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Public debt management of government of India and fiscal indicators for sustainability of public debt

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Abstract
Sound and prudent debt management policy as very important from the decision of government revenue and expenditure programme. Mismanagement of public debt is responsible for higher deficit of the government budget both in terms of fiscal deficit and primary deficit and that leads to the further debt spiral of the govt which is popularly known as debt trap. For the better management of public debt it is essential to formulate a policy that leads to the proper coordination between fiscal and monetary measurement of the government, proper implementation of FRBM act and maintain proper exchange rate policy for the repayment of external debt. debt management is not only necessary for maintaining fiscal discipline of the country but also to raise the credibility of the government for the further debt consolidation.

Keywords: liquidity adjustment facility (LAF), shadow economy, non-tax revenue (NTR), foreign finance, financial responsibility and budget management bill (FRBM)

Introduction

Debt formation is a natural and expected by product of economic activity. Different agents in an economy, such as individuals, businesses, and governments, make decisions about how much to spend, consume and invest. When one of the agents' incomes exceeds his / her consumption, there is a surplus. On the other hand, when some of the agents decide to spend and invest in excess of their income, they must supplement their income with borrowed financial resources. This shortfall or deficit must be filled or financed which necessitates the creation of debt. When the government's expenses exceed its income, it is necessary to issue public debt as a financial instrument. The shortfall can then be covered through foreign and domestic financing. Foreign financing is supplemented by domestic financing. It is possible that foreign money will not always be available. Even if foreign finance is available, it may not be sufficient to cover or restrict the fiscal deficit, because external debt is subject to other financial risks.

When a market has matured, the domestic market is the most reliable and thus most utilised source of finance for public debt. It has recently been urged that public spending be preserved while inefficient spending be cut. Several options for reducing government spending were considered, but they proved to be politically unviable. As a result, it becomes clear that additional funds are required to meet the rising costs. In such circumstances, public debt is the soft option for the govt. A modern government must perform a wide range of political, social, and economic functions.

These functions, notably economic activities, have grown dramatically throughout time, both in terms of intensity, breadth and responsibility. However, since the start of economic liberalisation in 1990-91, the role of the federal and state governments in economic operations has decreased, while public Spending has skyrocketed incorporated with public debt.

The main objective of debt management is to minimize the cost of borrowings over the medium to long run, consistent with a prudent degree of risk and to create confidence among the lenders. To achieve the minimization of cost, promotion and development of efficient primary and secondary market for government securities are also important and complementary objectives for debt management vis a vis the exchange rate stabilisation is pivotal for the management of external debt. Interest rate is very important for future debt burden determination and debt formulation in future.

Hence, Public debt management can be explained as the process of executing a strategy for managing the government's debt to raise the required number of borrowings and to minimise risk for further debt. This may be expressed as a financial long-term target for the stock composition of the debt referred to as the strategic benchmark. The policy instrument is medium to long-term debt, and the composition is managed through new debt issuance, as well as changing the composition of existing debt through swaps, debt buybacks and exchange offers. Debt management is essential both for internal and external cases. In India though the share of internal debt is comparatively very high but external debt management is very important for the maintain of forex reserve. Gradually, interest rates evolved to become mostly market determined now a days when India entered into new economic regime after 1991. With improvements in settlement and delivery practices, the secondary market in government securities had become active. The Ways and Means Advances (WMA) which freed monetary policy from fiscal considerations and the rise of a flexible exchange rate which freed

monetary policy from exchange rate considerations, opened up the possibility of an autonomous monetary policy that works to stabilise the business cycle.

In this new environment, monetary management, in particular, the use of interest rate instruments, may come in conflict with the debt management function of minimising the cost of government borrowings. While monetary management has become increasingly market oriented, there are different questions in regard to RBI's operations and functional independence. RBI is a major investor and creditor in government securities, its market interventions through open market operations, liquidity management operations, through cash reserve ratio (CRR) and liquidity adjustment facility (LAF) and other monetary policy instruments are to be considered as economic weapons of by debt management instruments.

There is a dire need of a fiscal and monetary coordination of govt. mechanism through these channels for better debt management. Additionally, RBI is also the banking regulator, determines the credit regime of the commercial banks and exercises control over investment proportions of commercial banks in form of quantitative and qualitative instruments. The functions of debt management is maintained by the government and RBI because the govt. looks the fiscal policy and the RBI formulates the monetary policy. No serious attention has been paid thus far to issues that are closely linked to debt management, such as cash and investment management. This document argues that the advantage of an independent DMO lies in freeing RBI of debt management considerations when performing functions of monetary policy and bank regulation. By unifying the debt management function, and efficiently linking the cash and the investment management function of the government, there will be improved information, analysis and thus decision making. With specialised human resources at its disposal, such a DMO can contribute to a more effective interface with the market resulting in cost efficient management of government borrowings.

Public Debt is broadly divided into internal and external debt on the basis of source of debt. The former is insider debt and the latter is outsider debt which is raised from outside of the territory of India and is predominantly borrowed in three currencies namely SDR, USD and Yen (about 96% of total external debt) and 4% is borrowed in Euros. States in India cannot issue external debt and therefore, the distinction of debt into internal and external is only relevant for the Centre. External debt as of end-March 2018 was 6% of total Centre liabilities and was about 1.5% as share of GDP. Internal debt in 2018 stood at 78% of total Central liabilities and about 38% of GDP.

