it must be met by further debt from banks/central bank. In other words, the monetary system is like a debt-trap. In absence of interest, primary debtors at the aggregate level[14], would not need to borrow to repay principal, as the deposits held by them would be enough to extinguish debt (assuming that they manage to retain the deposits created by borrowing from monetary institutions). Hence, absent interest, the debtors have the option to become debt-free. Application of interest closes the route to debt-freedom and perpetuates indebtedness.

4.16 The above conclusion is jarring but true. A commonsensical explanation of the debt-trap goes as follows. When monetary institutions lend and thereby create money, they create money equal to the principal of the debt. The money needed to pay interest is not created. When interest has to be paid new money is needed. As new money can be created only by new debt[15], new debt equal to interest is created. The metaphor in the footnote[16] is a good fit for the modern monetary system.

From debt into income

4.17 We have shown above that absent interest, primary debtors would not need to borrow. This is based on a highly restrictive condition that the deposits released in the account of the debtors by way of debt either never leave the account or whatever money leaves the account it eventually comes back in entirety. The first condition means that the money is not put to any economic use. The second condition states that the money is used for economic purposes but whatever money goes out, comes right back after a period of time. The economic activities arising from the release of the money result in different kinds of transactions, which in turn entitle innumerable economic agents to hold money as deposit or cash. In this scheme of things the primary debtors are the fountainheads of money – for it is they who create the money by borrowing it. For example when a bank releases working capital loan in the account of a debtor, the same money is used to pay for wages, cost of raw materials etc. Money received by suppliers and workers constitute their income, who in turn hold part of the money. Consequently, the primary debtors never get back the entire money (principal) released by them. This leaves them perpetually in money-deficit condition necessitating refinancing of their debts with monetary institutions. Faster economic growth implies larger nominal income and the need for monetary institutions to pump out greater quantum of money, which require larger borrowing by primary debtors.

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[13] In either case, debtors are required to further borrow the amount of interest in order to remain solvent and therefore the debtors are in a debt trap.

[14] At individual level it is possible for a debtor to have to borrow in order to pay interest. For example, if one debtor lost money in gambling he will have to borrow that money for repaying his debt.

[15] There is one exception to this inevitability; see paragraph 4.10 above.

[16] Suppose banks could create houses at will (instead of deposits). A bank lends you a house with five rooms. The interest on the house is one room per month. Each month the bank takes away one room as interest. After five months you are on the road. You can either file for bankruptcy or borrow another house from the bank, who lends you the same house. But now you are liable for two houses and the interest is two rooms per month! This is essentially how the system of debt-money works.

Section 5: Political economy of monetary system

5.1 Deficit is the money that one needs to borrow. Hence debt and deficit, for all practical purposes, are one and the same. Routine economic discourse tends to display a fixation with public deficit, as if only governments run deficits and deficit itself is something inherently bad. Yet deficit is the soul of money and thus the soul of the economy. Deficit generates traction power for the economy[17]. Since money supply has to expand in tandem with an expanding economy, growth in deficit is the natural outcome of a growing economy[18]. Therefore it *cannot be* that deficit is a bad thing – at least not in the context of the modern monetary system. We do not want to go into the issue of public deficit here. However we note that advocacy against public deficit is based on the postulate that it is better for the society if economic growth in funded by *private deficit* as opposed to public deficit.

5.2 In a system in which money and debt are alter-egos, access to credit can determine access to money and therefore access to real resources. A public deficit constraint (e.g., a cap on GFD ratio) is veritably a constraint of access to resources imposed on the government. A public policy that places a limit on public deficit without any (or lower) limit on private deficit would have distributive effects. Even within the private sector unequal access to credit implies to unequal of access to resources – and therefore, income and wealth.