The country's public debt surged from 32.1 percent of GDP in 1952 to 76.7 percent in 2004, owing primarily to domestic debt, which increased from 30.8 percent to 74.9 percent over that time. The path of national debt growth shows that external debt increased significantly until 1971, then declined, whereas India's domestic debt has been gradually increasing since 1980. Domestic debt increased from Rs.31.0 billion in 1952 to Rs.22,702.4 billion in 2004, with an average annual growth rate of 13.4 percent. This is not only alarming, but it should also be noted that the annual growth rate of debt was much higher than the annual rate of growth because the Indian economy was still struggling with Hindu rate of growth at that time. Domestic debt grew at an annual average rate of 9.3% from 1952 to 1960, 8.6% from 1961 to 1970, 12.6% from 1971 to 1980, 19.3% from 1981 to 1990, 15.6 percent from 1991 to 2000, and 16.0 percent from 2001 to 2004. During the same time period, annual average growth rates in nominal GDP were 5.3 percent, 10.6 percent, 11.1 percent, 15.0 percent, 14.8 percent, and 9.4 percent, respectively, while the average was 11.4 percent. Thus, except for 1961-70, domestic debt growth has outpaced GDP growth in all periods, which is worrying and from an economic standpoint, unsustainable and extremely undesirable. The tenacious Domestic debt continues to expand at a faster rate than GDP, implying a bigger debt burden and increased government liabilities for future repayments.

Table 1: Debt GDP ratio of India

Public Debt as a percentage of GDP			
Year	**Domestic debt**	**External debt**	**Total Debt**
1952	30.8	1.4	32.1
1960	42.2	3.6	45.8
1970	35.8	15.5	51.3
1980	42.3	9.2	51.4
1990	55.5	5.8	61.4
2000	59.2	3.3	62.2
2010	48.99	18.51	67.5
2020	38.13	20.6	58.7

The major cause of rising domestic debt and its utilisation to finance revenue deficit, is the rigidity and the limited scope for further expansion of the tax receipts and low nontax revenue to meet the growing expenditure mainly non-developmental expenses and current account expenditure. The most important factor for the low tax GDP ratio is considered to be narrow tax base.

There are a variety of reasons making the tax bases narrow which are the fragmented Constitutional assignment, wide ranging exemptions, concessions and deductions, complications and ambiguities in the tax laws due to multiplicity of objectives assigned to tax policy resulting in large and increasing amounts held in disputes, mechanisms of the multinational resulting in base erosion and profit shifting, organizational shortcomings and the poor capacity of tax administration including the information system to effectively administer and enforce the taxes. Main causes for the low tax collection and stagnant tax GDP ratio are Constitutional assignment of taxes, higher contribution of primary sector, large share of informal sector, low per capita income, large quantum of exemptions, shadow economy, Non - GST regime (before 2017).

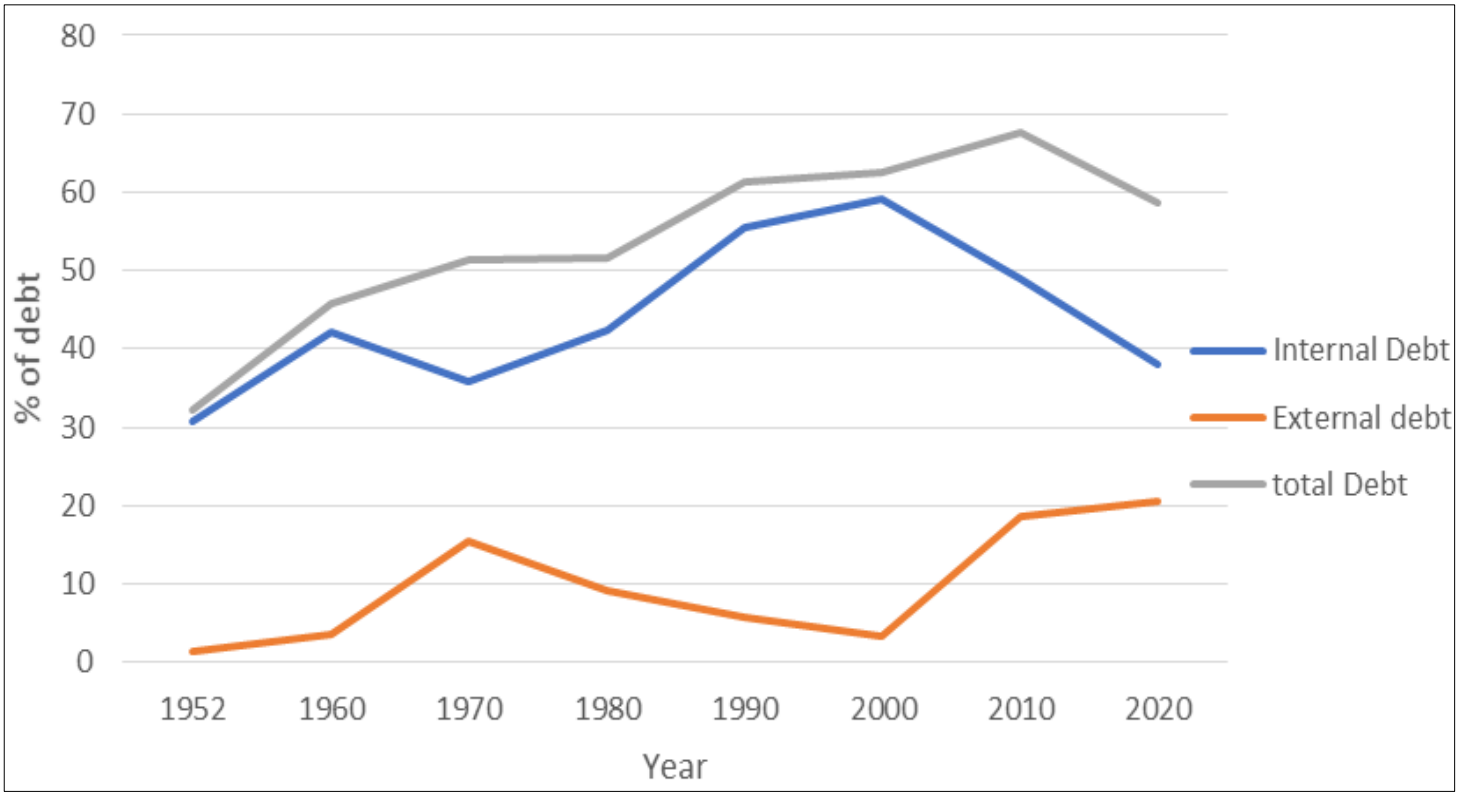

Fig 1: Debt as % of GDP

From table 2, it is clear that the country's internal debt has fluctuated, ranging from 30.8 to 59.2 percent of GDP. However, there has been a notable change in the external sector during this time, with almost a 15-fold increase in external debt in the 1970s, as well as the cumulative impact of the Cold War. As a result, there has been a remarkable increase in external debt for India for the import of capital goods, engineering goods, pharmaceutical products, and other items.

Although low, at 14.5 to 17.1%, the tax-to-GDP ratio has been constant for nearly three decades, owing to non-taxing of the agriculture sector, inadequate taxation of the services sector, and widespread tax evasion and avoidance. The restructuring of indirect taxes, particularly excise and customs, has slowed tax revenue growth (Singh, 2005). Non-tax revenue as a percentage of GDP remains low at 4%, owing to decreasing user fees, loss-making public firms, and low returns on public sector investment.

Table 2: Tax GDP ratio of India

Year	Centre			State			Combined		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1950-60	1.57	2.77	4.33	0.65	1.69	2.34	2.22	4.46	6.68
1961-70	1.93	4.49	6.42	0,44	2.48	2.92	2.37	6.97	9.34
1971-80	2.21	6.21	8.42	0.26	3.71	3.97	2.47	9.91	12.39
1981-90	1.96	7.77	9.74	0.20	4.79	4.99	2.17	12.56	14.73
1991-00	2.64	6.21	8.85	0.16	4.97	5.13	2.80	11.18	13.98
2001-08	4.43	5.46	9.89	0.15	5.57	5.72	4.58	11.03	15.61
2008-15	5.55	4.50	10.05	0.15	6.18	6.33	5.69	10.68	16.37

Source: Public Finance Statistics, Ministry of Finance, Govt. of India.

It was thought that increasing the proportion of direct taxes in the entire budget would be beneficial. According to the theory, the optimal tax rate schedule is determined by the distribution of abilities and drops as income rises. If there isn't any, the search for the second best optimal in the case of lump-sum taxes reveals that increasing The use of income tax rates to tax persons with high ability could result in disincentives in their quest for more money. Attempts to establish a fair tax system in emerging countries like India have always proven difficult. An ideal tax system would raise the government's required revenue in a timely manner without having a significant impact on investment decisions or economic activity. However, establishing an efficient tax system in a growing country like India, where a substantial number of people continue to work in the unorganised or informal sector, where cash transactions still dominate economic activity, is not a simple undertaking.