5.3 Moreover, outcomes of loan default may not be same for all debtors. A defaulting debtor can be lawfully dispossessed of his or her assets. A debtor may have to reduce his indebtedness by selling labour (i.e., out of wages) or by sale of goods or services (out of profits). Another debtor could be given fresh loans to repay the old ones, including interest liability. Thus it is possible that one set of borrowers can indefinitely borrow and expand their assets. Though much of their assets may be charged to the bankers as collaterals, the incomes generated by these assets are generally free from encumbrances. The differential treatment of borrowers – in which one set of borrowers repay debts out of their wages or profits or by dispossession of assets (in case of default), and another set of borrowers who can have their loans refinanced, lies at the core monetary system's political economy. As in the extant monetary system refinancing old debt with new is imperative and natural, unequal access to refinancing can generate inequality of wealth and income.

5.4 It is important to note that the difference between borrowing from the monetary institutions and from other lenders is that monetary institutions lend the money they create by lending. Non-bank lenders merely intermediate money already created. Funding of interest with fresh debt is a matter of a few accounting entries for banks, not for non-bank lenders. For non-bank lenders non-realisation of interest on debt is loss, as they themselves have to

[17] As a thought experiment, imagine a situation when the banks and the central bank have decided to stop all lending for a whole year!

[18] Where economic growth is driven by exports, foreign exchange may become the primary source of money supply. In this situation, indebtedness or deficit of the society will decline. One is tempted to make the same observation for foreign investment as well. A caution is in order here. Foreign investment may dispossess domestic citizens of their assets, rather than create new ones.

borrow the sum at certain interest[19]. As such, non-bank lenders have a much limited capacity to fund interest and would be quick to exercise its right of foreclosure.

5.5 The purpose of borrowing is also important. Consumption debts create debt without concomitant creation of asset and income generation capacity. Therefore, absent income growth from other sources, consumption debt will have to be repaid by fresh debt, liquidation of assets or reduction in consumption.

5.5 In an earlier paper it has been shown that banking system's capacity to create money *ex-nihilo* is real and the only restriction on banks' plutonic power is central bank's reserve requirement. Banks, as generators of money are institutions of the most critical importance in any society. The special nature of banks is recognised by law. Typical prohibitions on banks' buying of real estate (except for its own use), gold and silver (except for trading), lending against the security of its own shares, to cite a few examples, recognise that but for restrictions banks can simply create the money they need to buy up all of earth's resources. This brings up the questions - who should own banks? And what are the implications of banks' debtors themselves owning banks?

We have listed above a few issues that any earnest attempt to understand the political economy money must address.

6. Conclusion

6.1 A monetary system in which money and debt are two sides of the same 'thing', sustaining the monetary system is predicated on two fundamental conditions: (i) that old debts are repaid with new debt and (ii) that interest on existing debt is paid out of fresh debt. The way out of refinancing and debt-trap is to replace debt in domestic monetary system's balance sheet with foreign exchange assets. This requires that primary debtors have non-debt creating foreign exchange inflows equal to their interest liability, which we noted is practically absurd.

6.2 The set of conditions for debt freedom through acquisition of foreign exchange is highly restrictive and impractical. Further, trade imbalances resulting from export focused strategy of one nation will sooner or later be watered down by politico-economic repercussions from the rest of the world. And let us not be oblivious of the fact the foreign exchange itself is money borrowed by some someone from a foreign monetary system. *Globally, there is no escape from the debt-trap that the debt-money imposes.*

6.3 In this debt-money system a few large debtors borrow most of the money from the monetary institutions. The money thus borrowed gets redistributed among innumerable economic agents by way of lending-borrowing, investment and cost-income types of economic transactions.

6.4 The political economy of money depends on issues such as (i) how much of money is created by public deficit vis-a-vis private deficit (ii) inequality in access to borrowings

[19] A non-bank lender can also fund the interest liability of his borrowers if he is able to fund his own interest liability.

within the private sector and (iii) inequality in access to refinancing of debt-principal and interest. All these factors determine access of different sections of the population to productive resources and hence the manner in which wealth and income are eventually distributed.