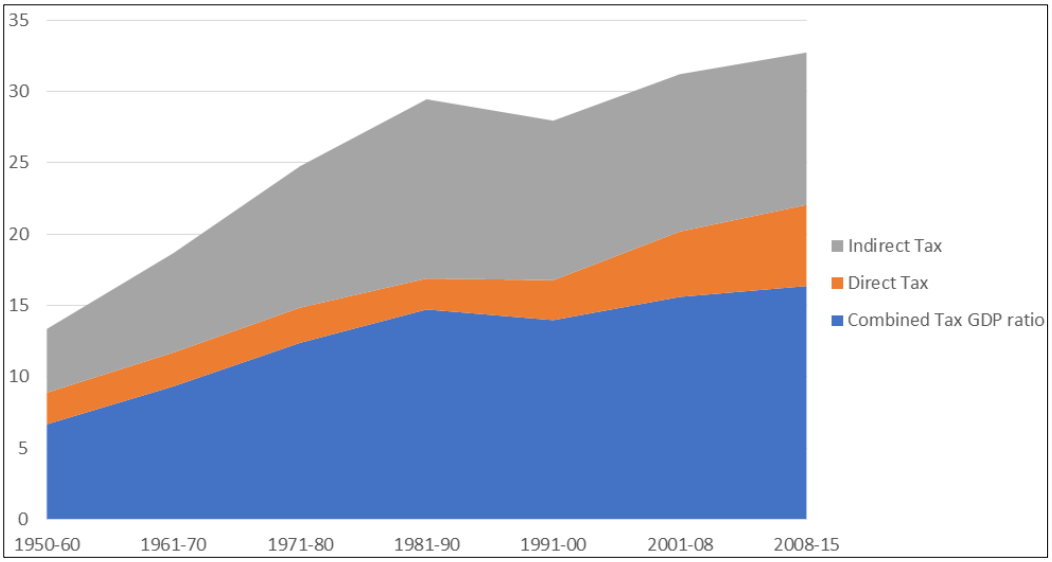

Fig 2: Tax GDP in India

Methodology

The study is done to analyze the impact of government debt management and for the purpose secondary data and reports are used, which are collected from published economical and commercial reports, different journals, RBI annual report, research articles and websites of financial institutions and most importantly annual budget statement of the Govt. of India (GoI). After judicious evaluation of government borrowing and its efficient debt management and cash management impacts, suggestions and recommendation are made. The outcome of the study depends on the selected period which may differ from other analysis due to the variation of choice of data section. Efforts have been undertaken to identify the issues that are preventing the increase of debt discipline of the Union Govt. Policy imperatives are presented for investigating the potential for streamlining rate structures and as a result, enhancing the Govt. of India`s overall budgetary situation as well as resource utilisation efficiency. It also investigates problems with the government's debt service.

Non - Tax Revenue (NTR) of the Govt of India

Non-tax revenue sources are far more diverse than tax income sources. Royalties, mining rights fees, dividends on government investments in state-owned firms and stock portfolios, sovereign wealth funds, and government participation in joint ventures with private operators are just a few examples. Additional sources include trade licences for commercial establishments, construction permits, and fees for registering or issuing birth, marriage, and death certificates. User and service fees are also significant, and they are assessed on leases for government buildings or other venues, as well as school and university attendance, hospital admittance, and visitors visiting museums and parks. Mining royalties on the extraction and sale of oil and minerals are a major source of revenue for resource-rich governments, whereas administrative fees, fines, and other service-related revenue sources are more common in mineral-poor countries. Mobilizing resources through non-tax reforms achieves the dual goals of a more rational non-tax structure and more resources to accomplish economic growth. The irrational structure of non-tax sources has negative economic consequences that undermine growth goals. From an economic standpoint, one must consider the goals of equity, efficiency, and neutrality, as well as the impact these goals have on the economy's overall growth. To achieve these goals, one frequently adopts an economically sensible structure of non-tax sources, which may or may not be politically acceptable. As a result, a democratically elected government must strike a balance between the two.

The fundamental aspect for development is revenue mobilisation through NTR resources when tax revenue becomes inelastic. The NTR resources are focusing more on increasing revenue efficiency and effectiveness. When contrasted to taxes, NTR has a few advantages. They lack the deterrent potential that typically comes with high tax rates. They do not address the myriad administrative issues that developing countries have in administering taxes, particularly direct taxes on income and wealth. The payment of NTRs is required in order for users of the government's different services to gain control over them. Upender (2008) estimated tax buoyancy for the country, which was just above the unity during pre tax reform period, is less than unity during post tax reform period evincing the fact that the gross Tax is relatively inelastic. Average propensity to tax is declining with the increase in Gross Domestic Product during post tax reform period. Thus, the estimates of gross tax buoyancy during pre- and post- tax reform periods are not stable.

Table 3: Tax and Nontax Revenue of the Central Govt.

Year	Tax Revenue	Non Tax Revenue (NTR)
2001-02	66.3	33.7
2002-03	68.7	31.3
2003-04	70.9	29.1
2004-05	73.5	26.5
2005-06	77.9	22.1
2006-07	80.8	19.2
2007-08	81.1	18.9
2008-09	80.2	19.8
2009-10	77.6	22.4
2010-11	76.1	23.9

Source: Budget Documents of the Union Govt.

Kaur and Gursimran (2010) suggested that tax revenue as well non-tax revenue of the Central Government had grown at the same rate of 15 percent per annum in the pre - reform period and were higher than that of post reform period. So, they suggest that there is an urgent need to pay special attention to augment revenue receipts from tax as well as non-tax sources in order to tackle fiscal crisis. The country's structural reforms in tax management have sparked widespread calls to lower the amount of subsidy and where possible, to cover the cost of public services through reasonable pricing. The common consensus is that public services that are "free of user charges" should not exist. The user fees should be determined by the user's economic situation as well as the nature or type of the commodity. This should be done in such a way that the cost is covered and the market price of the item does not lead to overuse of such services and waste of limited resources.

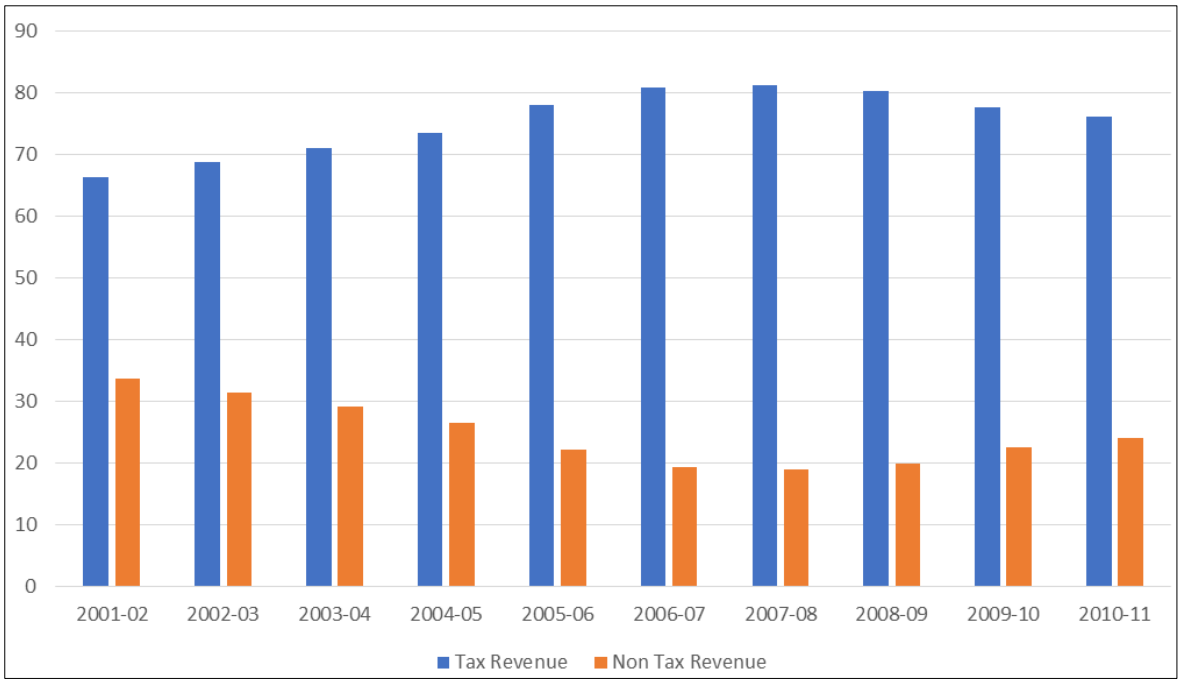

Fig 3: Tax and Non Tax Revenue

So far, the pandemic year 2020-21 has posed fiscal challenges for the Indian economy, with additional spending requirements aimed at ensuring basic means of sustenance and livelihoods for the vulnerable, relief measures for the MSME sector, accommodating additional health infrastructure and services to combat COVID-19, and demand-boosting measures. During this time, the government maintained a well calibrated expenditure management and debt policy.

Table 4: Debt Composition of GoI; (Rs. In Crore); Data Source: Status Paper on Govt. Debt; MoF

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2917-18
Public Debt	2945992	3553519	4096570	4615250	5104675	5711424	6149818	6603933
Internal Debt	2667115	3230622	3764566	4240767	4738291	5304835	5741710	6180027
Marketable Securities	2283720	2860805	3360932	3853594	4309003	4728297	5049107	5410429
Dated Securities	2148851	2593770	3061127	3514459	3959552	4363602	4714305	5060536
Treasury Bills	134869	267035	299805	339134	349451	364695	334802	349884
Non Marketable Securities	383395	369817	403635	387173	429288	576539	692602	769607
14 Days intermediate securities	103100	97800	118380	86816	85678	121127	156570	156570
Compensation and other bond	32495	20208	15326	15117	14930	13935	25108	27013
Securities issued to Int. Financial Institution	29315	29626	32226	35181	46395	106726	108740	108432
Securities against Small Savings	218485	208183	216808	229165	261391	313856	381291	456698
Special Sec. POLIF	0	14000	20894	20894	20894	20894	20894	20894
External Debt	278877	322897	332004	374483	366384	406589	408108	423897
Public Account Other Liabilities	587957	599265	611516	724936	763217	815825	857442	849102
National Small Savings Fund	42552	64734	80516	110039	103396	130320	142548	60543
State Provident Fund	111947	122751	133672	143425	155334	167193	184938	194193
Other Fund	304697	277904	257424	315421	315630	319800	321857	316227
Reserve Fund and Deposits	128762	133877	139904	156051	188857	198512	208099	278139
Bearing Interest	(70421	74413	83871	95479	108767	124240	128981	132870
Not Bearing Interest	58340	59464	56033	60572	80090	74273	79118	145268
Total Liabilities	3533950	4152784	4708085	5340186	5867892	6527249	7007259	7453035

	Memo Items							
Securities Under MSS	0	0	0	0	0	0	0	0
Dated Securities	0	0	0	0	0	0	0	0
Treasury Bills	0	0	0	0	0	0	0	0
External Debt Historical Exchange Rate	157639	170088	177289	184581	197514	210262	228259	240924
Securities Issued by the State to NSSF	526063	517277	517221	519145	543499	571049	538651	622953
Total Liabilities	3938774	4517252	5070592	5669428	6242521	6901971	7366061	7893015

At the end of March 2017, the Central Government's internal public debt was 37.8% of GDP, accounting for 93.4 percent of overall public debt. At the end of March 2017, marketable instruments (dated securities and treasury bills) accounted for 87.9% of internal Public Debt (82.10 percent of Public Debt and 71.3 percent of overall liabilities). The majority of these instruments have a fixed rate and tenor. The Central Government's internal debt (57.4 trillion, or 37.8% of GDP as of end-March 2017) is mostly made up of fixed tenor and fixed rate debt.

Treasury bills are bills issued by the government of the United States. As at the end of March 2017, securities (valued at $47.1 trillion, or 31.0% of GDP) Accounting for 76.7 percent of the national debt, Treasury bills (3.3 trillion dollars, or 2.2% of GDP) accounted for 5.4% of the national debt for India. Treasury bills are issued to fulfil the government's short-term cash needs, while dated securities are issued to raise longer-term funds to pay the fiscal deficit. All marketable debt is issued through auctions, which are held on a regular basis and are announced in half-yearly and quarterly auction calendars. External debt (4.008 trillion, or 2.7 percent of GDP as of end-March 2017) accounted for 6.7% of the Central Government's total Public Debt. The majority of the external debt comes from multilateral organisations such as IDA, IBRD, ADB, and others, with the remainder coming from formal bilateral agencies. International capital markets are not used for borrowing. The entire external debt was designed to be long-term, with a large portion of it having fixed interest rates.

Debt risk

When debt is issued, there are always financial jeopardy. They appear to be linked to the various types of debt that are issued. A summary of various dangers is provided, together with an explanation of how and why they emerge, as well as the potential repercussions. Interest rate risk, refinancing risk, currency risk, and exchange rate risk are four of them. Interest rate risk is built into existing floating-rate debt, and it's as easy as having increased financial costs if interest rates rise. Refinancing risk originates from the likelihood of a hostile capital market environment, in which the government would have difficulty rolling over its maturing debt in favourable terms. Currency risk is the risk of holding or incurring debt in a foreign currency other than the one from which the sources of income or financing typically come. As a result, unanticipated changes in the exchange rate between the two could result in significant financial expenditures.

Interest rate and currency rate changes which affect interest and redemption costs are commonly associated with market concerns. Market risks associated with the Central Government's outstanding debt have been assessed in terms of interest rate changes and the cost of market borrowings using indicators such as the fixed to floating rate debt ratio, the average time to re-fixing, the percentage maturing in the next 12 months.

Despite rising borrowings over time, the weighted average coupon has stayed relatively constant. The weighted average coupon of outstanding securities has varied between 7.81 percent and 8.55 percent over the last ten years, peaking at 7.99 percent in 2016-17. At the same time, the interest payments (IP) to revenue receipts (RR) ratio has been declining over time. During 2016-17, the IP/RR of the Centre was 33.93 percent, down from 53.4 percent in 2001-02.

The rollover risk primarily refers to the prospect of rolling over debt at a very high cost, as well as the failure to rollover debt totally or partially in extreme situations. The rollover risk is more relevant in the case of public debt in EMDEs, as they typically have big fiscal deficits and debt due for redemption during the year, resulting in larger gross borrowing requirements.

When market circumstances are volatile and big amounts have to be rolled over, rollover risk becomes increasingly critical. Indicators like the rising share of short-term debt in overall debt show the increased likelihood of a rollover. Rollover risk is addressed in India by extending maturity, limiting short-term debt issuances, and imposing yearly issuance limitations for maturity buckets and individual Government securities. These restrictions are evaluated on a regular basis, taking into account the macroeconomic situation, variations in cash inflows, and the government's financial management concerns. When debt is denominated in a currency other than the native currency, exchange rate risk arises. In terms of domestic currency, depreciation could raise debt payment costs. In the instance of the government, the debt would be denominated in a currency other than the country's, despite the fact that the government's income, taxes, and other revenues are all denominated in the domestic currency. In terms of debt management, interest rate risk could be mitigated by gradually substituting fixed-rate debt with floating-rate debt.

By achieving a cautious maturity profile and avoiding significant sums of debt maturing in the same year, the refinancing risk can be mitigated. Currency risk can be minimised by avoiding incurring debt in a currency other than the one used to receive inflows. Finally, the most obvious way to reduce exchange rate risk is to avoid having debt denominated in a foreign currency, at least in excess of the currency's predictable income. One crucial approach would be to substitute international debt for domestic debt as much as possible. On the other hand, this action implies the creation of a local debt market.

As a result, the maturity profile of debt, as well as its composition, cost, and share of foreign debt, are essential characteristics to consider when assessing sustainability. India's public debt is mostly funded by local resources, mostly through fixed-rate securities, and it has a sizable domestic institutional investor base. These variables help debt to be more long-term sustainable. Rollover risk is limited by India's debt's extended maturity profile.

Debt management

The analysis of the implications of expanding commitments necessitates a study of the composition of domestic debt, which is a key component of India's fiscal policy. Internal debt, modest savings, provident funds, reserve money, and deposits are the key components. The Central Government's internal debt is secured by the Consolidated Fund of India, whereas State Governments' debt is secured by the States' Consolidated Fund. The Indian Constitution allows for a limit on internal debt to be imposed at both the Centre and the States. Other debt instruments make up a modest portion of the overall debt market. Government securities, state loans, public sector undertaking bonds, mutual fund units, financial institutions, T- Bills with maturities of
364 / 182 / 91 days, corporate bonds, and other local debt bonds make up the Indian debt market, which is not as developed as the equity market and also not as transparent. Government securities dominate in the Indian debt market, with corporate, financial institution, and bank debt accounting for only a minute percentage of the total debt market.

Loans from foreign governments and multilateral institutions are presently included in external debt. The central government borrows foreign currency through international and bilateral institutions as part of its Official Development Assistance (ODA). Direct borrowing from international capital markets is not possible. Kelkar (2004), on the other hand, points out that this definition of external debt ignores proxy foreign exchange borrowing in the form of contingent liabilities. For example, the central government has a significant impact on foreign exchange borrowing by para-statal organisations like the State Bank of India (SBI). SBI has borrowed in foreign currency through a variety of instruments (e.g., the Resurgent India bonds issued in 1998) and RBI have placed restrictions on the bank's use of the funds raised. Currently, multiple divisions within the Ministry of Finance (MoF) and RBI handle actions linked to sovereign external assistance. The Multilateral Institutions Section and the Bilateral Cooperation Division of the Ministry of Finance (which deal with External Commercial Borrowing (ECB), the Asian Development Bank (ADB), Europe, and Japan), as well as the IMF Loans division of the Reserve Bank of India (RBI), are among them. The External Debt Management Unit of the Ministry of Finance's Department of Economic Affairs compiles and publishes statistics on India's external debt, while the AA&A, DEA offers back-office assistance to the different activities relating to India's external debt. From signature through ultimate re-payment, the AA&A manages the whole life cycle of an external debt agreement. The Working Group believes that the current system of external borrowings via external aid should be changed. The central government should review the cost-effectiveness of borrowing abroad and build a sovereign benchmark in the external market as the Indian economy integrates with the global economy, it says. This liberalisation is projected to increase market discipline on government borrowing and cut borrowing costs. This would also allow the private corporate sector to borrow at a lower cost. Managing external liabilities, on the other hand, would necessitate greater institutional capability. Indeed, we could go so far as to claim that borrowing is a necessary evil. DMO might be the specialised agency in charge of these external liabilities. The Working Group suggests that the AA&A, which is now under the DEA MoF, be combined with the DMO once it is operational to help the DMO in fulfilling this mission. This means that until the AA&A and the DMO are integrated, the external debt management function should be handled by the MoF.

The Indian government introduced the Fiscal Responsibility and Management Act (FRBM) in 2003, with the primary purpose of establishing financial discipline in order to minimise the fiscal imbalance. The act established a glide path to keep the fiscal deficit within 3-4 percent of GDP in the medium term, while also limiting the primary deficit's impact on debt-GDP dynamics. A committee led by N.K. Singh was formed in 2016 to recommend amendments to the Act. This group recommended that general government debt be used as the principal aim for fiscal policy, with a 60 percent debt-to-GDP ratio for the federal and state governments by 2023. (Compromising 40 percent for the Centre and 20 percent for the States). We show that the FRBM's implementation in 2003 had a positive impact on India's debt trajectory: the primary deficit's contribution to the change in the debt-GDP ratio during 1991–2003 was 20.9 percent, compared to 10.8 percent in the period after the act's implementation (2003–2018). When seen over a longer period of time (from 1980 onwards), the primary deficit's contribution to the rise of India's public debt-to-GDP dropped until around 2008, but began to rise again in the 2008–2018 period, indicating a mixed performance of the 2003 FRBM Act in the post-liberalization period.

As a result, the Working Group emphasises the significance of explicitly defining the cost-cutting and risk-management objectives for government debt managers, as well as the inherent short-run trade-off between these two goals. If short-term interest rates plummet, the government debt manager may be enticed to issue more short-term debt than long-term debt. In the absence of adverse-shocks, this could be a viable debt-management method. However, negative global or domestic events, such as volatility in international financial markets, a shifting political environment at home, or poor macroeconomic performance, can all lead to a re-evaluation of the country's credit rating. In developing countries, where financial markets are weak and government revenue and expenditure estimates are imprecise, coordination across fiscal, monetary and debt management tasks is even more important. The government's funding alternatives are restricted, and cash requirements are increasing that limits the central bank's independence. To ensure optimal outcomes, the issuing of government securities by a separate debt office should be closely coordinated with the central bank's open market operations. As a result, although being separated, the central bank's role in public debt management would remain critical. The central bank, as a government securities issuer, establishes regulations and procedures for selling and delivering securities as well as collecting government payments. The central bank acts as a fiscal agent, making and receiving payments such as interest and principal service. It could provide policy inputs on the design of the debt programme, the mix of debt instruments, and the maturity profile of debt stock as an adviser to the government and the debt management. These inputs will be useful in maintaining the overall debt program's stability, facilitating market smooth functioning, and creating a stable environment in which to execute monetary policy.

Various committees of the RBI work to coordinate debt management activities with fiscal authorities. The Cash and Debt Management Committee, which includes officials from the MOF and RBI, meets on a regular basis to discuss the practical aspects

of the Central Government's market borrowings. A semi-annual meeting comprising officials from the MOF, DOF, and RBI discusses issues affecting state governments. The Technical Committee on Money and Government Securities meets on a regular basis and advises the RBI on the development and regulation of the government securities market. It is made up of representatives from the market, academia, government, banks, and the RBI. The Governor (RBI) chairs the High-Level Committee on Capital Markets, which oversees general developments in the capital market, including the capital market. Internal and mandatory external audits are conducted on the RBI's debt management function. The accounting for debt management operations is done by the Comptroller General of Accounts, and the audit is done by the Comptroller and Auditor General of Accounts, a constitutional body. Internal debt management functions are disclosed in the RBI's statutory Annual Report, while external debt management functions are published in the RBI's Annual Status Report on External Debt, both of which are given to Parliament.

Debt Sustainability

For at least two decades, the concept of sustainability has been debated. The first considers that the interest rate at which a government borrows cannot be higher than the rate of economic growth, so that the debt-to-GDP ratio does not rise and an unsustainable debt does not develop. The other method assumes that if there is a present value borrowing limitation, which may limit the amount of money that may be borrowed, then that would be the primary criterion for achieving sustainability. A number of authors, particularly the staffs of the International Monetary Fund (IMF) and the World Bank, have discussed and used the concept extensively in recent years, particularly after the introduction of the Indebted Poor Country initiative (IPC) and, more recently, with the definition of the Millennium Development Goals (MDG) by IMF. These indicators are commonly calculated by comparing the current value of budget constraints or primary surpluses and the current value of debt interest payments.

The first is the problem of definition. In general, public debt sustainability is associated with government solvency (i.e., the government's capacity to meet all of its future financial obligations). Theoretical clarity, on the other hand, does not always transfer into operational clarity. Standard macroeconomic analysis assumes that the government is financially sound. However, it becomes evident that the benefits of default may outweigh the costs in some situations, at least ex ante, casting doubt on the reliability of promises to always fulfil obligations in full. The threat of default introduces market beliefs, and with them, the problem of self-fulfilling prophecies, in which even minor liquidity crises produced by irrational fear can cause otherwise solvent governments to default.

According to Xavier Debrun and Charles Wyplosz ``Debt sustainability perfectly illustrates the difficulty of deriving simple operational definitions from well-defined economic concepts. A broad consensus exists to consider public debt as sustainable when the government has a high probability of being solvent—i.e. able to honour its current and future financial obligations—without having to resort to unfeasible or undesirable policies (IMF 2013). However, because solvency boils down to a mere prediction about future budget balances over an indefinite horizon, it has no clear operational implication. Thus, the concrete approaches to assess debt sustainability have focused on sufficient (but by no means necessary) conditions for solvency; and since one can think of many such conditions, the debt sustainability literature has inevitably been quite eclectic. After a brief discussion of the government budget constraint, we use the simple arithmetic of the debt-to-GDP ratio to derive a formal definition of solvency and a common operational condition satisfying the solvency constraint, i.e. the stabilization of the debt-to-GDP ratio``.

The study of Buiter and Patel (1992, 1993, 2006) on debt sustainability and solvency of government in the Indian context incorporated nonmonetized liabilities of the central and state governments, long-term loan liabilities of central public sector undertaking (CPSU) excluding nationalized commercial banks and external liabilities net of forex reserves of the RBI. According to them, empirical testing of sustainability of public debt requires that debt/gross national product (GNP) and discounted debt series should not have positive stochastic or deterministic trend. The finding of non-stationarity of both present discounted value (PDV) of debt and debt/GNP based on formal time series unit root testing led to the conclusion that despite fiscal adjustment, the threat of government solvency and consequent fiscal crisis remained a major concern to the policymakers.

Conclusion

The creation of a capital market is an essential phase in the process of growth and development.

It is a necessary mechanism for the various agents in an economy to allocate and utilise the available financial resources. The emergence of a money market represents a significant opportunity for any government to place domestic debt. The number of financing options increases, allowing the government to choose from among the finest options, including not only local and foreign finance, but also a variety of options with varied rates and maturities. One of the most significant ramifications is that the government will be less reliant on international markets, giving it more authority and sovereignty. These securities can be utilised by monetary authorities to control and stabilise the monetary system in addition to providing domestic funding.

Financial funds, capital, and money markets support the banking system and serve to deepen the process of financial development; they are a key factor in promoting growth.

Despite the attempted fiscal adjustment and the achievement of banking sector reforms since 1991, the rising trend in domestic debt as a percentage of GDP is cause for concern. The market-related rate of interest on government assets has resulted in increased market absorption of government securities and diversification of ownership patterns. However, the rise in contingent liabilities is a source of concern. The financial markets' interest rates are convergent, and the markets are getting more integrated. Interest rate spreads between different areas of the market are narrowing, and trade volumes are increasing. As a result, debt management functions and practises have advanced significantly since 1991, despite the fact that they are still controlled by a department within the RBI. In light of recent market events and the central government's determination to keep the fiscal deficit under control, the 58 separation of monetary and debt management may be necessary. The split would give the central bank the required independence in monetary management, as it would no longer be responsible for providing

credit to the government or ensuring that government borrowing is done at a reasonable cost. The government can then ask the RBI to fulfil an inflation target, as has been the practise in most industrialised nations and as advised by the expert committee in 1997 as one of the pre-conditions for capital account convertibility.

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